

# TV TECHNOLOGY

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**NAB2007** in review  
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PART I

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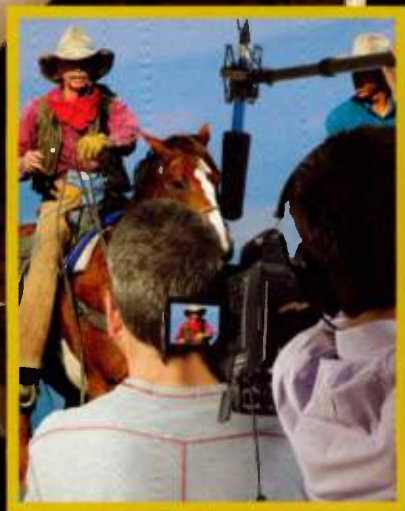


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Panasonic's new, full-size AG-HPX500 P2 HD camcorder does more than just capture incredibly detailed high definition images on ultra-reliable, solid-state memory cards. It offers the unique combination of high-end features never before offered in a camcorder in this price range, including production-quality 2/3" progressive CCDs, DVCPRO HD 4:2:2 quality, 32 HD/SD video formats, four independent audio channels, and variable frame rates for incredible quality and versatility.

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World Radio History



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## FROM THE EDITOR

# After the Show



**W**ith another NAB now in the history books, it's time to take a look back at another technology-packed show.

In part I of our NAB post show coverage, we focus on the news from the sessions and the exhibitors. This year, we decided to survey some of our contributing writers to get their impressions of the show. Here's what they had to say:

### Gary Arlen, Tuned In

Where were all the broadcasters (station owners and managers) in Las Vegas? For days, they were invisible at the LVCC, probably because they were so busy making deals at the Wynn and Bellagio where lawyers and brokers were encamped.

The stations may have sent their engineers to the convention center to buy equipment, but the owners were engaged in buying (and selling) stations. Was it any coincidence that Clear Channels' big selloff was unveiled just a few days after the show adjourned?

### Doug Lung, RF Technology

The big thing for me at NAB2007 was mobile TV for ATSC. The future of over-the-air TV depends on using it to reach wireless devices such as portable TVs and those in cars. Now it appears we have the opportunity to reach handheld devices with two strong players in this industry—I'm very encouraged to see some technology come out of this. The real test will be what we see come out of CES next year.

Among the sessions, a highlight for me was Saturday's Everything Audio session at the Ennes Workshop, part of PBS Tech.con '07. The session cleared up a lot of misconceptions about how Dolby technology is used for ATSC broadcasting. Through a series of demonstrations, they showed how improper dialnorm settings dramatically impact the sounds listeners hear, especially on smaller stereo TVs and TVs using set-top box converters. Many stations are not implementing dialnorm correctly and these demos give them a strong incentive to take another look at how they're handling audio.

Finally, at the show I noticed how the manufacturers are trying to drive home how important it is to plan ahead now for the 2009 transition.

### Jay Ankeney, Focus On Editing:

NAB2007 proved that the digital dreams for post production we had a

decade ago have now become a reality. Even high definition can be edited in real time on a variety of nonlinear edit systems and effects creation surpasses all expectations.

Most importantly, the marketplace has provided us with vigorous competition between NLE vendors, giving editors real choices in the platform and applications they desire. We are seeing a dynamic race between hardware- and software-based production systems that is bringing resolutions of 2K and above onto the desktop of digital content creators and making them affordable to a wide community of artists. Now that we have the tools, the next most important thing we need is... new dreams!

### Mark Turner, Count on IT

The most memorable observation I made at NAB was that our world is not about to change; it already has. The cost of entry for HD production has fallen so low that nearly anyone can get into the HD business, and it looks like that's exactly what's happening.

I was one of the people who stood in line for 30 minutes or so to see a short film shot with an HD production camera capable of shooting 720p, 1080i, 2K and 4K HD for less than \$20,000. The technology was exciting, but what I remember most is that the guy next to me in line was a college student exploring opportunities to start his own production business. With a camera like this and a personal computer, he may be doing HD field production long before many broadcasters take the plunge.

I also saw a guy doing a live shot from the lobby of the South Hall. That alone wouldn't be unusual, except that he was doing the live shot with a laptop, a cheap wired headset and a Wi-Fi connection.

The future is already here.

### Karl Paulsen, Media Storage Technology

Acquisition is now squarely headed toward a tapeless, solid-state process that continues to yield an ever evolving set of image and digital compression formats. While the value of 3 Gbps distribution architectures through real products was obvious; the focus in IPTV, mobile and advanced VSB delivery systems has ventured well beyond just "new technology." The parallels to a decade and a half ago, when DBS was just an emerging technology, are similar. All

the while, broadcasters continue to face challenges in a growing data-centric architecture encompassing files, sound, vision and the conveyance of related information as metadata.

### Walter Schoenknecht, Inside Production

Gone are the years in which NAB conventioners stood about in little clusters, whispering excitedly about the blockbuster technology or world-stopping products announced or released at the show. These days, it's more akin to watching time-lapse photography of an ant farm: Inch by inch, incrementally, old products evolve and grow, new features and accessories appear, and old technology is carried out to the scrap heap.

At NAB2007, the buzz over production tools was distributed between large and small alike: Sony's F23 electronic cinematography camera was no better received than the upstart Red One 4K camera.

The industry's wobble between disc-based and solid-state recording media only intensified as Sony introduced a card storage option for XDCAM-HD.

And the incrementals were everywhere: Avid extended product lines a little in this direction, a little in that; Autodesk, the new overseer for the former Discreet and Alias|Wavefront products, pushed forward with workflow improvements and a few buffed-up tools and features.

Sometimes, the real jewels are to be found hiding in the midst of the updates and upgrades. For Apple, whose Final Cut Studio 2 debuted at the show, the crowning achievement may have been Color, the suite's powerful new color correction tool... worthy of a suite of its own. The updated Adobe Creative Suite 3-Production Premium collection, while boosting features and firepower across all the old favorite apps, has a hidden gem of its own. Adobe Soundbooth, which leverages some of Audition's more outrageous technologies in a dual Mac/Win package, may be the world's easiest-to-use high-end audio tool.

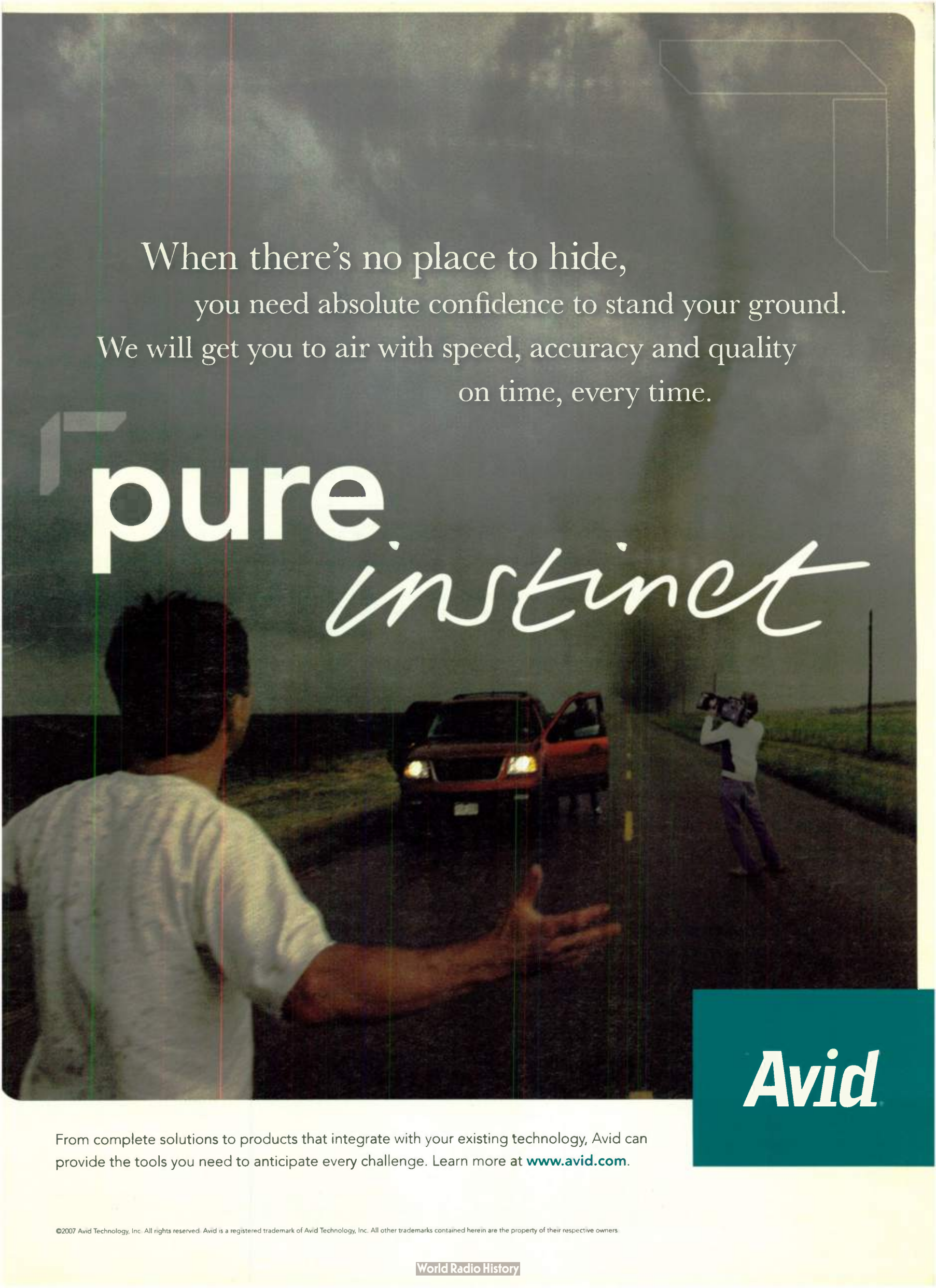
Who said that incremental change is boring?

So there you have it. Look for more NAB2007 news in part II as we review the new gear introduced at the show.

Tom Butts  
Editor

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## Jack Valenti Dies at 85

### WASHINGTON

Jack Valenti, a fixture Capitol Hill, has died at the age of 85. Valenti, a former aid to President Lyndon B. Johnson and longtime advocate for the Hollywood movie community, died April 26 of complications from a stroke. He was a passionate defender of the First Amendment who developed the movie ratings system.

"From his days in the White House to his efforts on behalf of the movie industry Jack Valenti was also something else: A class act... He will be sorely missed as a friend and the country has lost an American original."—Rep. Ed Markey (D-Mass.)

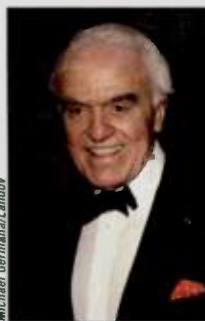
"Jack Valenti was a larger than life figure who brought passion, integrity and wit to every one of his endeavors. He was and will remain the gold standard for effective advocacy, whatever the cause."—Kyle McSlarrow, presi-

dent and CEO of the National Cable and Telecommunications Association.

"Working with Jack Valenti in the last year and a half has been one of the highlights of my 25 years in Washington. Broadcasters have lost a First Amendment freedom fighter, and America has lost the most gifted public speaker of his generation."—David Rehr, president and CEO of NAB.

"Regardless of whether we were policy friends or foes, Jack treated me with kindness and respect. There was no one in

Washington I respected more for his intelligence, his commitment, his integrity and his ability to work across party lines."—Gigi Sohn, president of Public Knowledge.



Jack Valenti, former head of MPAA

## Obituary

## A Texas-sized Production Facility

### AUSTIN, TEXAS

Villa Muse, a production company led by Jay Aaron Podolnick, has announced plans to build a \$125 million 200-acre film and television production studio in East Austin. The facility will anchor a \$1.5 billion 681-acre mixed-use development that will also include residential, retail and commercial spaces, according to the developers.

Phase One, to be open by the end of 2008, will feature several soundstages, including what the company claims will be the largest purpose-built soundstage in North America (50,000 square feet), as well as a scoring stage, recording studios and an outdoor amphitheater with a capacity of more than 70,000 people.

Villa Muse executives predict the overall project will generate approximately 8,000 new jobs upon completion and will make capacity available for 8,500 residents. The residential community—which could serve as a backlot for filming—will orbit the studio campus, and will be built in an array of styles to meet a variety of production needs. The facility will be

located just off of the SH130 corridor, 15 minutes east of downtown Austin.

Villa Muse has secured Phase One funding and, in partnership with Carpenter & Associates, a real estate development firm, has secured the land for the project.

"Villa Muse will address the needs of our thriving creative industries in

Texas, while attracting business that has been out of reach and forced to go elsewhere," said Jay Aaron Podolnick, founder and CEO. "Meanwhile, Villa Muse will give Texas a centralized location where creative talent can come together to cross-pollinate and communicate in a

uniquely innovative environment. And true to its name, it will be a place to live, work and be inspired."

Podolnick helped launch the Austin music scene in 1972 when he opened the first 24-track recording facility in Texas. The Villa Muse team also includes Rupert Neve, Tom Copeland, Bob Walters and Paul Alvarado-Dykstra.



An artist's rendering of the planned Villa Muse complex

## Production



## April Showers TV Rules

### WASHINGTON

The FCC at its regular meeting last month issued several orders affecting TV, while a bill was introduced Congress to give broadcasters first responder status during emergencies.

The FCC opened a Second Notice of Proposed Rulemaking seeking comment on dual must-carry—requiring cable operators simultaneously to carry digital and analog versions of broadcast signals. About half of the nation's nearly 65 million cable households receive analog-only service, many without a set-top box. Once broadcast TV becomes all-digital, those signals would have to be converted in the cable distribution chain for analog reception.

The notice seeks comment on whether must-carry should encompass a broadcaster's entire 19 Mbps payload, or just the primary channel, as the FCC previously determined. The commission also said the notice "reaffirmed that cable systems must carry high-definition broadcast signals in HD format."

### VIOLENCE REPORT ISSUED

The FCC also delivered its report to Congress on TV violence. It suggests further regulatory constraints are necessary because of way media violence influences children. The report cites studies from the Kaiser Family Foundation, the American Academy of Pediatrics and others that indicate children are adversely affected by media violence.

The study also deemed ratings, V-chips and other content filter technologies to be only marginally effective.

The report says that Congress would have to define violence in order to impose regulations, and it notes how historically difficult that is. Suggested alternatives to regulation included voluntary industry initiatives.

### MORE DETAILS ON DTV

The commission also issued more DTV transition rules that will tighten up time extensions on facilities construction. At the same time, stations moving to a new DTV channel based on the final table of allotments will get

faster approval on construction permits. They will also receive consideration on reducing analog service if their final DTV allotment is the same as their current analog channel. Those stations moving to a new post-transition DTV channel will be allowed to focus resources on that final channel.

The order will require all stations to file a transition status report by Dec. 1, 2007, and it establishes the analog sunset date of Feb. 17, 2009 as the construction deadline for all DTV facilities.

### TV WARNING ORDERED

The FCC also adopted an order requiring retailers to display the following information on analog TVs:

"This television receiver has only an analog broadcast tuner and will require a converter box after Feb. 17, 2009, to receive over-the-air broadcasts with an antenna because of the nation's transition to digital broadcasting."

"Analog-only TVs should continue to work as before with cable and satellite TV services, gaming consoles, VCRs, DVD players, and similar products. For more information, call the FCC at 1-888-225-5322 (TTY: 1-888-835-5322) or visit the commission's digital television Web site at: [www.dtv.gov](http://www.dtv.gov)."

### BROADCAST BILL BOWED

Sens. Mary Landrieu (D-La.) and Ted Stevens (R-Alaska) introduced a bill to classify broadcasters among first responders in the event of an emergency. (See "Landrieu Lauds Broadcasters," p. 26).

"For more than 50 years, we have required local broadcasters to be on that front line, sounding the alarm," Landrieu said.

S.1223, The First Response Broadcast Act of 2007, would assure that TV and radio broadcasters have fuel, food and water during emergencies.

Emergency services, hospitals, nursing homes and public utilities would still have priority for the federally provided necessities, but the bill would protect broadcasters stores from federal seizure except in dire cases.

## Federal Frequency





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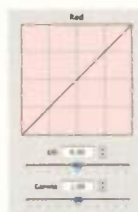
HDLink is the world's only full resolution HDTV monitoring solution that connects to both DVI and HDMI monitors, and features 4:2:2 and 4:4:4 quality. HDLink also includes SDI audio de-embedding to RCA analog audio outputs for monitoring using HiFi equipment.

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## Mobile TV Creates Buzz at NAB

### Four firms offer two systems for new standard

by John Merli

LAS VEGAS

In an industry where new technological development and acceptance have been known to occasionally move at a glacial pace, the impetus behind establishing an American broadcast standard for mobile and handheld broadcast TV in the digital age appears to be accelerating at a breakneck pace.

In the first half of April alone, a coalition of major station groups, the Advanced Television Systems Committee, two competing format proponents, the trade press, and the massive exposure provided by NAB2007 all weighed in on the enticing prospect of slicing away a small portion of a local broadcaster's allotted spectrum to provide TV content on mobile and handheld devices. Such an emerging potential revenue-generating venue also would be a coup, of sorts, over the cable and DBS industries, which cannot claim to possess digital terrestrial signals.

#### PICKING UP SPEED

The technical challenge of mobile TV in creating a plausible solution for vehicles, handhelds, and even laptop computers is the "mobile" part. A stationary portable device could simply pick up a terrestrial DTV signal with an ATSC tuner, as long as the tuner is within range of the DTV signal. Yet when a mobile or handheld device begins to move through difficult reception locations such as "urban canyons" where signal strength may be extremely low, or where there may be difficult dynamic multipath, an 8-VSB stream likely will break up or be lost altogether.

The advent of a mobile standard for broadcasters assumed more industry credibility and urgency a week prior to NAB in early April when the ATSC announced its intentions to develop a standard, to be known as "ATSC-M/H." Also announced a week before NAB, nine major groups whose stations collectively cover some 95 million TV households in virtually all major markets, formed the Open Mobile Video Coalition to help propel mobile DTV. The coalition currently

includes: Belo, Fox Television Stations, Gannett Broadcasting, Gray Television, NBC Universal, Telemundo Group, Sinclair Broadcast Group, Tribune Broadcasting, and ION Media Networks.

"We feel the coalition can help standardize and organize both CE manufacturers and content providers," said David Glenn, president of engi-

"Broadcasters just have to stand up and let the CE industry know if they provide the devices, we will deliver the content."

Another coalition member, Glenn Reitmeier, vice president for Technology Standards, Policy & Strategy at NBC Universal, said "this is the opportunity for broadcasters to rediscover and re-invent their roots in

framework which was approved by our board in March 2007, and now the work is under way in our Technology and Standards Group," Richer said.

Richer believes many broadcasters want the opportunity to announce new ATSC mobile and handheld services before the close-out of analog in February 2009.



While Harris and LG Electronics demonstrated MPH in its own van (L), on the other side of the LVCC, Samsung offered mobile demos of A-VSB (R).



LG Engineer Tim Laud fielded questions from NAB attendees who witnessed the MPH demos in a specially equipped van.

neering at ION in West Palm Beach, Fla., and owns and operates 60 television stations nationwide. "It can also educate consumers to let them see they can have the content they want, when they want it, where they want it, and how they want it—whether it's on a train, in a vehicle, or on a PDA/cell phone device."

Glenn said mobile TV is not a technology for the future; it's here today.

**"Broadcasters just have to stand up and let the CE industry know if they provide the [mobile/handheld] devices, we will deliver the content."**

**—David Glenn, ION Media Networks**

the digital age, since broadcasting is the original wireless service. So establishing an ATSC [standard] is the next logical step in digital television. We now have a 'perfect storm' of new enabling technologies, strong broadcaster interest in reaching mobile users, and the ATSC standards process already in gear."

ATSC President Mark Richer said his group's work on a mobile/handheld standard is based on recommendations in a strategic plan developed last year by the ATSC Board.

"The ATSC Planning Committee developed the preliminary project

"Our project goal is to meet that schedule requirement." Richer said ATSC-M/H must be backwards-compatible and permit existing digital services to operate in the same RF channel without causing interference.

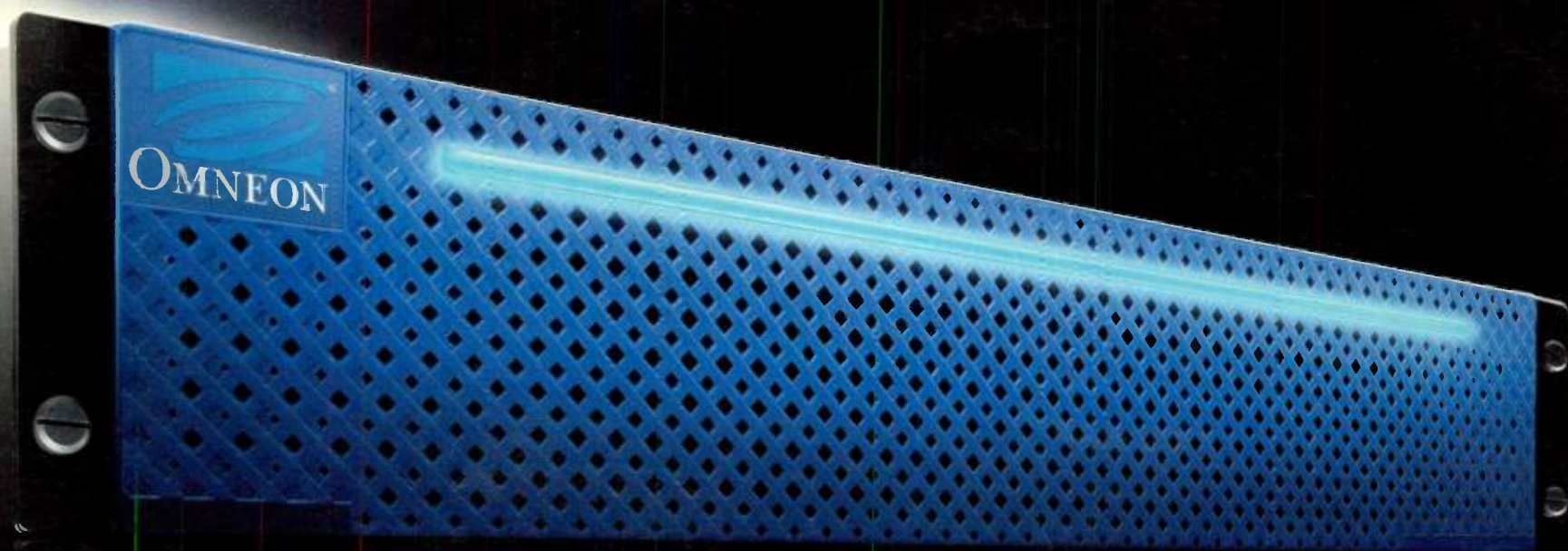
At NAB2007, Richer's group set up a DTV Hot Spot to demonstrate an array of technologies related to ATSC Standards, including both proposed mobile systems. "We plan to provide the industry with an open standard that will ensure interoperability of services with consumer products," he said.

The two competing systems were

MOBILE, PAGE 10



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World Radio History



# Mobile

CONTINUED FROM PAGE 8

spotlighted amid generally good reviews at NAB2007 when MPH (Mobile-Pedestrian-Handheld) from Harris Corp. and LG Electronics and the A-VSB scheme from Samsung and Rohde & Schwarz provided their own respective demo rides through the near-gridlocked streets of Las Vegas.

The Harris/LG demo used a digital signal from Sinclair station KVCW-TV, digital Channel 29, transmitting from

MPH signals for mobile/handheld retrieval (MPEG-4) at 557 kbps in real time, and at 299 kbps precoded.

Harris/LG premiered their system at NAB using a 6-inch untuned whip antenna mounted on the roof of its mobile van, with its input signal split four ways. No handheld prototypes, per se, were used in one demo tour taken by a group of reporters. Instead, screen images featured on a wall console in the van showed the regular 8-VSB signal alongside the MPH feeds. While the main 8-VSB signal showed fairly constant artifacting during much

**"We plan to provide the industry with an open standard that will ensure interoperability of services with consumer products."**

**—Mark Richer, ATSC**

Black Mountain about a dozen miles from the convention center (750 kW at 1,086 feet height above average terrain). While the station fed its main DTV content at about 15 Mbps, it used the rest of its allotted 19.39 Mbps to push out two simultaneous

of the 45-minute drive around Las Vegas (which included a short tunnel or two), the mobilecentric MPH streams held up generally well on The Strip and other busy streets.

Meanwhile, at the competing NAB demo, which was first shown at



At one of the MPH mobile TV demos, Dr. H.G. Lee, president and chief technology officer of LG Electronics, displays several LG products that could be used to receive mobile TV over the Harris/LG standard.

CES2007 in January, the Samsung A-VSB system tapped into a live transmission from another Sinclair outlet, KVMY-TV on digital Channel 22. The main stream of programming was maintained while the demo sliced away a total of about 5.2 Mbps (sometimes a bit more) of its FCC-allotted 19.39 Mbps—primarily to provide a one-quarter rate turbo stream of the main program, as well as a one-half rate turbo stream of special-purpose content.

A separate demo was conducted on

Channel 38 using three low-power transmitters fixed to the Stratosphere Tower south of downtown Las Vegas, at the Paris hotel on The Strip, and inside the convention center itself, thereby creating a triangular configuration.

The Samsung demo did use working handheld prototypes, each equipped with two six-inch antenna rods (although a Samsung spokesman said an antenna may not be visible by the time any devices reach consumers). ■

## MediaFLO and Modeo Get the Party Started

WASHINGTON

**M**PH and A-VSB are about where MediaFLO and Modeo were a year ago. The latter two mobile TV services were demoed at NAB2006, similar to the way MPH and A-VSB were this year.

While the technology behind the four mobile TV formats is different, the end game is the same: Getting broadcast-quality television on mobile devices like cell phones.

MediaFLO, the proprietary transmission technology from Qualcomm in San Diego, is currently leading the pack in developmental terms. Verizon Wireless relaunched its VCast service in March using MediaFLO, and AT&T is on deck for a launch later this year.

The MediaFLO VCast service is available in 27 cities at \$15 for eight channels, and \$25 for eight more plus Web access. VCast originally was launched over Verizon's regular data network and was much slower. Emerging transmission technologies such as MediaFLO allow for real-time delivery and channel surfing—like traditional TV. Jason Kenagy, vice president of product management for MediaFLO USA, said lingering indifference after the initial data launch remains a factor to overcome.

"We definitely, in our research, see that effect," he said. "Users who have said, 'a buddy of mine had it and doesn't like it.'

We definitely do get those sort of responses, but across our trials, we find people saying, 'oh, we didn't know you meant this.' What we've clearly seen is that when people see MediaFLO, they're blown away."

Verizon is not yet giving up the number of MediaFLO VCast subscribers. A company spokesman did allow that Verizon has around 60.7 million wireless subscribers, one-third of whom have phones with VCast capability, but mostly for the old data service. The MediaFLO service requires one of two smartphones—one a Samsung, the other an LG.

### MODEO'S DRIVE

Modeo appears to be on par with MediaFLO in terms of development, but not deployment.

Modeo, a subsidiary of Houston communications tower firm Crown Castle, beta launched its DVB-H-based mobile TV service in New York City during the last week of 2006.

Mike Ramke became president of Modeo on New Year's Day. He said that since the trials, Modeo has had a couple of big breaks.

One involved a waiver from the FCC allowing Modeo to crank up the power tenfold in urban areas and by a factor of 20 in rural areas. Doing so means Modeo can cover the same area with 75 percent fewer sites, save around \$120 million in capital expenditures and \$30 million a year in operating costs, according to Ramke.

Modeo, offered on a self-branded Microsoft smartphone developed by HTC, also announced on-demand viewing and DVR capabilities, and said feedback from the six-week New York beta tests was positive. The only thing lacking is a service provider.

"We have not made any announcements regarding our retail plan," Ramke said.

Both Modeo and MediaFLO are contemplating future services. Modeo is doing personalized content, time-shifting and interactive click-type services, i.e., "click to vote," and "click to buy."

MediaFLO was demoed at NAB2007 by PacketVideo as a "proof-of-concept" that it would work on a third-party platform, Kenagy said. It was the first time MediaFLO was demonstrated on a device other than a cell phone. Another personal media device—a V-Card, developed by Qualcomm—was also demoed, as well as IP datacasting applications from Roundbox. Conditional access systems are also in the works, a spokeswoman said. Kenagy said audio service, possibly FM radio, also was being considered.

"We're evaluating that," he said. "We haven't announced anything at this point. We have trialed audio service; it's had pretty good reception. We're factoring that against other solutions that already exist."

Another option under the scope is the download/hard drive model, in which case,

audio service could be in the form of MP3s, for example. AT&T, in announcing its adoption of MediaFLO, said it would use the technology to deliver data and video clip files by the fourth quarter of this year.

### USER ADOPTION

The technology push for mobile TV has been more aggressive than the market would appear to merit. Research done last year by the Mobile Marketing Association indicated that only 1 percent of wireless subscribers watched TV on their cell phones. In-Stat nonetheless predicts a worldwide mobile TV market of 125 million subscribers by 2011.

Broadcasters are definitely looking at their options when it comes to mobile TV, and MPH and A-VSB will allow them to do it within their existing infrastructure. Both formats are vestigial sideband-based, and therefore compatible with 8-VSB, the U.S. terrestrial DTV transmission standard.

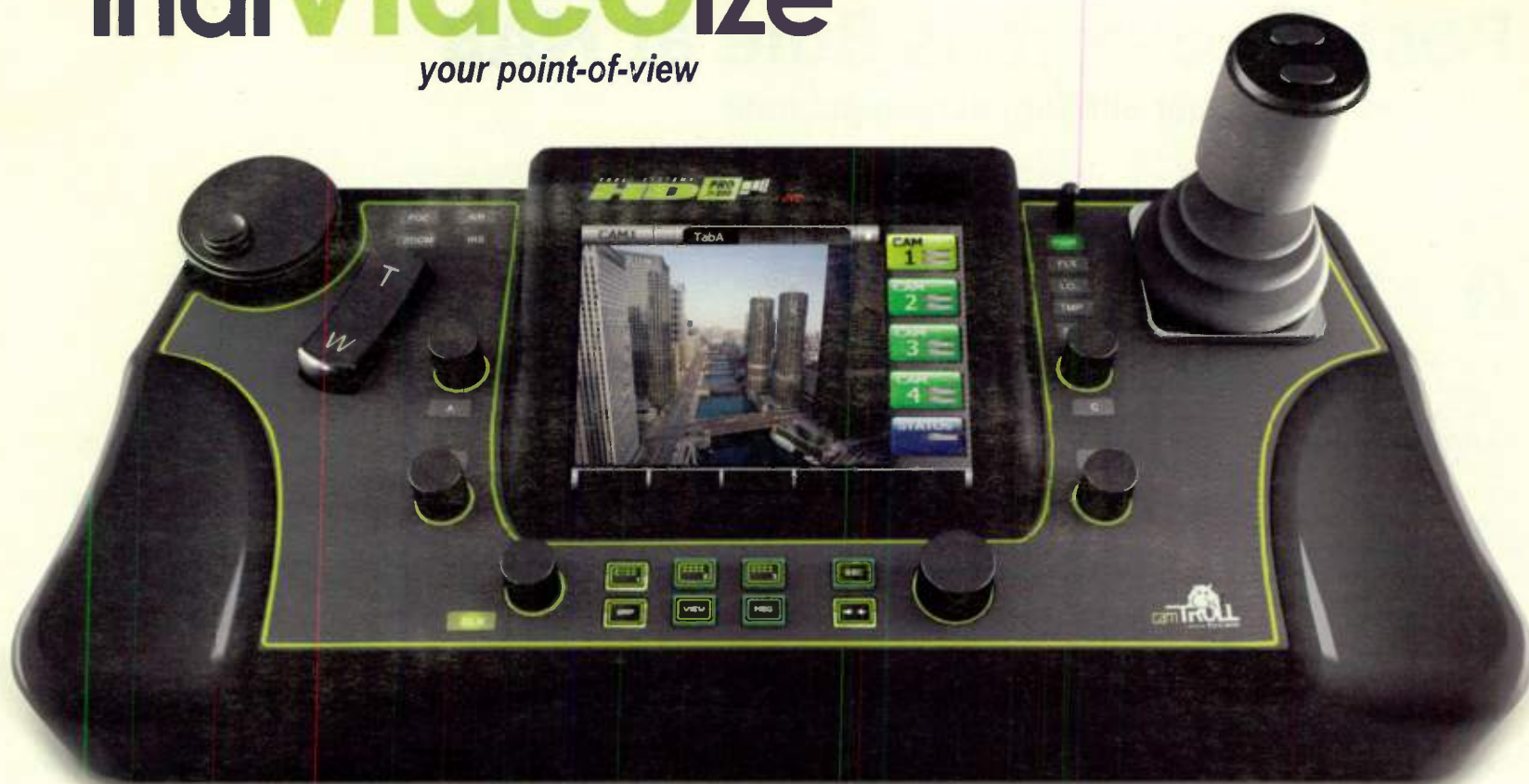
Neither Modeo nor MediaFLO are VSB-compatible, but as one network executive pointed out, they do have a very important advantage. Both minimize the capitol risk of launching mobile TV by providing the infrastructure, the devices and the subscribers. At the end of the day, the executive said, the networks gets paid for its content and if mobile TV flops in the market, his company doesn't lose a dime.

Deborah D. McAdams



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CON TROLL YOUR WORLD





# Post Innovations Rule at NAB

## Advances cover color and format manipulation

by Jay Ankeney

LAS VEGAS

Once again, post production was the arena in which most of the exciting announcements at NAB2007 in Las Vegas came together. Thankfully, representatives from major manufacturers were willing to give me some personal insights into the most fascinating new products on the convention floor.

Apple is known for staging some of the most boisterous press conferences on the NAB circuit. This year, when they finished announcing upgrades to the new Final Cut Studio 2 software, including the new Final Cut Pro 6 editing application, even reporters were applauding.

But a top contender for Most Awesome was a new component simply called "Color" that began life as Silicon Color's Final Touch until Apple purchased the technology last October. During a one-on-one interview with Rob Schoeben, vice president of applications product marketing at Apple, said that this is far more than just an advanced color corrector. In fact, Schoeben said he was convinced U. S. editors should start adopting the more international term "color grading" to appreciate Apple's new Color and its eight layers of secondary color correction.

"The look of a project's color is as important to film or video editing's creative power as sound design," Schoeben said. "Color correction is where it starts, but the other 98 percent refers to the way you can completely change the way a shot feels. That's what you get from our new Color."

Apple also demonstrated how AJA Video's new iO HD breakout box can help import files as big as 2K into Final Cut Pro 6 over FireWire 800 (IEEE-1394b). iO HD also supports Apple's new ProRes 422 codec that provides production-quality 10-bit, 4:2:2 HD in SD file sizes.

"The lines are kind of interesting between what is HD and higher resolution formats. The way that stuff is being captured on camera these days is amazing and we want to make sure any Final Cut editor can work with it," Schoeben said. "That's where ProRes 422 becomes such an important technology, regardless of how far up the definition of HD, 2K or 4K you go. We fully expect cameras to continue to advance, and we're going to be here making sure the Final Cut editor can take advantage of all the new gear."

Schoeben estimated there are more than 800,000 Final Cut editors around the world. That growth is not going to be hurt by the fact the new Final Cut Studio 2—even with the impressive new Color—will be selling for the same price as the original Final Cut Studio released two years ago.

### CINEFORM CROSSES OVER

The good folks at CineForm won some much-deserved recognition at NAB2007 for having finally broken the barrier separating Windows and Macintosh workflows by bringing out the first cross-platform compatible encoding software. It's called Neo and comes in HDV (1440x1080), HD (1920x1080) and 2K (2048x2048) versions designed to run on either a

mix of computing platforms, and the CineForm Intermediate codec inside NEO will let them leverage the strengths of either one," Taylor said. "It's like Microsoft Word for

"Renewed innovation through introductions like ScriptSync are keeping us at the forefront of the editing industry," he said.

Without question, ScriptSync has

**"The look of a project's color is as important to film or video editing's creative power as sound design."**

**—Rob Schoeben, Apple**



Rob Schoeben introduces Color, professional color grading for Final Cut Pro 2.

Windows or Mac computer.

"Neo is focused to support all post-production software," said David Taylor, president of CineForm, "and although the capabilities of each OS are slightly different, our intent is to keep the feature set roughly equivalent on any NLE. But the files it encodes are guaranteed to be completely cross-platform compatible no matter where they were created."

This all became possible for CineForm when Apple adopted the Intel processors, and CineForm soon developed a QuickTime wrapper for their codec. Neo will create either QuickTime or AVI files on a PC and QuickTime on the Mac OS. Trial versions of Neo for Windows became available right after NAB on the CineForm Web site ([www.cineform.com](http://www.cineform.com)), and Neo on Mac OS version should be out by June.

"Our customers typically have a

Windows and Microsoft Word for the Mac. The platforms are different but the files can be seamlessly exchanged. Now editors can also do that with digital video."

### AVID OPENS UP

Avid Technologies wanted everyone to know that even though almost all of TV's primetime shows are posted on their systems, they still want to talk with everyone else. In fact, there were 270 partners, including over 50 software manufacturers, showing collaborative efforts at the massive Avid booth.

"We think we are one of the most open companies at NAB this year," Graham Sharp, vice president and general manager of Avid's Video division said. Then he singled out one of the new features of Version 2.7 software for the Media Composer line of NLEs, called "ScriptSync."

to be seen in action to appreciate its usefulness. ScriptSync is a phonetically based voice-recognition system that automates the tedious task of aligning multiple takes with dialog lines in a script. Feature film editors have long been accustomed to working with a "lined" script, where each take is associated with the line of dialog from that particular scene. Now that kind of logging can be done for you in a fraction of the time it previously required.

Say you are working on the latest remake of "The Purple Pimpernel." First you import the printed script into the Media Composer editing application, then you fire up ScriptSync and run your source material. Calling upon some technology licensed from Nexidia, ScriptSync listens to the audio and phonetically identifies the words so that, for example, every time someone says "Pimpernel" the associated take is flagged and that word is aligned with the text.

ScriptSync's underlying technology is flexible enough to handle even a character actor's heavy accent, and it can also deal with up to eight foreign languages. Multiple cameras? No problem. You will see the audio waveform from each camera streaking down the side of the script with all identified words marked in each take.

The most immediate application for ScriptSync is to streamline the shot selection for feature films. But what editor who has been faced with notebooks of scribbled transcripts from a talking heads documentary shoot wouldn't welcome some relief by automatically cross-referencing shots with words? ScriptSync answers a lot of editing prayers. ■



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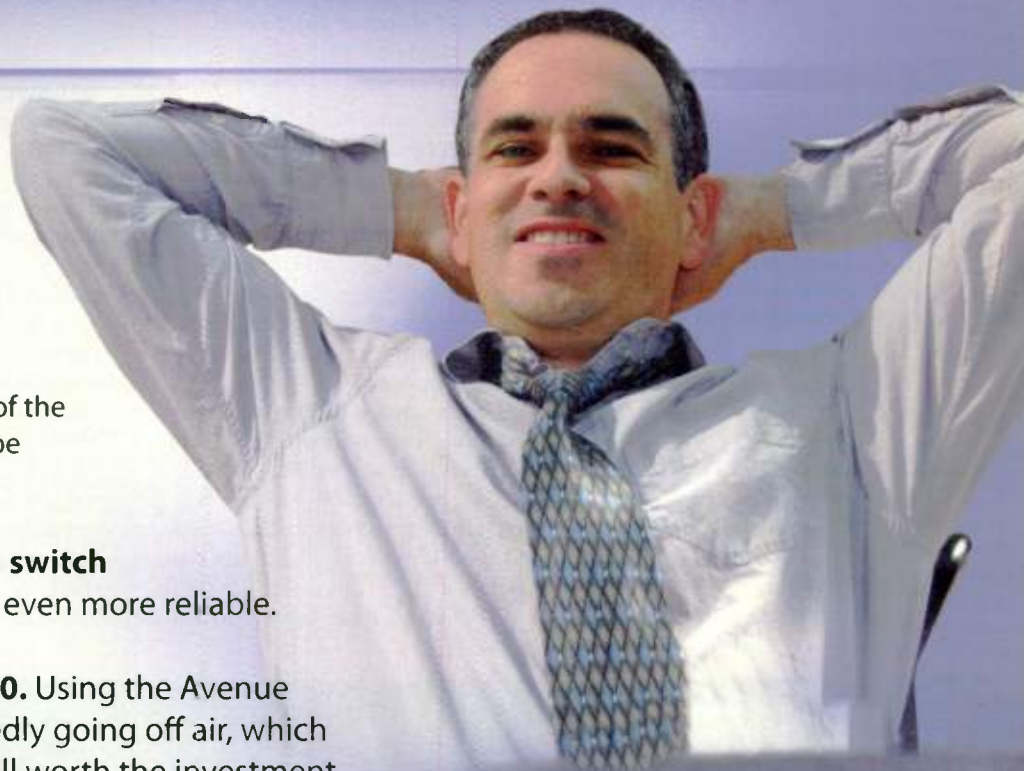
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# NBC's Return Highlights NAB Opener

## Rehr urges industry cohesion, Wolper receives Distinguished Service Award

by Deborah D. McAdams

LAS VEGAS

The opening event of NAB2007 included big names, a remembrance of a big TV event and big news—NBC Universal has rejoined the National Association of Broadcasters.

"There is no question that NAB will be stronger as an organization with NBCU as a member," David K. Rehr, NAB president and CEO, said in the Hilton Barron Room Monday morning. NBCU makes the fourth network member of NAB, along with ABC, ION (formerly PAX) and Univision.

NBC withdrew seven years ago over policy disagreements that have since changed or been resolved. Rehr emphasized the importance of cohesion in the industry, and said it was time for a change of vocabulary.

"Do we call the new, high-tech Mercedes S-Class car a horseless carriage? Of course not," Rehr said. "Broadcasting is using the equivalent of horseless carriage language in many ways. We have been using 20th century language to define ourselves and our position in a 21st century world, and frankly, that has to change."

### IBOC MAKEOVER

Rehr used the example of how iBiquity went to market with IBOC, for "In-Band On-Channel" radio. The response was undetectable, until IBOC was rebranded as HD Radio.



Mark Wolper, (C), accepts the NAB Distinguished Service Award on behalf of his father, renowned TV and film director David L. Wolper, from NAB Board Chairman Bruce Reese (L) and NAB President David Rehr.

"And suddenly a light bulb went on," Rehr said.

Broadcast issues need the same sort of overhaul, he said. Multicast must-carry, for example, is widely perceived as an effort on the part of broadcasters to take channel capacity away from cable operators. To the contrary, broadcasters do not want their own programming "stripped" out of their 6 MHz allotment, Rehr said.

"We're simply asking that they do not take the anticompetitive step of stripping out our signals," he said.

"Down conversion" is another phrase targeted for extinction. Rehr likened it more to "digital discrimination."

"What we have here is broadcast

discrimination by the cable companies," he said.

And just what are "performance rights people should be allowed to perform?" he asked.

The broadcast radio model has long been one of free music for free promotion. Now, record companies want to charge a fee for airplay. Rehr said it would equate a government-mandated tax that the NAB would "fight...

with everything we have."

Ditto on the satellite radio merger, he said.

Rehr was joined at the opening event by Mary Landrieu, the Democratic senator from Louisiana who witnessed firsthand recent hurricanes, including Hurricane Katrina.

"I feel like I'm in a room of fellow travelers telling the true story of what happened on the Gulf Coast," she said, thanking broadcasters for their assistance and contributions. "Broadcasters really were our first responders."

Landrieu said she intends to introduce a bill to support broadcasters in times of such disasters. The First Response Broadcasters Act of 2007, co-

sponsored by Sen. Ted Stevens (R-Alaska), was crafted to help keep broadcasters on the air during an emergency.

The legislation would provide that, along with police, fire departments and the military, broadcasters would be first in line for food, water and fuel. Out of 50 state broadcast associations, 45 have endorsed the bill, which will be introduced later this week in the House and Senate.

### DISTINGUISHED SERVICE

The opening event of NAB2007 was concluded with the presentation of the Distinguished Service Award to David L. Wolper. A veteran TV producer, Wolper's numerous works includes "Roots" and the opening ceremonies of the 1984 Olympics Games.

"I don't know if I deserve it, but I want it," Wolper said in a prerecorded message. Parkinson's enjoined his attendance, he said.

Wolper credited individual broadcasters for launching his career after 108 stations bought his first documentary, "The Race for Space."

Wolper's son David Wolper was on hand for a sit-down with Leslie Uggams and Le Var Burton, who starred in "Roots." Based on the book by Alex Haley, "Roots" ran over one week in 1977 and became a watershed event in TV history.

Uggams recalled how she was rehearsing for "Guys and Dolls" in Las Vegas when the show premiered.

"I couldn't get room service," she said. "I went down to the casino, and it was empty. People were up in their rooms watching 'Roots.'" ©NAB

WBS



WBS

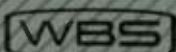
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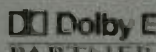
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# Google's CEO Describes a New Era

'Net chief anticipates a mobile future

by Geoff Poister

LAS VEGAS

Google CEO Eric Schmidt delivered a simple message to a large audience at the "Innovators Spotlight: View From the Top" Super Session at NAB2007.

"The new model will have to address user empowerment," Schmidt said. "It is a fundamental truth."

Schmidt outlined his ideas during a casual discussion with former NBC Nightly News Weekend Anchor John Seigenthaler in which he described how a new generation is redefining the rules of mediated communication.

## ADAPTING TO CHANGE

Seigenthaler introduced Schmidt by citing quotes in which Schmidt was called a "man with the ability to change the world." However, Schmidt preferred to describe his role as a person who is adapting to change.

YouTube, which was recently acquired by Google, surfaced as an example of an Internet enterprise that encompasses the "new model."

Schmidt described YouTube as the outgrowth of a social phenomenon that expanded exponentially. He described how it started with people posting some videos on the Web, who then shared them with their friends, who shared them with their

concerns about advertising competition and copyright control. Many of these concerns have arisen due to Google's acquisition of advertising placement firm DoubleClick. Schmidt attempted to allay these concerns by describing advertising revenue as something that is elastic.

"Google will produce more targeted ads that will grow the advertising business," he said. "We will not be stealing advertising revenue away from broadcasters."



Eric Schmidt, Google CEO

**"Google will produce more targeted ads that will grow the advertising business.**

**We will not be stealing advertising revenue away from broadcasters."**

**—Eric Schmidt, Google**

friends and before long an entire social environment was created.

"I have often been quoted for saying 'Don't bet against the Internet,'" Schmidt said. "I think that people who are using litigation to prevent change are betting against the Internet."

Citing Moore's law, which essentially predicts that a chip's density doubles every 18 months, Schmidt reinforced his predictions.

"In five years, we will have 10 times the capacity on mobile phones," he said. "The technology revolution is here to stay."

## NUMEROUS CONCERNS

Of course, speaking to an audience composed primarily of broadcasters, there were numerous

Schmidt repeatedly made the claim that Google and the use of Internet enterprises is a boon to the broadcasting industry. He repeatedly emphasized that Google pursues a policy of partnerships in which both Internet and broadcasters can expand their advertising base and increase revenue.

But some people in the audience expressed concern over copyright control in the era of YouTube—where content is copied, shared, and often remodeled. One member of the audience asked if her company would lose copyright ownership if they placed content on YouTube.

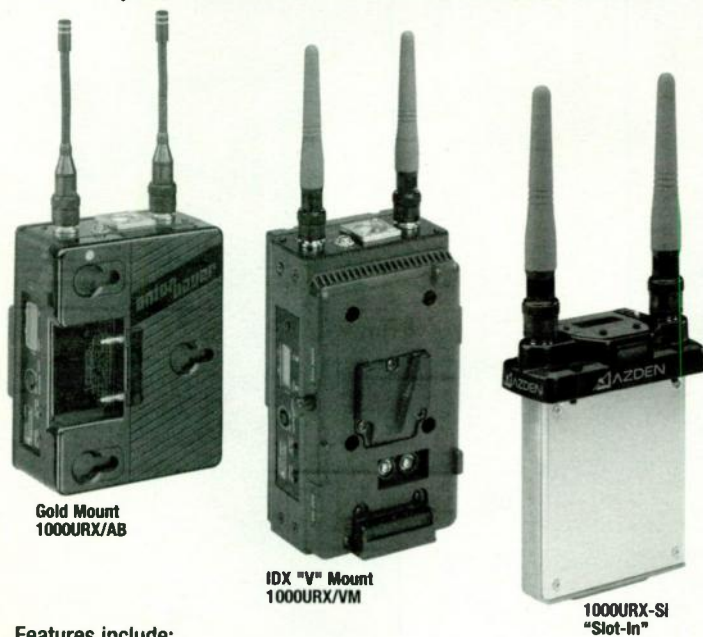
"No. You still retain copyright ownership," Schmidt said.

But he did concede that some con-

GOOGLE, PAGE 22

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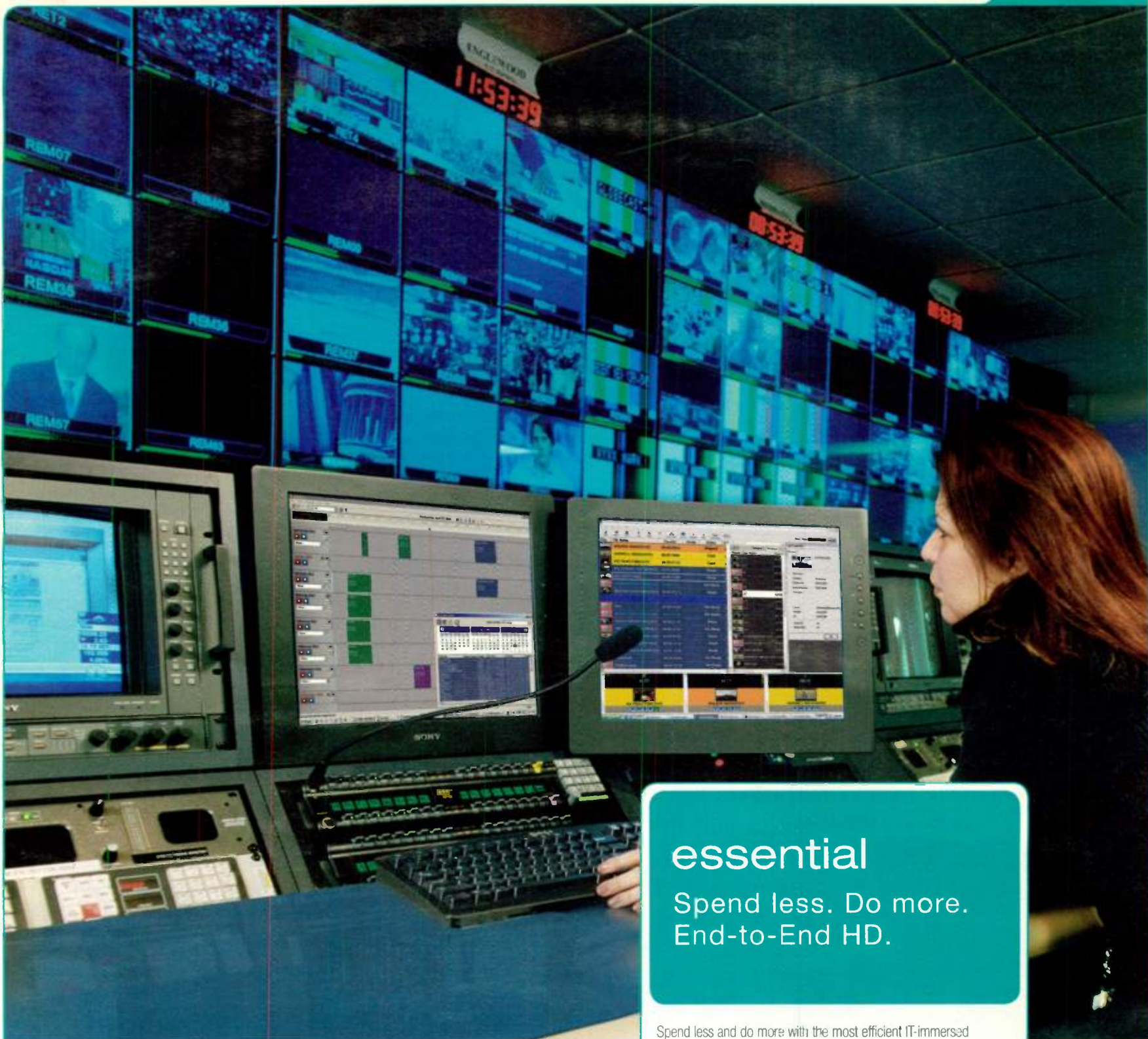
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# Analyst Sees IPTV as the Next DBS

## Broadcasters mull measurement for new distribution paths

by Andrew Morris

LAS VEGAS

The "IPTV—Market Outlook 2010" Super Session at NAB2007 offered an interesting combination of IPTV providers, content aggregators, mobile TV providers and traditional broadcasters discussing the new methods of content distribution.

Moderated by The Carmel Group's Jimmy Schaeffler, this session explored the potential and the challenges awaiting those attempting new methods of content distribution.

Schaeffler referred to IPTV as "a killer app ... like DBS was 10 years ago." He said the other killer app on the horizon is mobile television.

### CONTENT AGGREGATION

The panel consisted of Ed Horowitz of SES Americom, Alan Guggenheim of OpenTV, James Goodman of Capitol Broadcasting, Shawn Strickland of Verizon FiOS TV and Omar Javaid of

Qualcomm's MediaFLO.

Horowitz described SES Americom's IP-Prime aggregation service, which offers a seamless platform of more than



An NAB panel discusses the distribution of content to IPTV providers.

300 video channels and 103 music channels. He portrayed this service as an "add-water-and-stir solution" for the distribution of content to IPTV providers. Horowitz said the Americom service is scalable to over 600 video channels with much HD content using MPEG-4 compression.

Alan Guggenheim of OpenTV said, "Hybrid technology is the key."

Guggenheim was referring to the use of hybrid set-top boxes and hybrid networks that offer both IPTV and traditional video distribution technology to

distribution medium.

"We need to come up with a way of being sure that a computer receiving our stream is in our DMA," Goodman said, referring to Designated Market Areas.

Goodman proposed using credit cards with address verification as well as a USB dongle that would receive two or three local FM radio stations to verify that a computer receiving streaming video from a local TV station is indeed in that DMA.

Goodman said he regarded the Internet as simply one more distribution platform for his station, and indicated he was happy to use any available platform.

Questioned late in the program, he rejected the idea that it is appropriate in any way for a viewer to receive a local station outside of its DMA via a service such as Slingbox.

provide consistent services and experiences across all environments.

### LOCAL TV STREAMED

James Goodman of Capitol Broadcasting, which owns WRAL-TV in Raleigh, N.C., proposed an interesting application for traditional local broadcasters. Goodman proposed that local broadcasters use the Internet as a distri-

### CREATING AN IPTV SYSTEM

Sean Strickland of Verizon's FiOS TV described it as the "foundation for receiving any content on any screen at

IPTV, PAGE 32

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## Copps 'Worried' About Transition

### Analog sunset closes in

by Leslie Stimson

LAS VEGAS

In his first Q&A session with FCC commissioners at the NAB convention, NAB President and CEO David K. Rehr dove in with questions about several issues of importance pending before the agency.

potential satellite radio merger.

The urgency of letting the public know about the DTV transition was at the forefront of the discussion. Rehr referred to the Feb. 17, 2009 deadline, saying it's less than two years away.

"We have a coupon program being kicked off by NTIA. We have a car called a 'Digit Washer,'" he said.



Left to Right: NAB President and CEO David K. Rehr, and FCC Commissioners Deborah Taylor Tate and Michael J. Copps

At the NAB2007 FCC Breakfast, some of the topics that made Rehr's hit list included the DTV transition, white spaces, AM radio and the

There's also a cartoon in development to educate consumers about the transition. Rehr asked FCC Commissioner Copps what the

COPPS, PAGE 28



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World Radio History



# DVB Standards Do Not Stand Still

Payload and reception enhancements under way

by Craig Norris

LAS VEGAS

Given the ever-changing broadcast environment, Peter MacAvock, executive director of the Digital Video Broadcasting Project, announced at an NAB press conference that the DVB-T standard will be enhanced.

The new standard is called DVB-T2 and it follows closely behind the February announcement of DVB-SH. The commercial requirements for the DVB-T2 standard were published last month on the DVB Project Web site. The next step will be a call for technologies.

MacAvock pointed out that the DVB-S standard was 10 years old in 2004. It was therefore appropriate to upgrade that standard to DVB-S2 in 2005 to take advantage of a new generation of satellites that were being launched specifically for multichannel high-definition television.

Similarly, with the switch-off of analog terrestrial television services visible on the horizon as early as 2009 in some countries, it is appropriate to define an enhanced DVB-T standard to help broadcasters capitalize on the new opportunities that should present themselves after analog switch-off, MacAvock said.

## NEW SPECIFICATION

The specification for DVB-T2 will be defined by the first quarter of 2008, allowing just enough time for technology to be delivered in 2009. Higher efficiency to enable multichan-

nel HDTV is one of the key drivers behind the new standard.

The DVB-T2 standard will be backward-compatible with DVB-T, will support fixed, portable and mobile receivers, and will have 30 percent more payload capacity than DVB-T. It will also provide the possibility for a 30 percent increase in lateral spacing between the transmitters in a Single Frequency Network.

The other big news from the DVB Project involved the demonstration of

tion conditions (small antenna, high interference and weak signal) will only receive the more robust DVB-H service.

MacAvock asserted that "these broadcasts underline the undeniable capability of the DVB-T standard. Where there is a public demand for HDTV services, DVB standards deliver."

To add real world perspective to DVB's sales pitch for DVB-H, MacAvock was joined in the press conference by Franco Ferri, general manager of RRD (a DVB-H solution

shown that a DVB-H transmitter network can be set up with only about one-tenth the number of transmitters needed for the typical cellular network.

Hiwire's Wills has launched a DVB-H trial in Las Vegas with the intention of eventually rolling out a DVB-H service nationwide. Wills presented his justifications for being optimistic about the potential for DVB-H broadcasting to be a better business than the unicast video download model as used by cell phone network operators. His company's research indicates that consumers prefer to watch continuous long-form streaming video than short downloaded clips. Unicast long-form video does not make economic sense for a telco, but it is imminently suited to DVB-H broadcasting technology.

The Hiwire DVB-H service is expected to provide more than 24 channels of streaming real-time video in 12 MHz of spectrum (two, 6 MHz channels). The video will be full 30 fps with high quality and reliability. The trial in Las Vegas utilizes the LG U900 handset and a T-Mobile RF network on UHF Channels 54 and 59.

Although traditional television broadcasters may be feeling the pressure of unrelenting competition for viewer eyeballs, the expansion of reach to viewers outside of their houses creates an exciting business opportunity for distribution of television content. MacAvock emphasized that the DVB Project is instrumental in the enabling of that expanded reach by wide standardization of the technologies behind it. ©NAB

**"Where there is a public demand for HDTV services, DVB standards deliver."**

**—Peter MacAvock, DVB**

a hierarchical modulation scheme that allows a DVB-T multiplex to contain one or more DVB-H services alongside a high-definition DVB-T service in the same 6 MHz channel.

The DVB demo showed the co-existence of a 13.8 Mbps high-definition television signal and a 5.5 Mbps DVB-H signal within a 19.3 Mbps multiplex. Using hierarchical modulation, the DVB-H stream is embedded as a high priority service within a low priority DVB-T stream. Receivers with good reception conditions (large antenna, low interference and strong signal) can receive both the DVB-H and the DVB-T services. But receivers with poor recep-

provider in Italy) and Scott Wills, president and chief operating officer of Hiwire, a division of Aloha Partners, the largest owner of 700 MHz spectrum in the United States.

## NETWORK CONCERNS

Ferri shared some of his real world experiences in setting up a DVB-H network. He presented the bad news that a company cannot just use existing high-power transmitters on existing high masts for a successful DVB-H implementation. But the good news is that a dense array of smaller transmitters, like in a cellular network, is not needed. Actual experience in Italy has

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# TV Moves From Living Room to Phone

Forget appointment viewing, new media mavericks say

by Scott Fybus

LAS VEGAS

**W**hen consumers want access to video content of their choice on mobile devices, the industry had better not stand in their way.

That was the message of the keynote address at the "Portable! Digital Media Content Anywhere, Anytime," address delivered by Blake Krikorian, cofounder, chairman and CEO of Sling Media Inc.

Krikorian recounted his adventures with an earlier attempt at content distribution, the ill-fated General Magic, a spin-off from Apple Computer. While General Magic was attempting a "top-down," tightly-controlled system, Krikorian said it was blindsided by the organic, bottom-up growth of the Internet.

If General Magic had succeeded, Krikorian said, today's Internet might more closely resemble the cell phone system, dominated by a handful of big

national players.

"Appointment-based viewing is dead," Krikorian said, recounting the long historical move toward consumer-driven media, beginning with the Supreme Court ruling that legal-



Blake Krikorian, chairman and CEO of Slingmedia

ized the Betamax and continuing through today's DVRs and his own company's Slingbox.

That product enables "place-shift-

ing" by allowing consumers to watch their own local programming from wherever they may be.

## VIEWING ANYWHERE

Like those earlier technologies,

rounding the video content on the computer screen.

Krikorian said broadcasters need to understand that challenging new technologies and trying to fight them with legal action doesn't work in today's

**"If it's a hit, it's going to be a hit on pretty much every device."**

**— Larry Gerbrandt, Nielsen Analytics**

Krikorian said DVRs and the Slingbox have faced legal threats from content providers worried about losing money.

"We have to be careful we don't use copyright to protect business models," he said. "It's better to be using that to protect content."

Krikorian said consumers don't care about content producers' bottom lines.

"They don't understand that stuff," he said. "They want their content wherever and whenever they want it."

That increasingly extends to in-home viewing, using the Slingbox to extend TV to laptops around the house.

Krikorian said technologies such as Slingbox can actually benefit broadcasters. By turning every computer into another TV, he says the device has actually tripled or quadrupled the number of places consumers can watch TV content.

## ATOMIC WEDGIE

He said the company's newest offering, a video-sharing service called "Clip+Sling," will offer TV networks more opportunities to sell advertising and reinforce network branding sur-

rounding the video content on the computer screen.

The alternative to embracing new technology is that "people are going to be doing this, people are going to be stealing it, people are going to be sharing it, and nobody's going to make any money," he said.

Following Krikorian's keynote address, CNET editor at large Brian Cooley led a panel discussion about portable media with Maureen Fitzpatrick of Atomic Wedgie/Fremantle Media, Larry Gerbrandt of Nielsen Analytics, Kamil Grajski of the FLO Forum, Stuart Lipoff of IP Action Partners, Daniel Tibbets of GoTV Networks and Scott Goodwin of NAB.

"I think we have reached the moment in time where there are no barriers," Lipoff said. He said the technology and content needed to make mobile video work now exist.

"What's missing is a business model," he said.

One key to that model is simplifying the user interface, panelists said.

"There needs to be a level of quality and an interface people are familiar with," Grajski said.

## Google

CONTINUED FROM PAGE 16

trol of it may be lost. He used this chance to describe how the new model that incorporates user empowerment works in a beneficial way.

### WITNESS THE PROCESS

"I encourage you to put your content online and witness how the process plays out," Schmidt said.

He explained that it is likely to be copied, but this will ultimately build a larger audience base that benefits the content owner or originator over the long term.

The new world is being driven by young people who want to take content and put it on their mobile

phones, iPods and MP3 players and "use them all at once."

The next generation is using media content and molding it to fit their needs. And they are growing up and becoming the new market. These people become media "fans," Schmidt said, and the technologies employed by Google specialize in finding them or making it easy for them to find you.

Another audience member asked Schmidt what he would invest in for the future. His reply came without hesitation.

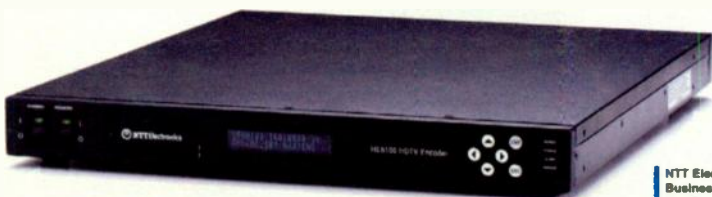
"Mobile devices," Schmidt said. "Mobile devices are the DVD of the new generation. Figuring out how to get your content onto mobile devices is the next big challenge." ©NAB

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## WHAT THE PEOPLE WANT

As for the programming, panelists said consumers seem to want many of the same things on portable devices that they're already watching on their TV sets.

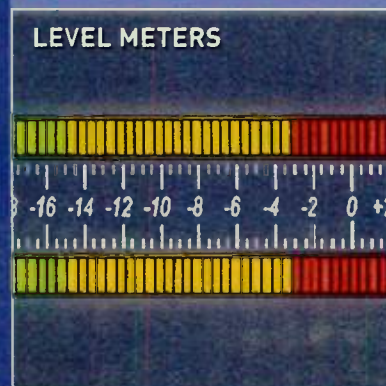
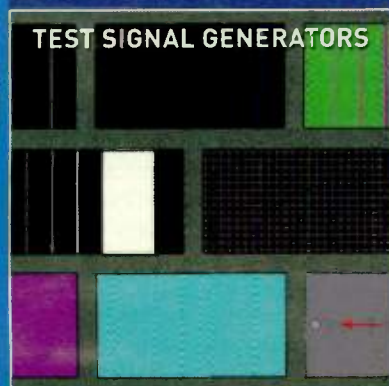
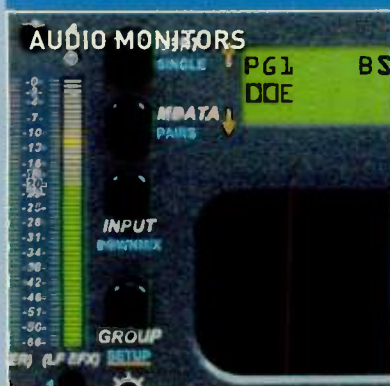
"What may work on a category basis on a cable device is what works on radio," Gerbrandt said, observing that programming where words are more important than images, such as sports play-by-play or drama, works better on a small mobile screen than image-centric would programming such as nature documentaries.

MOVES, PAGE 24



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# Big Pipes Reshape Content Distribution

## Broadband presents opportunities and challenges for broadcasters

by Walter Schoenknecht

LAS VEGAS

According to David Eun, Google's vice president for Content Partnerships, video has a different look and feel for his company than for traditional broadcasters. "As we think about video in 2007, we see a clip-driven culture," Eun said.

Eun delivered the keynote address for "The Revolutionizing Impact of Broadband" session at NAB. The event, sponsored by Level3 Communications, brought together Eun and a panel of broadband-linked industry executives who described the ever-shifting landscape of content distribution.

The inclusion of video content in the Google search suite, according to Eun, was in line with the company's stated mission to "Organize the world's information and make it universally accessible and useful." Google's mission "is really at the core of everything we do," Eun said. "We

want to think beyond the Web page, and go to other types of information."

For Eun, "other types of information" means video. He drew distinctions

between Google's two video offerings—Google Video-accessible content, impartially in-dexed across content types and formats, and the content uploaded to YouTube, intended to be shared between users as a means of interaction. Calling them "parallel but complementary paths," Eun suggested that there was great value to Google, its users and partners in tracking both modes of delivery.



David Eun, vice president of content partnerships for Google

### CONTENT OPPORTUNITIES

"We want Google to partner with content owners," Eun said, offering a nod to his NAB audience, likely to consist of content owners such as local broadcasters. He described several part-

ner relationships in which proprietary branding is applied to a YouTube player, offering a unique identity. "We want to let content owners create channels," Eun

said. But in this open, public space, according to Eun, viewers' true feelings tend to matter more than the hype that may surround content.

"It's not about channel positioning," he said. "It's about what the community thinks of your content."

Eun also sought to assuage broadcasters' fears about the unlicensed use of copyrighted material.

As an example, he described an automated "notification and takedown" mechanism used at YouTube to proactively detect copyright infringement, notify the offending party and summarily remove the content.

But for Eun, Google's mission of making information accessible and usable is in no way incompatible with the monetization of content owners' assets.

"We see ourselves as a conduit, connecting advertisers with audiences worldwide," Eun said. "We help them to find each other in an information-driven way, with metrics and data." With this focus on collecting and reporting viewing habits, Google recently announced what is termed an "early trial" of Google TV Ads, a service intended to deliver data on the frequency and demographic distribution of spot play-outs.

Eun stressed that Google's ability to serve its core constituency relied heavily on having content its users are searching for. "When our content partners do well, we do well," he said.

Broadband Directions President Will Richmond then chaired a panel discussion among industry executives whose responsibilities all relate to

content delivery via broadband channels. Under Richmond's guidance, the panel explored the complex task of managing and finessing the multiple venues used today to reach audiences.

WorldNow President Gary Gannaway cited his company's high volume of locally-originated streams as evidence of continued opportunity for local broadcasters.

"All the video streams we have are local," Gannaway said. "On the revenue side, that's the exciting. Local TV kicks butt!"

Shawn Gold, chief marketing officer for MySpace, acknowledged his firm's role in the content revolution.

"If MySpace has done anything well, it has combined community with content," he said.

### BEFORE IT WAS COOL

The theme of community-building resonated with all the panelists, some of whom noted that local broadcasters built and nurtured community long before the Internet was a dominant force. According to Blake Krikorian, CEO of Sling Media, the challenge in aggregating content is to "... overlay social elements to make it a more engaging experience."

Several panelists described a two-way synergy between broadband delivery and more traditional media. George Kliavkoff, NBC Universal's chief digital officer, offered encouragement to broadcasters: "The studies have shown that watching network shows on the Internet doesn't cannibalize ratings—it drives ratings," he said.

Still, vertical, single-source content delivery sites represent missed opportunity, according to Daniel Scheinman, head of the Cisco Media Solutions Group.

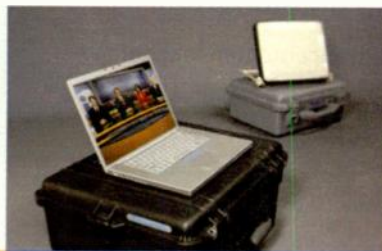
"This is the golden age of the aggregator," Scheinman said. "It's a new type of content, shorter form, but there's more of it." ©NAB

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## Moves

CONTINUED FROM PAGE 22

So far, Nielsen's measurement of mobile TV viewing shows that consumers look at most of the same hit shows on their phones and PDAs that they watch on their TVs, rather than dipping deeper into the vast sea of content out there.

"If it's a hit, it's going to be a hit on pretty much every device," Gerbrandt said.

Simplifying consumer access to that content is critical, panelists

agreed. Gerbrandt cited the Web as an example of successful standardization, where multiple forms of content can all play in a single browser.

Cooley said mobile media consumers who are now confronted by a welter of devices and services that all behave differently need the same sort of consistent experience that drivers expect when they get behind the wheel of any make of automobile.

"The gas pedal has to be on the right," he said.

The Super Session was sponsored by MediaFLO. ©NAB



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# Landrieu Lauds Broadcasters

## First responder proposal tops Louisiana senator's agenda

by Scott Fybus

LAS VEGAS

**B**roadcasters were an essential part of New Orleans' recovery from Hurricane Katrina, Sen. Mary Landrieu (D-La.) said at the Washington Policy & Politics Breakfast at NAB2007.



Sen. Mary Landrieu (D-La.)

"Many of you have been down and put your own boots on the ground, or sent your own people down, and I can't tell you how much we appreciate it," Landrieu said, as she recounted the story of the flooding and devastation in her hometown.

Even now, Landrieu said, the details of the story are not well enough known in Washington. But without the media, she said it wouldn't have been known at all.

"If it wouldn't have been for the broadcasters, I'm not sure this story would have gotten out," she said. "They were the essential first, first responders. I'm sure the police will tell you that if not for the media, they couldn't have done their jobs."

Landrieu talked about the chaotic evacuation of New Orleans after the storm surge, praising local broadcasters—many of whom also lost their homes to flooding—for helping to maintain lines of communication in the days just after the storm.

### THE PROPOSAL

The senator, who chairs the Senate's Subcommittee on Disaster Recovery that oversees FEMA, filed legislation last month that would officially designate broadcasters as first responders.

She cited the example of one Mississippi station that had gone to great efforts to secure fuel for its generator so it could stay on the air, only to be told by a low-level local official that the broadcasts didn't represent an "essential service."

Landrieu said those attitudes are mistaken.

"The people I represent, the only people they wanted to hear were the people on their radios and their televisions, because they could get the true story of what was going on," she said of her bill.

"When you show up at the disaster, you'll be on the list," she promised broadcasters. "You're entitled to food and water and emergency supplies so you can stay in the disaster zone," she said of the proposals in her legislation.

Landrieu praised the local broadcasters in her area for the responsibility they showed in the days after the storm, sorting out facts from unconfirmed rumors. She says broadcasters in other parts of the country can learn from the Louisiana experience.

"One day a tsunami is going to hit Seattle, and one day a hurricane will hit Long Island, and all hell is going to break loose, and you guys are going to be there," she said.

### THE PROGRAM

Landrieu's "First Response Broadcasters Act" also proposes a federal grant program designed to get broadcasters to think ahead of time

about what would happen in their areas if disaster hits. She said the program would include funding to help broadcasters acquire and install backup transmitters and generators to help them stay on the air if disaster strikes.

"Broadcasters, you all are my heroes," Landrieu said, which drew applause from the audience.

She also drew applause when she reiterated her opposition to the proposed XM-Sirius merger, saying she'll work to make sure it does not win federal approval.

The breakfast was sponsored by Online Video Service. ©NAB

# NAB Honors 'Meet the Press'

## Host Russert offers perspective on NAB Hall of Fame Inductee

by Jay Ankeney

LAS VEGAS

**I**n the heat of a political season and in the thick of a changing broadcast landscape, NBC's Tim Russert offered some perspective on broadcast political coverage at NAB2007.

"When I first took over 'Meet the Press' I went to see David Brinkley, who was an icon on Sunday morning on ABC, and asked him how I could take everything I had learned during the course of a week and distill it into one hour," Russert said. "He said, think of it this way: If Moses came down from the mountain-top, how would television news cover the event?"

Russert held up his hands. "Moses came down from the mountain top today with the Ten Commandments. Here is Sam Donaldson with the three most important."

### TODAY'S POLITICS

At the Television Luncheon, sponsored by Microsoft, NBC's "Meet the Press," the longest running television news show, was inducted into the Broadcasting Hall of Fame. Russert, the show's managing editor and ninth moderator, accepted the award and gave the overflow crowd in the Las

Vegas Hilton some perspective on the program's ongoing purpose in today's political scene.

"We are now in the midst of a presidential campaign," Russert said. "It is a unique opportunity for those of us in television news to capture the moment, and to give the voters an open window on this democracy."

"Who are these candidates? What

world of ethereal advocacy media.

"It is important to our democracy that we have people who espouse their views in trying to persuade you of the correctness of them. But I also believe ever so deeply there is a role for a program like 'Meet the Press,' which says the host or moderator does not have views and inject himself into that discussion. It is by asking the very best question he can possibly prepare for, by knowing as much about the issue as the guest that he can elicit from that guest an answer — or non-answer — that the voting public can make their judgment and size that person up."

### MISSION-DRIVEN

That, said Russert, is the mission of "Meet the Press," the most-watched Sunday morning interview program in America and the most quoted news program in the world.

"I can assure you on behalf of all the men and women of NBC News that we are going to cover this campaign in an interesting and meaningful way so that you will be proud of us as fellow broadcasters and journalists, and the American people will truly have the opportunity to make an informed decision based on what they were able to learn by turning on 'Meet the Press.'"

Russert heralded the show's induction into the Broadcasters Hall of Fame by saying, "If you invite the host of 'Meet the Press' back in 40 years at our 100th anniversary, I hope we can proclaim that this program is the longest running program in the history of the world not only for longevity, but for quality." ©NAB

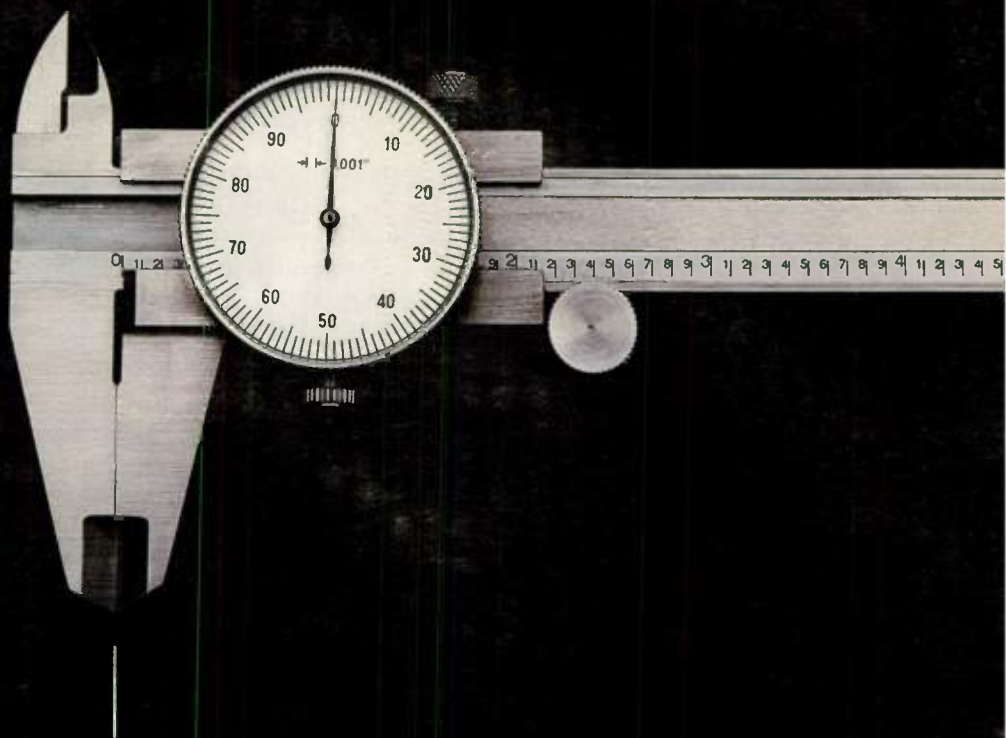


(L to R) NAB Joint Board Chair Bruce Reese, TV Board Chair Alan W. Frank, Tim Russert and NAB President and CEO David K. Rehr



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## Copps

CONTINUED FROM PAGE 18

agency is doing in terms of the transition and if he had any advice to ensure its smoothness.

### DTV TRANSITION

Copps said he's really worried about the transition process.

"We've really got to close business that day or [Rep. John] Dingell's prediction of a 'fine mess' will come true."

Copps likened the preparation process to Y2K, which involved a lot of meetings and outreach.

"This DTV transition is a stealth process compared to that. I think we've got to make sure people know what the sets and monitors are capa-

ble of," he said.

Turning to the "white spaces" issue, Rehr addressed the "move afoot to have unlicensed devices operate on the TV band." NAB believes the FCC "should have command of it," he said, and asked the commissioners what the next steps would be.

Copps said the agency has to protect against unreasonable interference. Testing is underway and the commis-

sion needs to write the rules on this issue. "I think white spaces should be used to advance the common good," Copps said.

Commissioner Deborah Taylor Tate said, "in this discussion of new uses of spectrum we have to remember those who are already there."

Moving onto radio, Rehr joked, "Most nights I don't sleep because of a man whose first name begins with 'M,'" referring to Sirius Satellite Radio President and CEO Mel Karmazin. Now that Sirius and XM Satellite Radio have filed their merger plan with the FCC, Rehr asked the commissioners what the process to handle the merger would be going forward.

Both commissioners noted that the Department of Justice has asked the satellite radio companies for more information, which may slow down the review process a bit, according to Copps.

Tate said her mind is open and she's reading everything she can about the issue. "It's important. It's a big decision," she said.

### SAT RAD MERGER

Copps said he's no big fan of consolidation. Chairman Kevin Martin has indicated "it would be a big climb for him and it would be a steep climb for me, too," Copps said.

One of the questions the agency needs to review is whether satellite radio and terrestrial radio compete in the same market along with iPods and other devices, he said.

Referring to NAB's petition to allow AM stations, in some cases, to use FM translators to fill in coverage gaps, Rehr asked what NAB could do to help the issue move forward. Copps said he "understands there are operational difficulties involved here," yet "others are clamoring for this," including LPFMs.

The issue should be teed up soon, he said, adding that the agency should have a general proceeding so the industry knows what to expect.

Copps brought up Don Imus, recently fired for on-air racist remarks, toward the end of the session when he, Tate and Rehr discussed how to get more women and minorities into station management.

Copps said, "Diversity is not a problem to be overcome. It's an opportunity." The diversity of the U.S. population is not reflected in station ownership, he said. About one-third of the U.S. population is minority, however only about 2 percent of broadcast stations are owned by people of color, and the number of women managers is in the low double-digits, he said.

"And you get something like Don Imus. This is really serious; it's not business as usual. It's got to be different." The country must move forward, he concluded. ©NAB

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# MXF Proponents Seek Real-World Apps

## Standard format sought for file wrapper

by John Merli

LAS VEGAS

**R**epresentatives of nearly a dozen media firms gathered in a show of unity at NAB to demonstrate what they said was growing support for the MXF Mastering Format Project, and to encourage other media and manufacturers to join in the cause.

Periodic format demos were held at the Renaissance Hotel during the show.

### SOMETHING FOR EVERYONE

At a press briefing sponsored by the newly named Advanced Media Workflow Association, proponents underscored their point that supporting the master format project makes sense for all parties.

"There are lots of benefits for everyone by taking a standard like this and making it practical for everyone to use," said Adrian Scott, chief marketing officer of Pro-Bel.

Principal AMWA members include

Adobe Systems, Ascent Media, Avid Technology, BBC, Quantel, Snell & Wilcox and Turner Broadcasting System. The stated mission of AMWA is "to promote the development and adoption of open, accessible standards and specifications relating to file-based workflows... [and] to promote such specifications worldwide, and to create a consumer awareness of, and demand for... products designed in compliance with these specifications."

Sam Pemberton, CEO of Softel, told reporters he believes MXF "represents the future of television." He said one of the big challenges is just getting the message out. "The more the message gets out there," he said, the more real the technology becomes.

The MXF Mastering Format Project was sponsored at NAB2007 by AMWA

after its initial kick-off a couple of years ago under the auspices of TBS.

Various aspects of the project



Panelists at the AMWA press briefing highlighted support for the MXF format.

undertaken by the respective proponents include providing support for MXF workflow in the iCR Repurposing Station at Snell & Wilcox, where MXF files are transcoded at different bit-rates while providing VBI insertion and extraction functionality. For its part, Softel used sample workflows to demo how pre-prepared subtitle content can be added to pre-ingested MXF media files, man-

ually or automatically, using Softel technology (Swift TX).

### KEY MANUFACTURERS

Also, OpenCube Technologies is supplying an updated version of its Toolkit that is completely adapted to the MXF mastering process. This new version of tools (known as MXFTk), is designed to create a cost-effective way to take full advantage of MXF technology, according to the Toulouse, France, firm.

The press conference also included representatives from most of the key manufacturers, including TMD, OpenCube Technologies, Snell & Wilcox, Quantum, Metaglobe, EMC, Marquis Broadcast, and Omneon.

To encourage use of the open format, the proponents—most of whom are competitors in all other aspects of the industry—said they'll promote it worldwide whenever appropriate venues present themselves, and they plan to maintain relations with other standards-setting groups to better ensure format coherence. More information about the format project is available at [www.amwa.tv](http://www.amwa.tv). ©NAB



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# Amanpour Honored With Paul White Award

## First foreign correspondent to receive RTNDA laurels

by Paul Kaminski

LAS VEGAS

Christiane Amanpour's storied career at CNN has been recognized by Emmys, George Foster Peabody Awards, George Polk Awards and an Edward R. Murrow award, among others. At NAB2007, Amanpour received the highest honor bestowed by the Radio Television News Directors Association—the 51st presentation of the Paul White Award, named for the legendary first news director at CBS News.



Christiane Amanpour, CNN

### WORK IN PROGRESS

Amanpour has long been noted as an advocate for quality foreign news reportage, and is the first full-time foreign correspondent to become a Paul White winner. The award was established by the RTNDA in 1956; past recipients include the late Peter Jennings, Walter Cronkite, Murrow, Charles Osgood and Ted Koppel.

Although the award is usually given for lifetime contributions to electronic journalism, CNN International President Jim Walton called Amanpour's award not so much a lifetime achievement award, but "recognition for professional work in progress."

In her acceptance remarks, Amanpour touched on the topics of mass appeal, her idea of what the role of television news has become and what it should be.

"I know that adolescents are the main consumers of mass culture. But I hope that we don't totally surrender the news agenda to them. Our historic role surely is reporting the world, not just enriching our shareholders."

Commenting on a recent poll that suggested a majority of high school students didn't know where Iraq was, Amanpour said, "that's their teachers' problem; it's our problem. It means that we're not doing our job. We have a role to play in enlarging the kind of knowledge that is necessary to survive in today's world."

Amanpour is noted for her reporting from areas of conflict and disaster from the ground in Africa, Europe, the Middle East and Asia.

Amanpour reminded the attendees that the job of the media was to "question, question, question. Our job is to

be rigorous; it's basic. We must surely speak the truth always, whether it's convenient or not. We must never be afraid of power, but we must always hold it accountable. We should never

exaggerate the bad; we should just stay with the facts and the truth."

In introductory comments, RTNDA President Barbara Cochran commented on recent RTNDA freedom of informa-

tion initiatives, the recent firing of Don Imus from CBS Radio and MSNBC, and the Virginia Tech shootings. CNN's Walton introduced Amanpour at the ceremony. ©NAB

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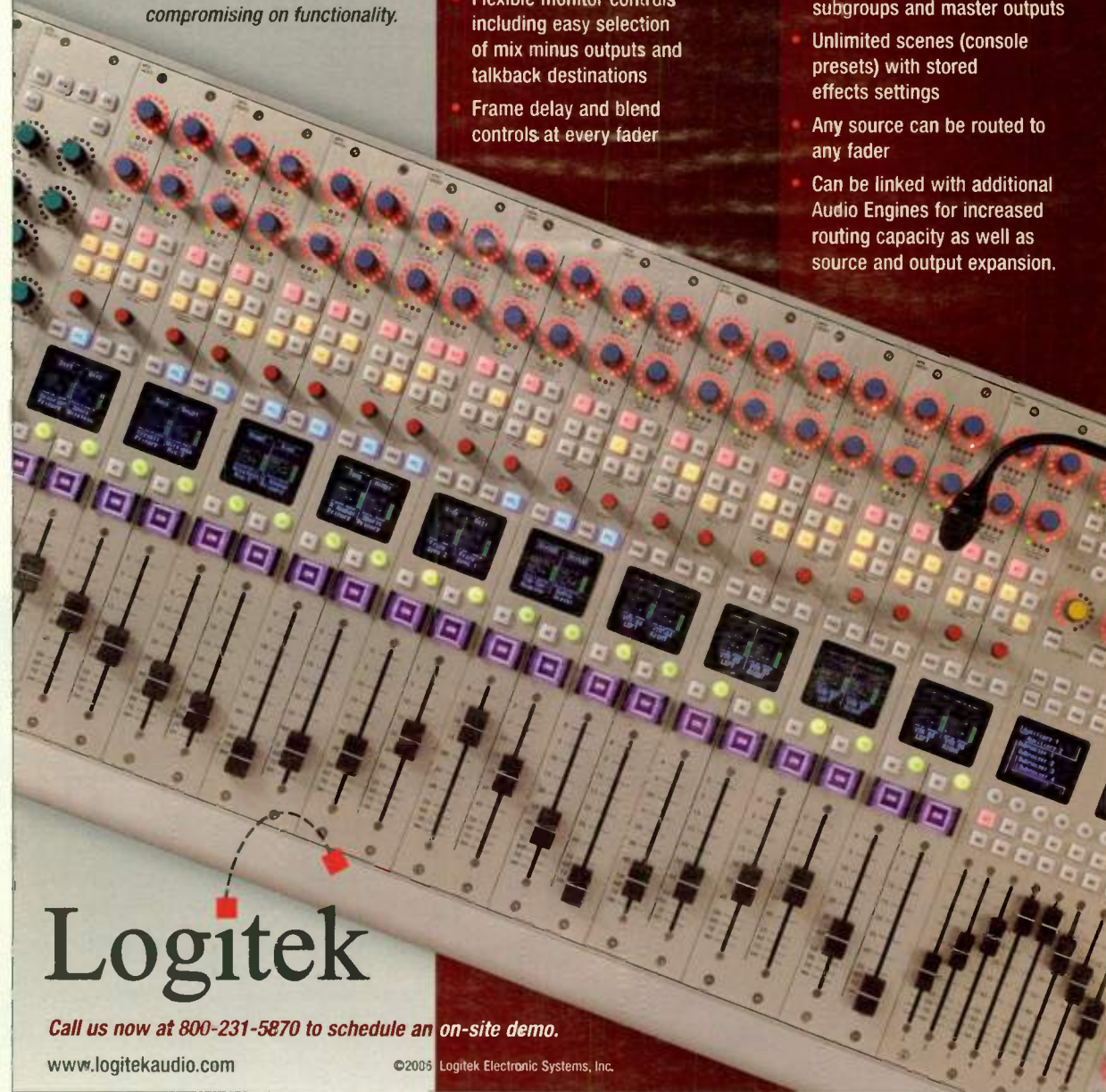
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# Web Content Models Need Context

Filters are considered pivotal

by Tony Ware

LAS VEGAS

**B**usiness success on the Web is dependent on mastering not just content but context, according to Shen Tong, founder and president of VFinity, a Web-native workflow management solution.

Achieving success on Web 2.0 is mandatory to avoid becoming obsolete, Tong said during the NAB2007 Super Session, "Social Networking in the 21st Century."

"When I was running the news center for the student center in Beijing, reporters said my revolution would be televised, and it made the difference," said Tong, who was a student activist during China's Tiananmen Square movement and whose best-selling book on the subject, "Almost a Revolution," is still required reading.

## MANAGED WEB

"Now the next revolution will be social networking," Tong said. "I want to thank NAB for organizing this panel, because it is the most challeng-

ing and important question for media business. It refers to massive growing interactivity."



Shen Tong, founder and president of VFinity

Tong went on to introduce his concept of the managed Web. Tong proposed that everything—from the Amazon model of users reviewing products and rating reviews to actual internal production—will become a network of harnessing context tools and tags.

Tong noted that content is no longer limited by access to the airwaves or shelf space. Everyone has

access to everything, and the Web is taking the place of libraries and archives, traditional broadcasting and means of distribution.

Now the key is in the filters, he said. Customers desire a self-service, self-correcting mechanism more than a dictated product. Manufacturers need to take note, offering a context-centric strategy with highly flexible metadata. Customers will dictate valuable content.

"Gatekeepers are dead," Tong said, stressing people as an integration point of creativity, community and software. "It's not about how you can protect content, it's about how easy you can get content to the context aggregate system."

After Tong demonstrated VFinity's means of creating "dynamic circles," Peggy Miles, session moderator and president and founder of Intervox Communications in Alexandria, Va., introduced the executive panelists. They include David Bankston, executive vice president and chief technical officer of Neighborhood America; Cynthia Francis, CEO of Reality Digital; Michael Gordon, cofounder and chief strategy officer of Limelight

Networks; Suzanne Stefanac, director of the American Film Institute's Digital Content Lab; and Rex Wong, CEO of Dave.TV.

The first thing Miles did was project the cell phone-captured CNN.com video of the tragic shooting at Virginia Tech in Blacksburg, Va.

"News, user-generated, is no longer in the future," Miles said. "Right now it's cached video, but the next generation will be live, mobile Webcasting on the phone."

As she spoke, someone circled the room with a cell phone, images of which were projected with a minor delay through ComVu.

## BUILDING A COMMUNITY

The panel then discussed how the networks are almost instantaneously realizing the value of reaching out to and building the community of potential content providers in the general public.

But with the concept of the medium being available to all came the issues of minimizing risks from legal issues such as libel and copyright infringement. This brought up the importance of filters on both the back and front end, but implemented without saying, "my way or no way."

People now have a digital life that travels conveniently with them, and allows for instantaneous unilateral feedback for strengthening all capabilities. Building affinity almost more than brands, locking in on a community of interest and the "mash-up" of applications and widgets on Web sites were bantered back and forth as the evolution of long-term collaboration.

"The power of social networking is available to everyone; it is not a threat," Tong said. "Like in 'Jurassic Park,' life finds a way. Now content finds a way." ©NAB

## IPTV

CONTINUED FROM PAGE 18

any time. It's not just TV but audio and video as well as weather and traffic info that is distributed over FiOS TV."

FiOS TV is not a pure IPTV application but a hybrid of IPTV and traditional cable TV-style RF distribution. Strickland referred to this architecture as RF IPTV and indicated at the time Verizon planned its deployment of FiOS TV, IPTV was not yet a sufficiently robust or proven

technology. As a result, on-demand and interactive content are delivered using IPTV technology while broadcast of video channels uses traditional cable TV broadband technology.

Omar Javaid of Qualcomm's MediaFLO explained that MediaFLO acquired nationwide spectrum on UHF Channel 55 and created a service provider for the distribution of content to mobile users over that spectrum.

MediaFLO does not have end users as customers but currently works with telephone companies. It is the

telcos that deliver the content to the end user. MediaFLO has already launched with Verizon Wireless and plans to launch an additional service with AT&T Wireless (formerly Cingular) later this year.

IPTV and Internet technology seem to be enabling technologies with the ability to advanced services to viewers. As these technologies evolve and carve out their niche in the marketplace, these technologies and the business plans that embrace them are sure to be topics of discussion at NAB2010 and beyond. ©NAB

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# Digitization Spreads Like Wildfire

Consumers driving technology shift

by Andrew Morris

LAS VEGAS

**D**igitization is causing a "massive transformation" in the media, entertainment, broadcasting and production industries, according to Shane Robison, executive vice president, chief strategy and technology officer of Hewlett-Packard.

"At HP our goal is to build the world's leading technology infrastructure company," Robison said. "When we say information our definition includes rich digital media. We're at a crucial turning point, the tire kicking

Another citizen journalist created a poignant report from the Gaza Strip on the dispossession of an Israeli settlement by Israeli soldiers. The video report from the Gaza Strip was instant-messaged by the video journalist to Current TV.

This presentation clearly stated that it is digitization and an increasingly sophisticated IT infrastructure that makes the work of Current TV and ILM possible.

Robison emphasized that it is consumers who are driving the inescapable move to digitization.

"People are willing to spend money to have fun their way on their terms,"

Robison said. "If you can deliver personalized content to viewers that they can enjoy on their terms, that they can view when and where they want to view it, they will pay a premium for that content."

Robison showed a picture of a warehouse with rows and rows and shelves and shelves of canisters containing film and boxes containing videotape. The digitization of all this content

will provide irresistible business opportunities to those prepared to repurpose and reuse this valuable content.

Robison indicated that new content, which begins its life as a digital asset, offers even greater business opportunities. Digitization offers end-to-end solutions for the seamless creation, management, distribution and consumption of content. Business models that focus on digital solutions are disruptive to current business practices but offer great potential, Robison said.

## FLYING TOMATOES

The Super Session also featured HP's efforts in the gaming space and an appearance by Olympic gold medalist Shaun White (the red-haired snowboarder known as "The Flying Tomato"). White demonstrated a race car video game that included digitized feedback to the chair in which he was seated.

Robison indicated HP is deeply involved in the hardware and software infrastructure that is making end-to-end digitization possible. It seems clear that HP believes digitization will have profound effects on the world of media and entertainment and on consumers who enjoy media and entertainment products. ©NAB



Shane Robison, executive vice president and chief strategy officer of Hewlett-Packard



Peggy Miles of Intervox Communications

phase is over, everything is going digital. Today, we're on a path to digitize every step in the production and use of digital media from the concept to how you script it and create it, right down to the end user experience."

Robinson made his remarks during the NAB2007 Super Session, "Digital Content: The Race is On." The session was moderated by Peggy Miles of Intervox Communications.

## EVERYTHING GOING DIGITAL

Robison discussed how creating a true end-to-end digital supply chain by connecting the islands of digitization that exist in the media space today will irrevocably alter the worlds of both old and new media.

James Tooley of Industrial Light and Magic was on hand to discuss the increased use of digitization and computer graphics techniques in the production of the second "Pirates of the Caribbean" movie.

Joel Hyatt, CEO of Current TV, provided examples of user-generated video content that makes for compelling television. These included virtually real-time reports by a citizen journalist from New Orleans on rescue efforts in the immediate aftermath of Hurricane Katrina as well as commercials for Toyota.



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# Sony: HD Gear to Suit Every Application

## New flash memory XDCAM, F23 digital cine camera debut

by Craig Johnston

LAS VEGAS

**S**ony came to NAB2007 packing HD products and systems to suit every professional application, from affordable handheld HDV camcorders to high-end CineAlta digital cinematography camera systems.

It was all in keeping with Sony's NAB theme, "HD for All: Real Systems, Right Now."

The theme refers to the practical requirements of today's broadcast infrastructures based on the MPEG-2 codec, said Alec Shapiro, Sony's senior vice president for sales and marketing.

"High quality at low bit-rate is just the beginning," he said.

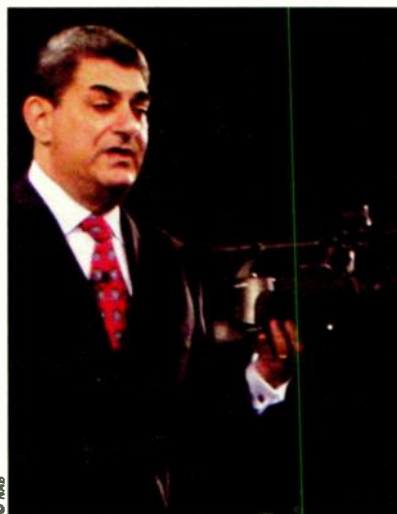
Broadcasters are asking how fast PC software will be able to encode or decode HD, how much network bandwidth encoded HD will eat up, how much server space encoded HD will require and how much third-party support a codec has today, Shapiro said.

### WHAT'S NEW

Sony spotlighted several new XDCAM HD customers, including CNN, slated to begin using XDCAM HD camcorders and decks for ENG and news production applications. At the station group level, Shapiro pointed to recent XDCAM HD purchases by Hearst-Argyle, Belo Corp., Pappas Telecasting, Albritton Communications and Tribune.

Shapiro unveiled a flash media version of the XDCAM, the XDCAM EX,

due out this fall. The camera records to ExpressCard high-speed flash media. Sony and SanDisk Corp. announced that the two companies have agreed to a memo of understanding with the intention of developing the SxS (S-by-S) memory card specification.



Alec Shapiro, senior vice president of marketing for Sony Broadcast, introduced the Sony XDCAM-EX at NAB2007.

Also new was a 2/3-inch 3-HD progressive imager 50 Mbps 4:2:2 optical disc recording camcorder, due out next winter. The company also showed its next generation of Professional Disc media, a dual layer version with 50 GB capacity that doubles the record/playback time.

"Our XDCAM series of products, and all our products, will continue to evolve to meet the needs of the industry and continue to offer flexible, more capable and more affordable

production systems," Shapiro said.

For studio and remote applications, Shapiro announced purchases by the multimedia retailer QVC and NEP Broadcasting, the leading mobile production company in the United States. QVC is upgrading its broadcast operations to high-definition technology with Sony HD studio cameras and production switchers.

NEP is installing 150 Sony high-definition HDC-1500 series cameras across its operations during the next two years. Shapiro noted NEP's order was the largest single camera order in Sony's history.

This year, Sony also is introducing the SONAPS HD newsroom system, providing MPEG-2 recording in high definition as well as standard definition. It offers newsroom computer integration with Avid iNews and ENPS, and tight integration with the Omneon Spectrum play-to-air server. Omneon is using Sony's MPEG-2 codec in its server products.

Another networked HD product is the HDXchange shared storage system. It is designed for workgroups, and holds up to 250 hours of material. Features include proxy generation and browsing, multiple simultaneous access, and flexible ingest, export and archiving.

Announced earlier in the year, Sony's F23 digital cinema camera made its NAB debut. It features 1080/60p capability and 4:4:4 RGB data output, and is shaped like a traditional film camera rather than a shoulder-mount portable camera.

Sony also announced it has upgraded the MVS-8000G live pro-

duction switcher to offer smooth SD to HD migration. There is also the HDC-1400 dual-format camera, a lower cost version of the HDC-1500 for broadcasters who don't need full multiformat capabilities.

Sony's SXR projection systems are becoming the de facto standard for movie theaters, with movie chain Muvico installing 4K projectors for 18 screens at a theater entertainment complex. The company plans to similarly equip its 12 other complexes.

Also, the Smithsonian Institution's National Museum of Natural History purchased 15 SXR 4K projectors for its "Oceans" exhibit, scheduled to open in the fall 2008. Sony kicked off the press conference with a short 3D video of NBA All-Star game highlights, using the SXR 4K projector.

Sony showed its first LCD critical evaluation monitor, the BVM-L230 LCD unit. The monitor incorporates 40 separate Sony-patented innovations for video monitoring technology, and includes a customized full high-definition LCD panel, a high-precision proprietary backlight system and an enhanced display engine.

The company also upgraded its line of Luma production monitors, with features like 1920x1080 resolution, 1080/60p input, backlight control, waveform monitor, audio level metering and closed caption capabilities.

Another introduction: An upgraded version of the Anycast Station live content producer system. Anycast Station's internal signal core has always been high definition. The new upgraded system is preconfigured with HD interface cards. ©NAB

# Miranda Hones its HD Target

## New products minimize multiple processes

by Geoff Poister

LAS VEGAS

**M**iranda's Michel Proulx outlined a sharper focus on helping local broadcasters respond to the increasing pressure of transitioning to HD.

"Our goal is to simplify the infrastructure so that it is more affordable," said Proulx, Miranda Technologies chief technology officer at NAB2007.

He stressed that the company's mission has become more focused on condensing operations that require numerous hardware interfaces into fewer more efficient units.

"As one of our customers put it, we

want fewer moving parts," Proulx said. And to make his point, he showed how a typical data flow from router to fiber output requires five hardware interface cards. Miranda has reduced the process to two cards, resulting in greater simplicity and cost savings.

### FEWER COMPONENTS

Proulx said that Miranda is basically in the business of taking multi-step systems and designing innovative solutions that offer more functionality with fewer components.

This mission, along with the decision to concentrate on helping local broadcasters succeed with original HD production, has culminated in this



Michel Proulx, Miranda Technologies chief technology officer at the company press conference.

year's product line, which is unified by this strategy.

The Kaleido-X multiroom, multi-image processor was shown at NAB2007 for the first time. The primary function of the Kaleido-X is to create a virtual monitoring display that allows unlimited sizing and repetition.

To create "fewer moving parts," the Kaleido-X also has a built-in router. This allows signals to be accessed for other operations such as camera shading. Another feature of the Kaleido-X is multiple algorithms that resize images of different source sizes at a much sharper resolution than previously available.

MIRANDA, PAGE 42



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# Grass Valley Introduces New Leadership

## Thomson telecom veteran marks first NAB

by Tom Butts

LAS VEGAS

**G**rass Valley marked NAB2007 by formally introducing its new leader, Jacques Dunogu , to the broadcast industry.

Although it was the first NAB show for the Thomson executive, he was more than prepared for what he expected to be "a baptism by fire."

As the senior executive vice president in charge of Thomson's Systems division, Dunogu  oversees the entire Grass Valley professional video division of Thomson, which has transformed itself over the past decade from a consumer products company to a solutions provider for the media and entertainment industries. Dunogu  plans to continue that evolution.

"The mission of the systems division is simple—to be the market leader in the three interrelated markets—broadcast, networking and remote access," he said at the company's NAB2007 press conference.

Dunogu 's experience in Thomson's telecommunications initiatives—including the development of IPTV technologies for the company—gives him a solid footing for leading Grass Valley into the networked video future.

"I've been in telecommunications all my life," he said. "I lived through the convergence of communications and IT technology."

Dunogu  is also well aware of the importance HDTV plays in Grass Valley's future, but he stressed that, "in order to be everywhere, HD must be affordable."

### HD NEWS

HD news is a primary market for Grass Valley. From small to major U.S.

markets, increasing numbers of broadcasters are integrating Grass Valley systems, including Aurora Edit, Edius editing systems, K2 media servers and Ignite news automation production systems.

The LDK 8000 HD camera, which was introduced last year, is off to an impressive start, according to Jeff Rosica, senior vice president for Grass Valley Broadcast and Professional Solutions.

The camera, which supports the widely deployed 1080i and 720p formats, also acquires video in the emerging 1080p format as well. Since hitting the market last fall, Grass Valley has sold more than 300 units worldwide.



Jacques Dunogu  addressed his first NAB press conference as senior executive vice president of Thomson Systems.

The camera targets a range of applications; for example, mobile production provider NEP Supershooters will deploy the LDK 8000 for sports, and Discovery Communications plans to use the cameras for documentaries.

HD adoption is not restricted to the United States, however. For mobile production, Grass Valley announced that it is building a high-definition production truck for German sports outside production company TV-Unit

GmbH. The \$4 million, 54-foot-long truck with an expanding side will be outfitted with 12 Grass Valley LDK 8000 HD cameras, two Kayak HD production switchers and a Trinix digital video routing switcher.

Grass Valley has also been commissioned to design and build a new completely tapeless news production system for CET 21/TV Nova in the Czech Republic.

In addition to its Infinity tapeless production systems, due for delivery this summer, Grass Valley debuted several other new products to promote HD adoption.

The Infinity cameras will sport the new Grass Valley Xensium imaging chip, a native high-definition CMOS

compressed material, saving up to half the bandwidth of existing encoders.

On the server side, the Grass Valley K2 Media Server and Media Client has posted sales of more than 1,000 units worldwide since its introduction in the fourth quarter of 2005. In addition to new features for the storage system, Grass Valley introduced a new version, the K2-SDA-22, a low-cost, SD K2 client workstation with analog audio and video capability.

A new version of the Edius nonlinear editing system featured a new GUI design, added format support and the ability to import/export AAF and GXF, simple DVD authoring and support for VME.

### MOBILE TV

For mobile TV, Grass Valley offered the Kalypso Mobility Demonstration at its booth in the North Hall. The demo showed how Kalypso could take a live broadcast and substitute larger images and graphics designed for cell phones and PDAs without adding any additional production switchers or requiring any additional staff.

A feature called "DoubleTake" divides the four keys in each M/E

into two separate background transitions, and once programmed, the functionality allows for shots on the main broadcast feed to be automatically substituted with alternative pre-programmed material.

To manage video and audio content, Grass Valley rolled out ContentShare2, an open, service-oriented architecture designed to manage workflow across the entire production and business chain.  NAB

**"In order to be everywhere,  
HD must be affordable."**

**— Jacques Dunogu ,  
Thomson**

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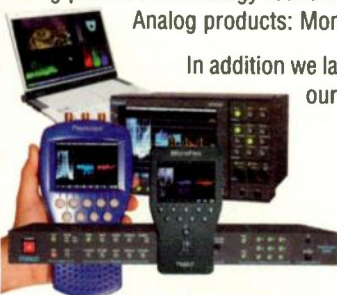
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have leveraged technology from other business sectors that specialize in point-to-point and point-to multi-point wireless solutions, for industrial, broadband, and network service providers.

The DTV product line

provides the user with an array of interfaces including: DVB-ASI, SMPTE-310, Ethernet, and T1/E1. The digital modulation utilizes Reed Solomon and Trellis coded error correction scheme, to provide an unparalleled error free performance. User flexibility allows the bandwidth modulation scheme (4-256 QAM), and the data rate to be varied by the broadcaster (20-155Mbps.).

The applications for DTV-Link provide multiple SD or HD video channels over a single RF link. The DTV-Link is available in a range of RF frequencies from 2 GHz – 13 GHz.

Nextel 2GHz relocation requirements can be fulfilled with the Event-HD series, which was developed for broadcasters, with their changing RF bandwidth needs. The Nextel requirement is forcing some channels to 12MHz and others to maintain 17MHz. In the future the FCC can change these bandwidths.

The key features of the Event-HD are the fast acquisition and locking mechanism for ENG requirements and overhead channels available to provide GPS information back to the central receive system with less than 3ms delay.

The changing technology in video compression, as seen in MPEG2 (est. delay 3-20 frames), MPEG4 (est. delay 10-100 frames), JPEG2000 (est. delay 1 frame), require flexibility of high data rates.

The DV-Mux allows broadcasters to use the Telco network with leased DS3 line, which can provide DVB-ASI, SMPTE-310, Ethernet, and T1/E1.

The application for the DV-Mux was used by a Fox station in New York, which fed SMPTE-310 and 19Mbps of DVB-ASI through a leased DS3 line from their local telephone company. This is how the station was able to get out of crowded New York without the ability of microwave radios.

The Event IP product allows broadcasters to convey ASI video over ordinary high-speed Internet Protocol connections. Video can be transported anywhere in the world that has a high-speed connection.

Mr. Moseley, currently retired, was the first to develop a wireless audio link between studio and transmitter broadcasters for their listeners. In upholding this legacy, the DTV continues to provide premium digital products for the broadcasting industry.

Moseley Broadcast, Axxcelera and Carriercomm comprise the Moseley Wireless group, with offices and manufacturing in Santa Barbara, San Diego, San Jose, CA, Richmond, VA, China, United Kingdom, and Brazil. ■



**2GHz BAS  
Relocation**

**Moseley**

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## Longevity, Stability and Functionality Made Simple

**F**or over 15 years, vendors and end users alike have sought out the engineering team at NVerzion to design and develop software solutions

to run their broadcast and associated A/V processing facilities. Working closely with broadcast engineers and large hardware manufacturers, NVerzion has developed an extensive suite of software products including: television automation software, traffic interface software, satellite delivery solutions, archive

interface software, asset management software, fully integrated hardware/software solutions, and complete facility design.

NVerzion engineers were among the first enlisted to develop and implement digital technology software solutions. With that expertise, NVerzion has been called upon to engineer solutions for educational facilities, the space industry, various government agencies and a wide variety of other industries not traditionally associated with broadcast. Nearly two decades after the company first opened its doors, NVerzion is now positioned among the top software solutions providers in the broadcast and content delivery markets and has software operating and supported around the globe. Support is paramount to NVerzion which has never backed away from a product. Solutions created in the 80s are still running and fully supported by NVerzion. To ensure smooth, economic upgrade paths for its customers, virtually every previous generation product can be integrated into NVerzion's newer solutions. Support continues to be one on one. Calls in to NVerzion's support staff are answered by an experienced engineer dedicated to finding an immediate solution to the problem at hand.

Longevity and Stability are of key importance to NVerzion whose employees truly love the business. Wholly owned, NVerzion is one of the oldest in the industry and continues to make plans to offer even better services and support for its customers in the future. In 2006, NVerzion moved into a 5700 sq. ft. building, providing the company space for a brand new sales department as well as complete demo and training facilities. NVerzion's customers have always been considered the company's greatest asset, and in response, the majority of NVerzion's business is either repeat business or referral. Today, NVerzion solutions are installed in over

100 locations, managing billions of dollars of assets.

At NAB 2007, NVerzion demonstrated a new solution marrying two operating systems, Linux and Windows. These two operating systems each offer certain benefits over the other, and this new solution takes advantage of the best of both. This new solution harnesses Linux to manage back end applications such as machine control, archive management and data movement. Front end applications, including a brand new fully configurable GUI, is performed by Windows. As always, all communications between applications is across the network, giving the user control from anywhere to anywhere as well as virtually unlimited expandability.

In February 2007, working with two other major software/hardware vendors, NVerzion was able to demonstrate a 10 year dream of creating a file-based-only distributable solution for Public Television Stations. This fully automated system allows the movement of audio, video and metadata from any point to any point. It interfaces traffic at every station in concert with the local video server, the local archive and the local automation system. The conceptual solution was so elemental, that it took just a few hours to set up the demonstration and have it theoretically functional. This same PTV solution is fully useable in any other industry that wishes to have a simple, cost efficient and powerful solution for the movement and management of their assets.

NVerzion sells automation packages as straightforward as small, single channel, cost-effective modules to full scale, multi-channel stations with integrated near and off line solutions, as well as automated asset preparation and distribution.

During NAB 2007, NVerzion showcased what it can do for your environment, and also asked for your input. We love this business and we look forward to any opportunity to talk about it. ■



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## Pro-Bel: Engineering the Broadcast Future

**P**ro-Bel enters its 30th year with its traditional values of reliability, integrity and innovation intact and with an exciting range of ground-breaking new products due to be launched during the year.



Masterpiece, with Pro-Bel's wide range of control panels.

Pro-Bel offers the systems, the services and the know-how to help broadcasters design and implement the infrastructures they need to achieve business success. The Pro-Bel range covers routing and switching, automation, media management control and monitoring, and modular infrastructure.

### NAB 2007 Highlights Included:

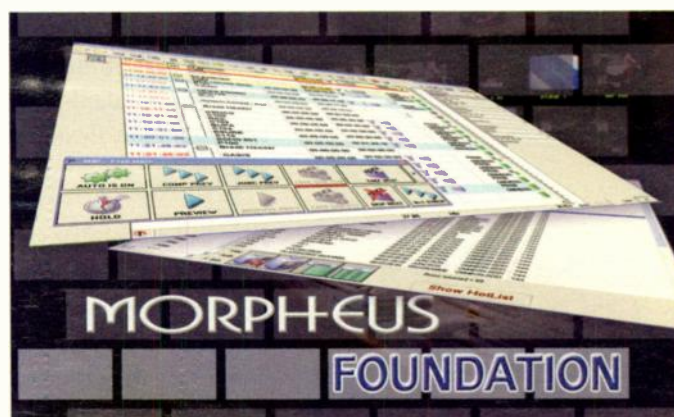
**CYGNUS** – A brand new router, Cygnus combines a compact form factor with the latest technology in a cost-effective package. Cygnus is 1080p 3Gbit/s native and offers up to 576 x 576 routing in a single 26U housing, including PSUs with industry standard BNC connectors. There is also a 288 x 576 18U version. Other features include redundant crosspoints and dual redundant power supplies and controllers as well as four reference inputs. This allows for frame accurate switching at the correct point for multi-standard operation or simulcast HD/SD. Cygnus adds significantly to Pro-Bel's existing comprehensive router range, which covers all options from the very large to the very small.

**MORPHEUS FOUNDATION** – NAB 2007 was the show debut for **Morpheus Foundation**, announced earlier this year. As Pro-Bel's new entry-level automation system, it offers many of the advanced features of the company's flagship Morpheus system (as used by some of the world's leading broadcasters) but in a compact and low-cost package suitable for one to six channels. A wide variety of new features and options for **Morpheus** itself will also be on show, ranging from ingest, to media management, to advanced creativity tools.

**MORPHEUS CONTROL AND MONITORING** – The latest version of **Morpheus Control and Monitoring (MCM)** will be demonstrated. This is Pro-Bel's emerging enterprise-wide management application, which is designed to provide an over-arching command-and-control capability across the entire content production and delivery infrastructure. New for NAB 2007 was the inter-

face to Pro-Bel's extensive Vistek range of modular products, complementing the existing suite of Pro-Bel router and master control management tools available in MCM. The latest version of the designer permits users to fully customize their own displays and create control sets that are abstracted from the physical hardware and signal flow. Status feedback from Morpheus Automation software is also provided in the MCM environment. Moving forward, MCM will also include control for third party devices. This was highlighted at the show, with control of a VGA switcher forming part of the demonstration.

**VISTEK MODULAR INTERFACING** – **Cifer**, Pro-Bel's groundbreaking standards converter, now offers full bi-directional conversion at HD 1080i and 720p combined with up/down format conversion, and uses the unique ASP-mc (Advanced Sub-Pixel Motion Compensation) technology to guarantee breathtaking picture quality. Also on show was the latest version of **Valid8**, Pro-Bel's unique SD/HD infrastructure analysis tool, the complete answer to lip sync issues, which now includes a new feature using compact flash memory to allow a user instant recall of up to 64 separate sets of audio and video idents.



**MASTERPIECE** – housed in a single 2RU frame, Masterpiece is Pro-Bel's HD and SD master control switcher. Based on many years experience of designing state of the art digital switchers, it is the most advanced and most cost effective solution yet conceived. As well as an HD DVE, which provides 3D perspective effects on two planes of video, Masterpiece options include Dolby E decoders and encoder, a logo store and a clip player for inserting short audio clips and jingles into the 'Audio Over' paths. Masterpiece benefits from four downstream keyers, each with external Key and Fill inputs and a Preview output. Unmarried audio selections and offset timings (audio lead and lag) are supported. All embedded channels of audio are mixed or faded in a multi-level audio mixer while video transitions include Mix, Wipe and Fade. ■



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## openGear is Revolutionizing the Terminal Equipment Industry

The terminal equipment industry has long been a commodity type business with multiple vendors selling similar conversion equipment. This leads to customers being locked into one vendor's frame standard for terminal equipment solutions. Ross Video initiated a movement at NAB 2006 to completely revolutionize the industry with the launch of openGear.



openGear is based on the open-architecture 2RU modular frame designed by Ross Video, a leader in video switching, processing, and distribution technologies. The platform allows other vendors/partners to design and participate in developing a common broadcast standard frame and control system. As technology continues to advance it is imperative

that the industry move toward common standards to give broadcasters maximum flexibility of choice in equipment solutions.

### For the Industry

openGear is moving the industry toward a common platform with common standards and accelerating technological advancements for terminal equipment. In the past, the general business case was to lock the end user into a proprietary solution, forcing the customer to return to a single sourced supplier for all of their solutions. openGear has evolved with numerous manufacturers, worldwide, designing and developing solutions for a common platform.

### For the Broadcaster

openGear as a broadcast standard offers the broadcaster the ability to standardize on a frame architecture using a multi-vendor solution with a consolidated control system. Broadcasters have the ability to select solu-

tions, best of breed, from numerous manufacturers, no longer being forced to a single source offering. Many manufacturers specialize in areas of expertise, video processing, audio processing, fibre, compressed domain processing, etc. An open architecture allows the broadcaster to select the best solution from a variety of manufacturers without having to sacrifice interoperability.

### For the Manufacturer

The open architecture allows broadcast manufacturers the ability to excel in their areas of expertise without being penalized for not offering a complete portfolio of products. A well-defined communication standard, internal to the frame, ensures that all openGear modules communicate to the control system. The flexibility of the rear module I/O allows all manufacturers the ability to design custom connections for their specific application. openGear allows manufacturers, large and small, some that may otherwise be excluded from the industry, to participate and offer solutions in a card modular format.

openGear as a common platform with common standards is taking the broadcast industry to new levels, allowing manufacturers to concentrate on innovative solutions, and offers broadcasters the flexibility of choice in selecting their terminal equipment.

### openGear Partners

Ross Video  
Cobalt Digital  
Ward-Beck  
Claratech  
B&M  
Wohler  
Telecast  
Chromatec  
Practel  
Algolith  
BAL Broadcast  
Norpak  
Redbyte Design

### Award Winning

- NAB 2006 Award for Innovation in Media (AIM)
- STAR Award for Superior Technology, awarded by TV Technology magazine.
- Gemini award for Outstanding Technical Achievement by the Academy of Canadian Cinema & Television. ■

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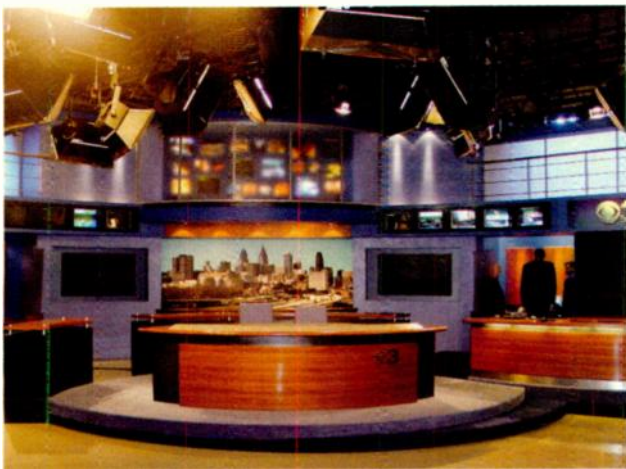
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## Videssence Fluorescent Lighting and HDTV

The onset of High Definition TV has really raised the bar for lighting design on sets and broadcast studios. Many "old school" lighting designers that would never consider fluorescent fixtures in the past are now taking a second look. Why? Because the



good news and bad news about HDTV is that it shows infinitely more detail in the broadcast image than prior technology. This creates particular problems for Quartz fixtures, while Videssence's fluorescent fixtures offer solutions. The harsh, hard edge shadows created by quartz fixtures might be fine for artistic interest, but your "talent" does not want every flaw and wrinkle in their face highlighted in the same fashion. Fluorescent

lighting fixtures produce a much softer, flattering, more diffuse light. Not only will your "talent" look better, but because of the low heat emitted, they will also be more comfortable!

Videssence originated energy efficient fluorescent lighting for television, studio, ENG, and corporate video conferencing in 1981. They offer a variety of fixed and portable lighting products and kits which provide: high level artistic performance; reduced energy consumption; lower heat levels for talent comfort; and long lamp life.

### Fluorescent Fixtures & Systems for Studio, Broadcast & Video:

Videssence offers the largest variety of fluorescent studio fixtures on the market. Numerous models are available for all lighting design needs from Key, Fill, and Back Lighting to beautiful, evenly lit Chromakey areas. Debuting at NAB 2007 was the new "Colorcaster" which offers a full palette of color to accent your set design. All studio style fixtures may be ordered in dimming or non-dimming versions, and numerous accessories provide control of intensity and beam angles.

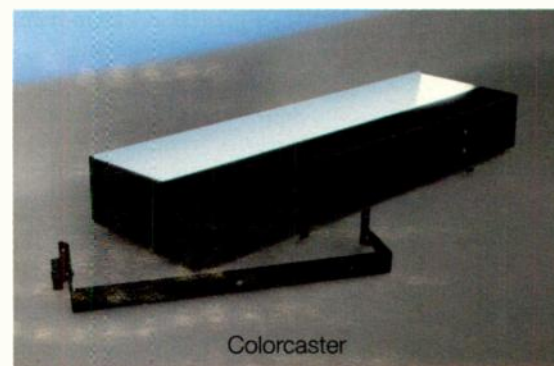
The **POWER KEY** fixtures are the super-stars of our studio line. These patented fixtures are the only fluorescent, adjustable beam fixtures in the world. They provide concentrated even coverage

and a beam adjustment without additional accessories from 60° to 90°.

Additionally, Videssence offers several "**Lighting System Packages**" to take the guess work out of lighting design. Packages cover everything from a one- to four-Person Broadcast/Interview Desk to Chromakey Walls and more.

### Fluorescent Lighting Kits:

Videssence has 10 diverse, fluorescent lighting kits available. They range from high light output fixtures and accessories in heavy-duty flight cases to extremely compact ENG or OB kits that weigh less than 35 lbs. and only require 2.5 amps to operate. All kits are provided with stands, lamps, and case. Many have accessories and additional lamps.

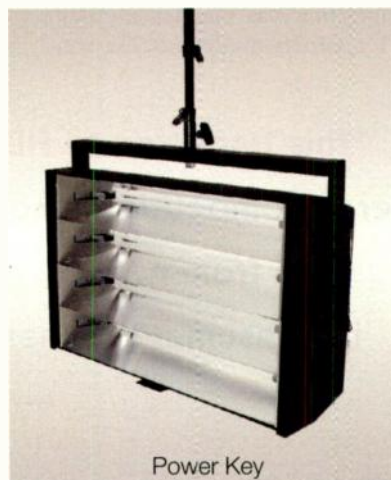


The most exciting kits right now are the **BABY BASEKIT** and the new **SHOOTER KIT**. Both are lightweight with low power consumption —perfect for mobile media!

### Corporate Video Conference – Distance Learning:

Corporate broadcasting for Video Conference and Distance Learning spaces are becoming very common, and recessed fixtures with their architectural design are much more desirable. Videssence offers three different styles in our "Soft" line of products that provide a broadcast quality image without the "studio look". The **SOFTLITE**, **SOFTKEY** and **SOFTWASH** fixtures may be ordered for Drywall or T-Bar ceilings and are also available for surface mount installations.

Videssence continues to take advantage of new technology to engineer quality products that the industry has come to recognize and expect. They set the pace, while others follow. ■



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# Harris Wraps Unity and Mobility

## Disparate divisions brought together as ONE

by Deborah D. McAdams

LAS VEGAS

**H**arris introduced 47 new products at NAB2007 with the over-riding goal of keeping them all united as ONE. Executives discussed the issue at the Harris NAB2007 press conference at Caesars Palace. Officials from LG Electronics also joined the Harris folks to talk about MPH, the mobile DTV transmission format that was demoed in a little black bus on the streets of Las Vegas.

ONE is an effort on the part of Harris management to bring together the assets of multiple and sundry companies and divisions.

"We're a number of different businesses," said Tim Thorsteinson, president of the Harris Broadcast Communications Division. "The managers' jobs are to integrate that into 'ONE.'"

Brian Cabeceiras, vice president of strategic marketing and technology for Harris Broadcast Communications Division, went on to provide a few more details about the ONE initiative. He said it was started last year at IBC at a personnel level; e.g., a given customer would have to deal with only one person in sales and one in service.

"Now," he said, "we want to cherry pick the best technologies and transfer the idea to workflows."

### ONE FLASH OF LIGHT

Cabeceiras said Harris had identified seven specific workflows the company's products could cover end-to-end, such as business operations, media management, newsroom editing, core processing, channel release, media transport, and of course, trans-

mission.

In the way of business operations and media management, for example, Harris offers the H-Class line. H-Class gear handles media assets, sales, scheduling, traffic and billing, among other tasks.



Harris Centrio display

For channel release, Harris rolled out the Channel ONE, a series of equipment and systems for getting a channel on the air. The single chassis configuration handles graphics ploy-out, animations, live video and clips, audio, external data feeds and master control.

Cabeceiras said that with Channel ONE, an SD channel could be launched for less than \$20,000; and one HD channel for less than \$30,000.

One of the many new products in the Harris line that made its debut morphed out of the ONE philosophy. The Centrio multi-image processor unites routing and monitoring applications with a graphics engine, all integrated into a configurable display.

In the North Hall, Harris showcased HD Radio, conditional access

and surround-sound technologies in conjunction with iBiquity, National Public Radio, Neural Audio Corp. and NDS. A new HD Radio electronic programming guide from Harris and iBiquity premiered, along with a new version of the Harris Sage ENDEC

be that ATSC adopts the Harris/LG technology as the standard, similar to the way 8-VSB, developed by LG's Zenith division, was adopted as the terrestrial DTV standard.

A few ideas for business models were proffered—from free TV to sub-

**"We're a number of different businesses. The managers' jobs are to integrate that into 'ONE.'"**

**—Tim Thorsteinson, Harris**

emergency alert system product.

### GIVING TV A RIDE

While MPH—mobile, pedestrian, handheld—has been widely publicized, the mobile DTV transmission initiative generated the majority of questions at the Harris event.

How was it related to the nearly concurrent announcement from the Advanced Systems Television Committee that it would immediately begin standards work on mobile DTV transmission? What was the payload? What were the technical details? What business models were being discussed?

Executives on hand said the ATSC and Harris/LG projects were unrelated, at least in terms of their launches. However, it may very well

scription packages. Simply rebroadcasting the main channel is currently most attractive, given previous attempts at mobile pay TV—notably, Verizon's VCast—which have not been as popular as anticipated. (The early incarnation of VCast did not have real-time, broadcast-quality video. Qualcomm's MediaFLO technology changes that game.)

No technical details about MPH were imparted at the press conference, but a few made it into the press kit:

"MPH is significantly more bit-efficient than a competing system, offering for example, 1.1 Mbps of payload in a 4.4 Mbps channel, compared to the competing system's 0.5 Mbps payload in a 5.08 Mbps channel." ©NAB

## Miranda

CONTINUED FROM PAGE 34

The result is a monitor wall where all images from sources of various size and resolution can be scaled to any size while maintaining the highest possible image integrity.

### ALL THAT JAZZ

Proulx also announced the launch of the Jazz-800 single/dual channel, universal signal processor. The built-in HD/SD linear standards conversion simplifies signal processing in mixed format environments fulfilling the need, for example, of converting HD-SDI from 1080i/50 Hz to 1080i/59.94 Hz.

Another introduction to the product line was the Densite XVP-1801 modular up/down/cross con-

Densite Series.

The fourth new product offering, the Image 750, provides HD/SD

**"This transition to HD is being driven by fierce competition among broadcasters and pressure from networks, as well as the boom in consumer purchases of HDTV sets."**

**—Michel Proulx, Miranda**

verter with AFD and background keying. This new interface brings advanced HD processing to the

master control switching plus multi-level channel branding graphic using four keying layers.

Proulx emphasized that these new product developments were part of a company strategy to help local broadcasters deliver superior HD programming. The pressure, he asserted, is coming from the networks as well as consumers, who are developing high expectations to match their investment in HDTV sets.

"This transition to HD is being driven by fierce competition among broadcasters and pressure from networks, as well as the boom in consumer purchases of HDTV sets," Proulx said. "In order to secure their position and brand equity, local broadcasters have to fill those screens with native HD content and high quality HD graphics."



# Panasonic Promotes P2 Versatility

## Tiniest card camera yet unveiled

by Deborah D. McAdams

LAS VEGAS

When Panasonic rolled out the AG-HVX200 at NAB2005, it was mostly a recorder with a camera to come. The company nonetheless stacked up orders for the little fixed-lens HD, P2 unit.

The price of the HVX200—around \$6,000—was something of a revolution at the time. This year, Panasonic took the idea a step further during its press conference during NAB2007. A camcorder the size of a hotel hair dryer was unveiled to a blast of flash bulbs. The AG-HSC1U, an H.264, 3-CCD P2 camcorder weighing just 1.1 pounds, is available now for \$2,099.

Whatever the future holds for the AG-HSC1U, the finished version of the HVX200 was a hit, and not with just for the amateur set, as Panasonic Broadcast President John Baisley pointed out.

"Our customers are not hobbyists," he said. "Their livelihoods depend on this."

To further drive home its dedica-

tion to P2, Panasonic will cover every camcorder with a limited five-year warranty as of May 1.

Alongside a number of P2 product intros, HVX200 testimonials were a big feature of the Panasonic event.

In a multimedia presentation, directors and videographers described using the HVX200 to record material ranging from a Civil War re-enactment to campy Doritos commercials.

Chas St. George, director of communications for the Iditarod dogsled race, related how he came to be a HVX200 user and a P2 convert in general.

In 2006, St. George said the production of the 1,150-mile race had the usual raft of "workflow interruptions," with camera mechanisms and tape freezing up in the subzero environment.

### ONE LUCKY CARD

At some point afterward, St. George had a conversation with Panasonic Product Manager Jan Crittenden Livingston who told him "how a little 8 GB card was going to change my world."

St. George was referring to the solid-state, PCMCIA storage card that replaces tape in the Panasonic P2 line. The first time he saw one, St. George said he wondered, "How are these little cards going to hold up?"

Not only does the race begin near the Arctic Circle, it's held in the dead of winter during 17 days in March. A decision was made to chance P2 with a complement of HVX200s and a

crews encountered 60 mph wind gusts and temperatures of -60 degrees Fahrenheit.

"Not one camera froze up," he said.

### P2 PARADE CONTINUES

A total of 150, 8 GB P2 cards were used to record the 2007 Iditarod. Next year, the same amount of footage will fit on 76 cards, given Panasonic's intention to have 32 GB cards available by year-end. In the meantime, a new \$900 16 GB card will start shipping in May.

Other new additions in the P2 line include:

The AK-HC3500, a 2/3-inch 2.2 megapixel 3-CCD studio/EFM camera; a smaller model, the AK-HC1800; the AJ-HPX3000, a high-end shoulder-mount, 3-CCD, multimode camcorder; the AG-HPX500, a 2/3-inch 3-CCD variable frame rate, multiformat camcorder; the HPG10 P2 Gear, a 2-pound, portable backup recording unit; the 7.9-inch, 3.3-pound BT-LH80W production SD/HD monitor; and the AJ-HDP2000 processor, which records 2K and HD images to Panasonic D-5 VTRs. ©NAB



The Panasonic AG-HSC1U

higher-end AJ-HPX2000. The seven-member production team endured a baptism by fire.

"We shifted the culture from tape to the card in three days," St. George said. The dogsled race, which commemorates the 1925 delivery of Nome, Alaska, from a diphtheria epidemic, was captured for the first time this year in hi-def. St. George said the



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## HVS-500HS "1M/E HANABI Portable" NEW

This versatile new switcher can handle everything from editing and in-house studio applications to outside broadcasts and live productions. The main chassis and control panel have been combined into a compact self-contained unit, making it ideal for small trucks and fly packs. But, best of all, the surprising low cost of the HVS-500HS makes it an easy choice for multi-format productions

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- One DSK comes standard, and one keyer is available as an option
- Optional up conversion and frame synchronization card



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# Riedel Expands Intercom Line

## Comms maker gears up for 2008 Summer Games

by Mary C. Gruszka

LAS VEGAS

**R**iedel Communications announced new control panels, interfaces and headsets for its line of intercom products, as well as a new office, at its NAB2007 press conference.

Riedel opened an office in Beijing in late March, conveniently located near the new Olympic stadium.

"The office will be for sales and support for rentals for the 2008 Summer Olympics," said Riedel General Manager Michael Descoteau.

As for products, the new Riedel 2100 control panels for the Artist matrix intercom provide features that were formerly only available with the company's Artist 1000 LED control panels.

"A lot of people asked for additional functions, and we were able to incorporate these features in a cost-effective way in the 2100 series," Descoteau said.

The new features include additional analog line-level inputs and outputs and three general purpose interfaces on the rear. The new panels incorporate the usual features of the 2000 series, such as the eight-digit, high-contrast, full graphic LCD display,

which show label and cross-point level for each talk key.

The new interface is the MADI-108 G2 client card to provide a way for an Artist intercom system to connect with a digital audio router. "This gives us tremendous flexibility for the intercom system," Descoteau said.

### HEARING THE ARTIST

Because all Artist intercom control panels are connected to the matrix via standard AES3 signals, with the user bits containing the panel data, the new MADI interface makes it possible to connect panels to an audio router for panel distribution, instead of laying additional cables. The MADI card also provides a way of connecting multichannel audio between the audio router and the intercom system.

The MADI-108 G2 client card is cascable, with each card adding eight audio channels to the MADI signal for up to 64 channels total. The MADI connection from the client card to the audio router can be handled via coax or fiber.

Riedel has added new panels for its Performer digital partyline intercom system. The Performer CR-4 (4-channel) and CR-2 (2-channel) master stations can drive up to 32 Performer devices such as backpacks, split-boxes or desktop speaker stations, depending

upon the setup. The units can be used with a headset or with the integrated powered loudspeaker and gooseneck mic.



The Riedel CD-2 desktop control panel

One of the many features is a remote mic-kill function that allows users to silence any open mic on the intercom channels. Other features include individual listen volume controls for all partylines, call and S-call, IFB and stage announce.

### BISCUITS AND GRAVY

The Performer CD-2 desktop speaker/headset station is "the world's first digital biscuit box," Descoteau said. It has all of the same features as the CR-2 master station except for the internal power supply.

The Performer CW-2 wall-mount speaker/headset station is sized and

packaged for a four-gang outlet box. In addition to the new intercom stations, Riedel introduced its own line of professional headsets. The AIR ultralight headset features a noise compensating mic on a flexible boom with 270 degrees of rotation. The exchangeable ear cushions are made from a specially engineered DuPont Coolmax material that doesn't transfer body heat.

"These really are cool headsets," Descoteau said.

The Riedel PRO closed headsets were designed closely with beyerdynamic and with comfort in mind. These headsets are available with either a hypercardioid or omni mic, and the mic boom rotates 270 degrees to allow for either left or right side placement.

Recent Riedel projects include Madison Square Garden's purchase of a Performer DPL system, the touring show of "Jersey Boys," and the new "American Idol" and "Dancing with the Stars" TV shows using the newly installed Artist series at CBS Television City in Los Angeles.

Cirque du Soleil purchased a sizeable Performer system for their production at the Venetian Macao. "They pushed us along quite a bit in developing some of the new products," Descoteau said. ©NAB

# AJA and Apple Team Up

## Io HD taps FireWire 800 to enable Macs for HD

by Bob Kovacs

LAS VEGAS

**A**JA Video, a Grass Valley, Calif. manufacturer of conversion and interface products, jointly developed with Apple Computer a new HD interface and conversion device that uses Apple's ProRes codec technology.

The AJA Video Io HD uses FireWire 800 to bring HD capability to any recent Macintosh computer, including the MacBook Pro. Io HD also supports standard-definition video and just about everything else from SD to 1080p.

Based on Apple's new ProRes codec, the Io HD provides hardware encoding and decoding, which speeds processing and editing times on the connected computer. The compact box has a built-in handle to make it easy to transport the Io HD.

AJA Video has long made products for Macintosh computers, and Apple

gave the company the inside track to interface video between the high-end production world and Apple's OS X operating system.

"We have a really unique relationship with Apple," said Nick Rashby, president of AJA Video. "We are excited to develop the first device to support the Apple ProRes 422 codec."

In addition to getting video in and out of Macintosh computers, the Io HD can cross-convert among all popular video formats, processing video with 10-bit resolution. The device's audio resolution is 24-bit. The Io HD is expected to ship in July and has a list price of \$3,500.

### XENA SOFTWARE

AJA Video may have a special relationship with Apple but it also has products for PC-based editing and effects. New this year is software Version 3.0 for the company's Xena line of video playback and capture cards, which can be used in Mac, Windows XP and Windows Vista

computers. The new software will be available when Adobe ships its CS3 Production Premium software later this year.



Nick Rashby, president of AJA Video, describes the capabilities of the company's new Io HD interface and conversion product for the Apple Macintosh.

Known for its conversion boxes, AJA Video had several introductions of such products at NAB2007. Topping the list is the FS1, an any-

thing-to-anything frame synthesizer that can up-, down- and cross-convert just about any SD or HD signal.

### EIGHT AUDIO CHANNELS

In addition, the FS1 has embedding and de-embedding facilities for eight channels of AES audio. The unit processes video with 10-bit resolution and audio with 24-bit resolution.

"The FS1 is like the Swiss Army knife of converters, with inputs and outputs active at all times," said Karen Holt, converter sales manager for AJA Video.

The FS1 will ship in June with a list price of \$4,000.

In keeping with its "small boxes that do a lot" heritage, AJA introduced the GEN10 HD/SD sync generator. With the ability to provide sync signals for both SD and HD facilities, the GEN10 has tri-level HD sync that can be switched among 19 HD formats. The GEN10 will ship in June at a list price of \$390. ©NAB



# Rohde & Schwarz Highlight Mobile TV

## New transmitters rolled out

by Mary C. Gruszka

LAS VEGAS

Rohde & Schwarz arrived at NAB2007 with a unique mix of products for both the TV and mobile communications world.

"Rohde & Schwarz has the transmitters and test equipment to support MediaFLO and other ways of presenting TV to mobile receivers," President and CEO Michael Vohrer said at the company's NAB2007 press conference.

Rohde & Schwarz transmitters are major components of the live demonstration of an A-VSB tool called "Single Frequency Network," or SFN.

### IMPROVED SIGNAL COVERAGE

During the show, live A-VSB content was broadcast on a low-power SFN from three transmitter sites—inside the LVCC at the ATSC DTV Hotspot, and from the Stratosphere and Paris Hotels, (see "Mobile TV Creates Buzz at NAB," p. 8).

Rohde & Schwarz and Samsung Electronics developed A-VSB, which is

currently going through the standardization process at ATSC, to provide better reception for receivers in motion, both indoors and out. It's intended to allow broadcasters to include multiple "turbo-coded" streams within the current main stream to provide stronger

high-power transmitter," said Walt Gumbert, eastern regional sales manager for transmission products. "All these transmitters are fed the same signal and broadcast on the same frequency."

A-VSB does more than provide for mobile delivery.

"SFN is a method that provides better signal coverage and can improve reception of legacy ATSC receivers," Gumbert said. "And it's backward compatible with ATSC."

Rohde & Schwarz also introduced several new transmitter and test and measurement products, plus enhancements to existing test and measurement products.

In the transmitter line, the SLx8000 family of compact low-power transmitters supports DVB-T/H and ATSC digital TV networks as well as all analog TV standards except SECAM L. "These are perfect for single-frequency networks or LPTV applications," Gumbert said.

The Nx8600 family of high-power UHF transmitters is the company's second generation of liquid cooled devices, providing a 20 percent increase in efficiency.

The NR8200 and SR8000 families of FM transmitters are air-cooled and based on the Rohde & Schwarz common system for all TV and sound broadcast transmitters.

The new Rohde & Schwarz DVB-H play-out system, which consists of the AVE264 H.264 encoder and DIP010 data inserter and generator, allows up to 40 percent more transmitted content and utilizes up to 99 percent of available bandwidth, according to Gumbert.

### NEW TESTING FEATURES

For test and measurement, the company introduced the TU8980 FDCS-FLO Device Conformance System, which will enable manufacturers to evaluate their handsets for compliance with the Qualcomm MediaFLO minimum performance specifications published by the TTA as well as any additional performance requirements emphasized by service providers. It will also analyze the

RHODE, PAGE 46



The Rohde & Schwarz TU8980 FDCS-FLO Device Conformance System

and clearer signal transmissions. A-VSB can also allow the synchronization required to enable a SFN.

"SFN is a method that uses a number of low-power transmitters or a combination of a high-power transmitter with low-power transmitters instead of one

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# Avid Demonstrates Open Interoperability

## Faster editing workflow emphasized

by Jay Ankeney

LAS VEGAS

**A**t Avid Technology's NAB2007 press conference, the message was the open workflow structure of its systems with 270 partners, including 50 leading software and hardware manufacturers promoting digital media production interoperability over the full range of Avid systems.

"Our release of new software for all our editors projects us back into the forefront of the industry with new innovations like ScriptSync," said Graham Sharp, vice president and general manager of the Avid Video division. "The sheer volume of partners who have signed up with Avid technologies such as DNxHD demonstrates the breadth of Avid's presence in the overall digital production industry."

### FULL COVERAGE

Avid recently announced the worldwide availability of Version 2.7 of its award-winning Media Composer family of products and Version 5.7 of Avid Xpress Pro software. The new Media Composer and Avid Xpress Pro systems now include support for Intel-based Mac notebooks and workstations, new workflow capabilities and an updated bundle of third-party content creation software.

Version 2.7 of the Media Composer

system introduces two industry breakthroughs—Avid ScriptSync, a next-generation script-based editing tool that uses phonetic speech recognition technology to automatically sync text



Avid's Media Composer now supports Intel-based notebooks.

with media. It also includes Avid DNxHD 36, a remarkably efficient HD codec for offline editorial, which runs at a data rate of 36 Mbps, only slightly greater than the data rate of DV25 media, but at full-raster HD resolution.

Avid also unveiled the Avid Unity MediaNetwork 5.0 system powered by the Avid Media Engine—a streamlined, next-generation system architecture that sets a new standard in price-performance for real-time shared storage. Avid Unity MediaNetwork 5.0 delivers twice the performance of previous generation Avid Unity systems at a new lower price point.

Apple Final Cut Pro and Adobe Production Studio systems accessing and editing the same content in real time on Avid MediaNetwork 5.0 was demonstrated, along with a color-grading workflow using Symphony

Nitris and Digital Vision's Film Master application.

The company also introduced Avid Liquid Chrome Xe, the newest member of the Avid Liquid family that works in conjunction with the AJA Xena LHe board. Avid also announced Version 7.2 software for all products in the Avid Liquid family, adding support for a variety of new camera formats from JVC, Panasonic and Canon, as well as 24p support for JVC cameras. This includes native capture, editing and play back of JVC's HDV 720 24p/25p/60p formats from the GY-HD 100 and 200 series of cameras.

### FAMILY ADDITION

One of Avid's biggest presentations was the newest addition to the company's comprehensive line of MediaStream HD and SD play-to-air servers, MediaStream 9000. With new Version 3.31 software that supports Sony XDCAM HD and long GOP HD and SD media formats, the new sys-

tem extends the broad play-out functionality of the MediaStream family.

Upgradeable from the MediaStream 8000 systems, the MediaStream 9000 system offers improved play-out performance via the new Palladium Store 2000 storage array, a next-generation storage architecture that offers scalable capacity of 3 to 48 TB, and higher throughput with bandwidth of 680 Mbps, per array.

Avid also announced that its real-time nonlinear workflow engine, Interplay, has been purchased by more than 150 customers since it began shipping last September. Customers included large broadcasters, mid-sized post-production facilities, government agencies and education institutions such as Alliance Atlantis, Avi-Drome, BMC Software, Canadian Broadcasting Corp. Creation Club, Radio Telefis Eireann, Réseau France Outremer, RTL TVI, The Navy Visual News Service, BMC Software, The Pentagon Channel, WANE-TV, WLUK-TV and WOOD-TV. ©NAB

## Rohde

CONTINUED FROM PAGE 45

capability to coexist with existing mobile communication infrastructures.

"This is the world's first MediaFLO conformance device," Gumbert said.

Another new test and measurement product from Rohde & Schwarz, the

ETL is a universal multistandard platform for analyzing TV signals. It includes a test receiver and spectrum analyzer. The frequency range of the analyzer is from 500 kHz to 3 GHz.

The ETL is configured to analyze internationally common analog TV standards as well as the DVB-T/H and DVB-C digital standards, and for the first time, the Chinese DMB-T standard (GB20600-2006).

The SFU universal broadcast test system has received some new capabilities—video and audio baseband generation for PAL, SECAM and NTSC, and a video test signal library.

In addition, "the SFU combines all the major mobile standards in a single test transmitter," Gumbert said.

This includes DVB-H, T-DMB, ISDB-T, DMB-TH, and MediaFLO. The system also generates adjacent-channel assignments with digital and analog interferers in accordance with the MBRAI standard to simulate the effect of an analog TV interference signal on a digital signal.

For the DVM digital measurement system, Rohde & Schwarz added new functions as well. The platform now features ATSC/8-VSB and J.83/B, and IPTV capabilities have been expanded to allow monitoring of up to 300 television services over a single Gigabit Ethernet interface.

A template monitoring option (R&S DVM-K10) is available for automatic detection of undesired changes in the transport stream. ©NAB

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# Calrec Unveils New Omega Audio Console

## Company reveals secrets of Bluefin

by Mary C. Gruszka

LAS VEGAS

Calrec Audio introduced the newest audio mixing console in its Greek-lettered lineup, the Omega, at its NAB2007 press event.

"Omega is the third product that Calrec has released with our Bluefin high-density signal processing technology," said John Gluck, sales and marketing director, Calrec. "Omega is physically a very compact yet powerful system."

Positioned between the company's Zeta and Sigma consoles, the Omega features 160 mono DSP paths packaged as 48 stereo, plus 64 mono channels, allowing up to 24 full 5.1 surround channels.

Omega is available in three frame sizes with 24, 40 or 56 faders. Other features include eight 5.1 surround, stereo or mono audio groups, 20 auxiliary outputs (20 mono or 10 stereo) and 48 outputs for multitrack or general purpose feeds. The console also has two main stereo or 5.1 surround

program outputs with full EQ and compressor/limiter facilities, and full control of the stereo downmix of the surround main outputs.

"With the launch of Omega, Calrec now has a range of digital consoles that meet various production needs at various price points," Gluck said. "Omega is targeted for O&O stations, affiliates, news outside broadcast vehicles and smaller HD production trucks."

QVC Local Inc., a subsidiary of QVC Inc., purchased a Calrec Omega

console for a new 48-foot, single-expanding production vehicle. The truck was shown at Sony's booth before hitting the road this summer for remote QVC broadcasts at different locations.

### BLUEFIN EXPLAINED

Until NAB, Calrec was rather close-lipped about the details about its Bluefin technology. But with the introduction of Omega, Calrec has started to reveal what's behind the curtain.

"Bluefin uses FPGA technology,"

Gluck said. FPGAs are field programmable gate arrays, which Calrec had already employed for mixing, routing and gain control for its Alpha, Sigma and Zeta consoles.

For Bluefin, FPGAs are used to create a set of processing structures, each of which is designed to perform only one job and with amazing efficiency.

"Traditional DSPs are good for random calculations or a wide variety of mathematical processing, but an audio

CALREC, PAGE 48



Calrec's new Omega console with Bluefin technology

**"Omega is targeted for O&O stations, affiliates, news outside broadcast vehicles and smaller HD production trucks."**

**— John Gluck, Calrec**

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# Wohler Celebrates 20th Anniversary

## New gear includes standalone video converters

by Mary C. Gruszka

LAS VEGAS

**C**elebrating the 20th anniversary of its first in-rack audio confidence monitor for the broadcast industry, Wohler Technologies Inc. continued its tradition of developing audio and video monitoring products, as well as test signal generators and now conversion products.

"We continue to design and manu-

(including connectors), the single rack unit device has eight audio inputs on a DB-25 connector and four AES/EBU inputs on BNC connectors. The unit features dual four-channel summing matrixes, with the output from each matrix fed to a powered loudspeaker.

Wohler, maker of the Penpal-SDI and Penpal-HD portable test signal generators, now combines SD and HD test signals in a single unit—the Touchstone. The Touchstone is a

the Red Range family of converter products, which are about half the cost of what's out there. We're partnering with Ross Video on the openGear format, and our converters will also be available in card format for high density applications."

### VIDEO CONVERTERS

The first converter offerings introduced at NAB2007 included the HD12DAC, a dual-rate HD/SD 12-bit digital-to-analog unit with 24-bit

ble monitor with a native resolution of 1920x1200, and the HD MON 90 8.4-inch with a native resolution of 1024x768, 170-degree viewing angle.

The DTV-ready Data LCD monitor line is also new. In addition to HD-SDI and analog HDTV video inputs, this series of monitors incorporates an asynchronous serial interface (ASI) input for detecting, scaling and monitoring a wide range of video bit-streams and compression formats, including MPEG-2 and H.264.

"This represents the first universal method of monitoring integrated video, audio and data services," Dempsey said. "It extracts data from the compressed bitstream and displays custom selected information on the screen like multiple video streams or programming related data like closed captioning."

Building on the success of its Touch-It analog multi-image viewer introduced last year, Wohler rolled out a digital version, appropriately named Touch-It Digital, for NAB2007.

"It's more than a new I/O," Dempsey said. "We completely redesigned the unit and have included features our customers have requested, like on-screen channel ID."

Touch-It Digital includes two 7-inch LCD screens in a 3 RU frame. The left-hand screen displays a thumbnail image and on-screen ID for all input channels, and incorporates a 16x1 touch screen switcher to select one of these images to be displayed on the right-hand screen. Up to 16 SD-SDI inputs can be installed, and there are two SD-SDI outputs and two DVI outputs as well.

Each of these monitors can be adjusted with front panel controls or via Ethernet connection with Wohler control software. ©NAB

**"Wohler has been doing conversion for 20 years, but our conversion has been inside the Wohler boxes."**

**—Carl Dempsey, Wohler**

facture a large range of confidence monitors for audio and video, and we continue to evolve our product line in anticipation of the needs of our customers," said Carl Dempsey, president and CEO of Wohler.

### NEW AUDIO PRODUCTS

A new product in its audio line, the VMDA-SUM8 was designed for space critical applications.

"Customers wanted our powerfully focused Wohler sound, but they didn't have the rack depth," Dempsey said.

Built originally to meet the custom demands of an OB truck company, the VMDA-SUM8 is now part of the regular Wohler product line.

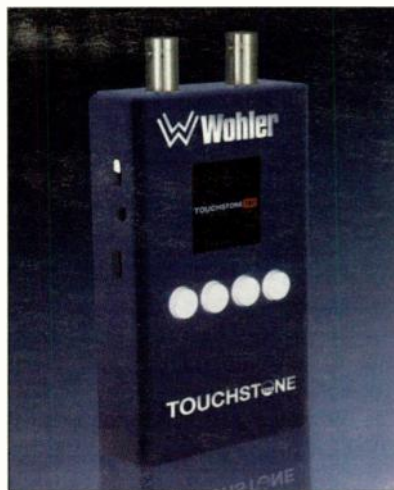
With a depth of 4.75 inches

compact battery-powered handheld HD/SD-SDI audio and video test signal generator with 32 video test patterns, 10-bit resolution, 16 channels of embedded AES/EBU audio, two outputs, a built-in color LCD monitor and USB power connector.

"The color LCD screen on the Touchstone lets users see which of the many test signals they are selecting," Dempsey said.

In other developments Wohler has a new product category: standalone video converters.

"Wohler has been doing conversion for 20 years, but our conversion has been inside the Wohler boxes," said Dempsey. "But our customers have been asking us to do something outside the box, and we've come up with



The Wohler TouchStone audio/video test generator

audio, and the SD12DAC SD digital-to-analog converter and test signal generator. Each of these products includes an audio de-embedder and graticule generator.

The HD2SD HD-to-SD downconverter uses a 10-bit data path and includes a safe action and safe title graticule generator and signal test generator.

Panorama, the video division of Wohler, unveiled the HD MON series of professional-grade LCD video monitors. New models included the HD MON 170 HD 17-inch WUXGA capa-

## Calrec

CONTINUED FROM PAGE 47

mixing console is predictable, with the same things on each channel," Gluck said.

A console needs only a few different mathematical operations, but these need to be performed extremely rapidly. So the FPGA processing structures and tailored logic resources are dedicated only to the types of operations needed for audio.

An FPGA design can expand or reduce word length of fixed point calculations to improve precision and audio quality, for example, providing

sufficient dynamic range in complex calculations such as IIR (infinite impulse response) filters, used in EQ.

Because of the increased efficiency, Bluefin supports 480 channel processing paths in one card.

### 19 MINUTES OF DELAY

Another advantage, Gluck said, is "with Bluefin, the Omega provides 19 minutes of audio delay that you can use anywhere you want, on the inputs, insert sends, groups, main outputs."

"In TV productions, audio gets out of sync with the video in unpredictable ways," Gluck said. "Now, audio [operators] can solve that prob-

lem by putting in the right amount of delay. Operators of the Alpha and Sigma consoles with Bluefin say that having so much delay is a wonderful thing."

At NAB2007, Calrec also launched a new range of fixed-format audio input/output boxes that link to the Calrec Hydra network by Cat5e Gigabit Ethernet ports or through optional duplex fiber GBIC connectors.

Analog audio is covered by the AD5603 with 24 mic/line inputs and eight line outputs, and the AD5608 with 12 mic/line inputs and four line outputs. Both have phantom power indication and tricolor signal LEDs

indicating whether audio is present, normal or at clip.

For digital audio, the JB5607 consists of 32 AES inputs and 32 AES outputs on BNC connectors. An AES unit with 110-Ohm XLR connectors also is available.

The VI5566 contains four inputs of HD/SDI audio de-embedding and can be outfitted with up to eight optional Dolby E decoders.

All of these units make their respective channels available to any console connected to the Hydra network.

"These new boxes make Hydra more flexible and cost-effective," Gluck said. ©NAB



# Snell & Wilcox Designs for Distribution

Products address multiplatform demands

by James E. O'Neal

LAS VEGAS

**J**oe Zaller, Snell & Wilcox's vice president of strategic marketing, said broadcasters and content providers are facing some big issues right now.

"These are really exciting times," Zaller said. "Obviously HD is a major issue and so is content distribution. We want to help our customers make these transitions, and also to help them to be more efficient. These are our themes for NAB2007."

Snell & Wilcox prepared for this new and rapidly evolving world of broadcasting by putting emphasis on three product areas: live production, conversion and multiplatform distribution.

## KAHUNA LINE EXPANDED

Snell's most visible live production product is the well-established Kahuna switcher. Zaller said that his company had been listening to customer requirements and has expanded

the Kahuna line of products.

"Our customers were having to choose between the functionality of a large system and the physical size of a small system," he said. "Now we've expanded Kahuna functionality to a smaller physical size."

Snell is providing Kahuna users of much smaller platforms with the func-



The Alchemist Ph.C-HD high-definition frame rate converter

tionality and feature sets previously available only in a large switcher.

Zaller said that with the wide range of options Snell offers with both main-frame and control options for the Kahuna line, users can now tailor a live production switcher to their exact requirements, and this is paying off in terms of customer response.

"We're getting a lot of repeat busi-

ness. We've sold a number of switchers for the Beijing Olympics, and also to the ABC and Raycom station groups," he said. "The Kahuna platform keeps going from strength to strength."

Zaller said that in addition to new Kahuna platform additions, his company is now providing enhanced DVE

capability for those switchers with its second-generation Impakt 3D DVE system. Existing Kahuna users can also take advantage of this enhanced DVE functionality

through an upgrade for their switchers.

## IMAGE CONVERSION

Image conversion is becoming big business for broadcasters, as the demand for more and better content keeps expanding.

Zaller said Snell & Wilcox is addressing this market with two new

products based on its Emmy Award-winning Alchemist architecture. The first of these, the Alchemist Ph.C-HD, provides bidirectional 1080/720 HD frame rate conversions, conversions between 50 Hz and 60 Hz SD television systems, as well as HDTV up-, down- and cross-conversion.

**"Obviously HD is a major issue and so is content distribution."**

**—Joe Zaller,**

**Snell & Wilcox**

"BBC Resources has taken delivery of the first HD Alchemist, and we've also received an order from NBC to supply a large number of frame rate converters for the Beijing Olympics,"

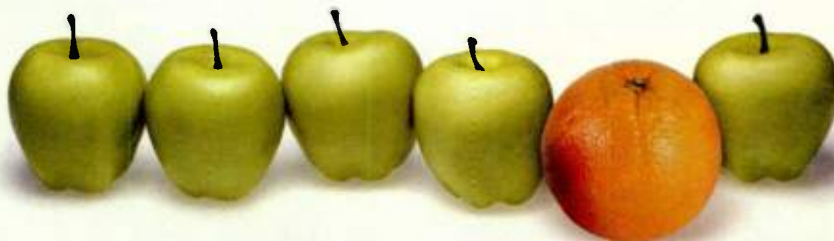
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# Ikegami, Toshiba Announce Partnership

## New professional production gear targets flash memory storage

by James E. O'Neal

LAS VEGAS

Ikegami Tsushinki Co. and Toshiba Corp. formally announced a partnership agreement between the two broadcast electronics firms, and revealed details of new products forthcoming from this venture.

The agreement between the companies will initially result in the release

of four new products: GFPACK, the removable flash memory storage medium; a new camcorder using this memory; and two standalone tapeless video recorders.

Masaki Matsubara, president and CEO of Ikegami, announced the partnership at a joint press conference during NAB2007.

### COMBINING SKILLSETS

"Both Ikegami and Toshiba have

strong developmental skills and this collaboration brings together these skills from both companies and will allow us to propose a new solution for video production and editing systems using systems with semiconductor flash memory," Matsubara said.

"This will definitely be a great milestone for us to further promote our digital broadcast systems business. So please look forward to a range of new products coming out in the future."



Masaki Matsubara, Ikegami president and CEO, (L) and Shunichi Kimura, corporate vice president and president and CEO of Toshiba's Social Infrastructure Systems Co., announced a collaboration to produce a new camcorder system with flash memory storage.

Shunichi Kimura, corporate vice president, and president and CEO of Toshiba's Social Infrastructure Systems Co., expressed his pleasure with the business deal.

"I would like to welcome this collaboration between the two companies and say that we are delighted to be working with Ikegami Tsushinki in the development and sales of video

## Snell

CONTINUED FROM PAGE 49

Zaller said.

Snell is also taking image conversion in a slightly different direction with Alchemist Ph.C-IP software-based system.

"It's designed to run on commodity IT hardware," Zaller said. "There have been a tremendous amount of requests for this product—to bring conversion to the file-based platform."

Snell & Wilcox keeps expanding its catalog of products, with entries including the new iCR automated content repurposing workstation and the Protus Ph.C video image conditioning system. Both are designed to meet the needs of the emerging multiplatform content distribution market.

Zaller said that these products were introduced to create greater efficiencies in the process of purposing content for an increasing range of end users. They are designed to both

speed up workflow and to provide better quality images with fewer bits.

Zaller cited one instance in which a mobile content provider was able to expand from 17 to 20 channels without increasing system bandwidth by preprocessing with Protus Ph.C.

Zaller said that better pictures with fewer bits are what everyone wants and that Snell & Wilcox is aggressively seeking out newer and better ways for "putting pictures to work." ©NAB

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production and editing systems in the broadcast industry.

"When combining the strengths and solid presence of Ikegami in video production with Toshiba, which has expertise in play-out and transmission systems, we will now offer the industry a cutting edge innovation—a system that seamlessly connects the total workflow of the broadcast station and realizes a total tapeless environment," Kimura said.

#### OPEN STANDARDS

As part of the agreement, all components are to be built around open standards, including codecs and formats such as MPEG-2, long GOP I-frame and MXF.

**"The camcorder will have the traditional Ikegami broadcast size and shape; however the layout of the controls and the location of the LCD panel and point of insertion for media will be new."**

**— Alan Keil, Ikegami**

Alan Keil, Ikegami vice president and director of engineering, talked about features and capabilities of the new equipment.

"The camcorder will have the traditional Ikegami broadcast size and shape; however the layout of the controls and the location of the LCD panel and point of insertion for media will be new and improved for this camera model," Keil said. "We will be using 2/3-inch image sensors to maximize the signal-to-noise and sensitivity, especially important for news applications. Also, the 2/3-inch format will give the user the maximum choice of lens availability."

The recording side of the camera will allow the use of several compression types and has a built-in down-converter. Traditional Ikegami nonlinear tapeless features will be included, such as the retro-loop buffer. Time lapse and interval recording will also be provided. The camera will record in 720, 1080, or

standard-definition video.

#### RECORDING OPTIONS

Keil said that the GFPK flash memory pack will initially be available in 16, 32 and 64 GB sizes, and that a 120 GB hard disk pack will also be offered for longer recording needs.

The 32 GB pack will provide about one hour of recording time when using a 50 Mbps data rate. Keil said

the introductory list price for the 32 GB pack was expected to be around \$950.

Two tapeless video recorders were part of the program—studio and field models.

Conventional tape functions such as shuttle will be available. The studio unit will have an internal 128 GB flash memory storage, as well as a slot for removable camera memory packs.

The machine will be capable of doing simple in/out type edits, but is designed to be integrated with conventional NLE editing systems. The field recorder will have a more compact profile, allowing two machines to be mounted side-by-side in a 19-inch rack. The feature set is basically the same as the studio model, but the field unit does not have internal flash memory storage. ©NAB

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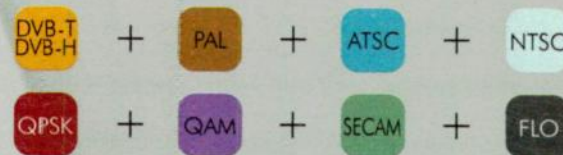
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#### MICROWAVE LINKS

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#### TRANSPOSERS & GAP FILLERS

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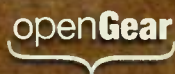
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# Vitec Announces Camera Dynamics Unit

## Six broadcast industry brands join forces

by Craig Johnston

LAS VEGAS

**V**itec Group used its NAB2007 press briefing to announce it had formed the Camera Dynamics business unit earlier this year.

"It covers six of the world's leading broadcast industry brands—Sachtler, OConnor, Petrol, Vinten, Vinten Radamec and Autoscript," said Vitec Broadcast Systems Division CEO Joop Janssen.

Jürgen Sommer, Camera Dynamics director of brand development said, "For our customers, that now means they can talk to their Camera Dynamics sales contact about all of our world leading brands that encompass the needs of the professional cameraman."

### STRONG BRANDS

"The mission of Camera Dynamics is to build strong individual brands," Sommer said, "with their own brand identity, with a product development philosophy."

Service on equipment also will benefit from the new business unit, said Camera Dynamics President Bob Carr.

"Here in the U.S., we successfully

unified service for our camera support brands—Sachtler, Vinten and OConnor—so that the end users can get factory service in California as well as New York," Carr said.

Carr also detailed a number of customer announcements, including CNN's purchase of 14 Vinten Radamec systems; ABC's use of Sachtler Video 18 Speed Balance heads for ENG units in its Washington, D.C., bureau; and Fox Business News updating its entire bureau with camera support gear from Vinten, including Quattro pedestals and Vector 700 heads.

He also pointed to NBC's "Today Show" purchasing eight sets of prompters with talent monitors and the new ClockPlus feature from Autoscript, as well as OConnor's record sales to Panavision last year.

The press was given a tour through Vitec Village, the cluster of the company's brands on the exhibition floor.

Vinten Radamec's new Fusion range is a single robotic camera product line with backward compatibility to Vinten and Radamec's former products. On display were a robotic-only head and the bolt-on height drive, as well as a concept development for a compact control system panel.



Vinten-Radamec robotic camera support unit

Sachtler showed its new F-Cell battery, designed for handheld DV and HDV camcorders. It not only gives all-day power capability to those camcorders, but adds carefully positioned mass to allow smoother panning on a tripod and smoother moves when handheld. Sachtler also is showing its next-generation HDV fluid heads and the ACT 2 Spring Arm for its full-sized stabilizers.

### ACTIVE SYSTEM

Vinten displayed the Vector 950 Active intelligent fluid head, which made its debut at the Super Bowl earlier

this year. The 950 Active is part of a system developed in collaboration with Canon Broadcast, in which the Active and Canon's lens stabilization system communicate to allow differentiation between unwanted vibration and intentional camera moves by the operator.

OConnor introduced its 120EX fluid head, designed for a payload between 30 to 120 pounds in its normal operating mode, but able to handle a payload of up to 240 pounds with some restriction to its forward and rearward tilt range.

Autoscript premiered its ClockPlus feature on its teleprompters. This easy-to-read LED screen below the prompter screen displays SMPTE/EBU timecode. Autoscript also has its voice-activated prompting solution.

Petrol showed its latest carrying systems, including the 9-inch LCD Monitor bag. The bag is lightweight and designed to protect the flat-screen monitor, and acts as a shade for the monitor as well.

Clear-Com showed several new and updated products, including its Tempest wireless intercom belt-pack systems. Clear-Com's Digital Matrix intercom system also is updated with new V-Series panels. ©NAB

# Chyron Enters Fifth Decade

## Graphics gear follows distribution divergence

by Bob Kovacs

LAS VEGAS

**C**hyron Corp., the long-time manufacturer of graphics systems, is having a great year.

Now entering its fifth decade, the company is boasting that "Life Begins at 40." To make corporate middle age particularly sweet, Chyron CEO Michael Wellesley-Wesley, announced that the company's financials are solid.

"Today, Chyron is profitable, growing nicely and completely free of debt," he said.

Putting its profits to work, the company introduced several new products and technologies at NAB2007. Topping the list of debuts was the latest version of Lyric creation and rendering software, Lyric Pro 7.

Lyric Pro 7 has several key improvements, including an FBX importer that allows for interoperability with popular high-end graphics products such as 3ds Max and Maya. Another new feature is the ability to integrate Adobe Extensible Metadata Platform (XMP) information with Chyron graphics to

speed workflow and improve accuracy of graphics as they move through a facility's broadcast chain.

Lyric Pro7 also adds dual rendering engines to improve creation and play-out flexibility, as well as what the company calls "Adaptable Primitive Geometry" for generating bar charts, pie graphs and other data-driven graphics.

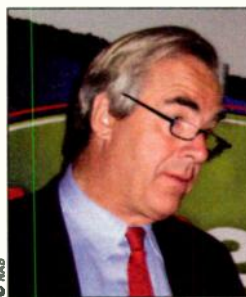
Updated versions of Chyron's graphics creation and play-out systems will replace the current line. The company announced HyperX2 as its top-of-the-line creation and play-out system, replacing HyperX. Likewise, there is a LEX2 system that replaces the earlier LEX, LX and HX200 products.

### GOING SOLO

Building on these improved products, Chyron packaged its solutions into a highly portable system called Solo2. Solo2 is a "graphics system in a briefcase" targeted at OB truck companies,

rental houses, freelancers and anyone else who needs a compact and highly portable broadcast graphics system.

Focusing on the growing interest in mobile television, Chyron announced WAPSTR and MOS2WAP.



Michael Wellesley-Wesley, CEO of Chyron said the company is on solid financial footing.

WAPSTR (pronounced "WHAP-ster") is a multimedia messaging gateway that enables uploads of photos and videos from cell phones for faster on-air playback. MOS2WAP is a WAP server plug-in for Chyron's Camio server, which allows for story creation directly on newsroom computer systems.

With WAPSTR and MOS2WAP, pictures and videos from mobile phones

can be quickly integrated into news stories without disrupting the normal workflow of the newsroom.

Also new at NAB2007 for Chyron—the integration of the company's Channel Box on-air branding system with the Promotor Auto Promo Generation suite from Video Design Software. This combo will support

complex animation sequences triggered by automation without otherwise tying up the automation system. The new system features the ability to automatically generate promos and schedule them for play-out.

Chyron now has the products in place to handle the entire graphics chain from creation to play-out. Using the company's Camio server, graphics can be created, managed with Chyron's graphics asset management system and played to air. As all the company's products are resolution independent, graphics can be created for HD and scaled for viewing on cell phones.

"Everything is brought in and can be played back live," said Kevin Prince, executive vice president and COO for Chyron.

Video can now be acquired simply from cell phones, integrated into a broadcast graphics system with HD-resolution images, merged seamlessly into a news program and distributed to high-definition broadcasters, standard-definition cable outlets or transmitted to mobile viewers on cell phones and other portable devices. ©NAB



# Telestream Flips Over Expanded Features

## Episode encoding integrated into Final Cut Pro 2

by Craig Johnston

LAS VEGAS

Telestream's growth rate is accelerating, and at the company's NAB2007 press conference, CEO Dan Castles attributed the business increase to content creators, broadcasters, Web video sharing and corporate and government customers.

Among other announcements, Castles reported that the company acquired Popwire, a video application company, in August of last year.

"They are very complementary to both our Flip4Mac channel and our workgroups channel," he said, adding that the integration of Popwire is going seamlessly.

### PRODUCT PIPELINE

Company President David Heppe previewed several new products, the first of which was the Pipeline Network Encoder. The device is targeted for SDI video capture into Telestream's FlipFactory and Episode applications as well as Apple's Final Cut Pro editing

applications.

The Pipeline encoder is accessible to multiple users over the network, and because it is external rather than a card in a PC, it takes that part of the workload off the computer itself. Pipeline is available as either a single-channel version, or the Pipeline Quad, providing four independent channels in 1 RU.

A second announcement was the integration of Telestream's Episode

compression capabilities. The Episode Engine provides faster-than-real-time encoding to all supported media formats. Version 4.3 software is demonstrated in the company's booth.

### FLIPFACTORY UPGRADE

Telestream's FlipFactory is now upgrading to Version 6.0 software, which adds more support to HD workflows.



Telestream Pipeline

FlipFactory's TrafficManager can automate ingest at stations for HD sports delivered by DG FastChannel as well as syndicated HD programming delivered by Pathfire.

The new software also expands support for Web and mobile workflows, including support for H.264 with AAC audio for mobile workflows. It also provides subtitling automation, integrated Flash 8 and other format support, and Thomson/NextAmp watermarking capabilities.

Heppe noted that Telestream's GraphicsFactory is finding use around the world, and he showed a short sample produced by Eurosport that demonstrated automation for multiple language tracks and text graphics.

The company's Flip4Mac has expanded support to the 360 Systems Image Server, providing file compatibility and direct file transfer between the Final Cut Pro editing system and the 360 Systems servers.

The Flip4Mac image server component imports MPEG-2 IMX 30/40/50 standard-definition video, uncompressed audio and metadata from the 360 Systems image server directly into the Final Cut Pro project bin for editing. When the project is completed, the MPEG file is transferred back into the 360 Systems server.

Telestream has been operating as two business units. The Desktop group markets digital tools for the Mac via online sales. The Workgroup & Enterprise group focuses on scalable, server based solutions with broad format support and workflow automation. ©NAB

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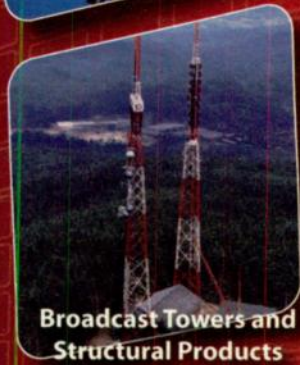
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# Omneon Decks MediaGrid

## New technology gives servers transcoding powers

by Deborah D. McAdams

LAS VEGAS

This is the year Omneon endowed its servers with sentience. The muscle-bound MediaGrid can now use its brawn for more than storage thanks to new transcoding software dubbed "ProXchange."

Geoff Stedman explained the technology at a briefing at The Palms Resort during NAB2007.

"Many applications need those files in a different format," Stedman said. "When you move a file into MediaGrid, it's automatically converted into every format you need."

ProXchange handles formats and wrappers from DV and MPEG-2 types to H.264 and QuickTime. It can be configured via a "rules" engine to transcode an I-frame file simultaneously into long GOP and H.264, for example.

There are other transcoders, but Stedman said ProXchange could take them in a dead heat.

"Flat out, it's fast," he said. "It transcodes up to 10 times faster than real time."

ProXchange gets its juice from the MediaGrid architecture, which comprises multiple central processing units in each of its componential storage elements. These many CPUs were integrated so that various layers of MediaGrid could communicate, but they're not always chatting. ProXchange draws its power from that CPU downtime, kind of like a small-scale "SETI@home" within the server itself.

### MODERN PROMETHEUS

If ProXchange represents a brain, then MediaDeck could be the hands.

By itself, MediaDeck is essentially a

HD capability.

As an edge server, MediaDeck can perform ingest and play-out for MediaGrid, which lacks those capabilities—capabilities customers wanted, Stedman said.

Khalid Naseem was one such customer. Naseem is the head of broadcast engineering at TVNZ, New Zealand's national public-service broadcaster. In its transition to do away with tape, TVNZ installed an Omneon Spectrum last year. A 34 TB MediaGrid with three MediaDecks will be added this year to accommodate two new channels.



The Omneon MediaDeck

miniature Spectrum, with six SD, 50 Mbps I/Os and 4 TB of storage in a 2 RU box that goes for \$36,000. It also has two I/O module bays for adding

company had actually realized my vision."

The final appendages of Omneon rollout are akin to opposable thumbs.

When he heard about Omneon's new ingest/storage/play-out setup, Naseem said, "A

The latest addition to the MediaPort line, the 5000 series, represents the company's entry into HD encoding. Previous MediaPort generations handle SD material. The two types can be combined for multiformat encoding; something future versions are expected to do.

The 5000 Series is "designed to choose the right codec for the job," Stedman said, be it hardware- or software-based.

The series also has more processing power to support features like audio scrub, enhances slo-mo and jog/shuttle on material coming directly from a Spectrum.

The first of the new MediaPort models, the 5300, uses a codec licensed from Sony. Sony, in turn, is integrating Spectrum servers into its SONAPS news production system.

Toshihiko Ohnishi, deputy senior general manager of the Sony B&P Business Group, said the broadcast gear giant tapped Omneon because of its position in the server market, and its "commitment to MPEG-2."

All three new Omneon products are expected to be out in the market by June. ©NAB

# Quantel Embarks on a 'Mission'

## New asset management system unveiled

by Jay Ankeney

LAS VEGAS

At its NAB2007 press conference, Quantel unveiled a media and asset management system called "Mission."

"Asset management systems are often layered on top of production systems," said John Woodhouse, senior product manager at Quantel. "Mission is different because it is deeply integrated with the Quantel production system, dovetailing production and management workflows to a degree previously achieved only with expensive, custom-designed system integration projects."

Woodhouse added: "That way, Quantel's Mission offers sophisticated yet highly practical media and asset management to the widest possible range of broadcast operations."

### DRAG-AND-DROP MEDIA

Unlike standalone asset management systems, Quantel's new Mission is designed to be part of its ISA (industry standard architecture) database environment, making it a seamless extension of its Enterprise sQ or Newsbox

HD systems' workflow.

"The tight integration of Mission with the ISA database means that



Quantel's Newsbox system now has HD capability.

media can simply be dragged and dropped onto the desktop ready for production," Woodhouse said.

Mission is built around a multilevel architecture. Its core component is Mission Central, providing media asset management database, key frame shot generation, user log-on and production access.

Users enter the system via Mission Tracker, which runs on all operational workstations in the system and uses familiar Quantel menus to search and display media assets and associated metadata.

A range of advanced tools for managing the ingest of video, files and agency feeds is provided by Mission Transfer, which also automatically han-

dles transcoding material for Web distribution and assigning automatic deletion dates as background tasks. Mission Capture extends metadata-driven functionality to include associated key frame and text data from agency feeds, automatically extracting and presenting this to the user through Mission Tracker.

Web-based remote access and tracking is provided by Mission Webview.

For subsequent storage and retrieval of information, Mission Archive enables users to store material outside of the system and search and restore material for production use. The integration of Mission Archive with ISA allows for entire projects, not just flattened files, to be securely saved for future use.

Finally, Mission Store is suitable for customers wanting to create a complete software and hardware archive system, as it is a combined disk and tape library offering enough storage capacity for two to three years' worth of typical news production.

"Mission takes production and

workflow integration to the next level, providing broadcasters with a blend of functionality and usability to enable them to maximize the efficiencies gained from server-based production," Woodhouse said. "And because it is fully integrated with Quantel's server technology, it does all this equally well with HD and SD assets. We think it will become the ideal system for broadcasters looking to transition high definition in the short to long term."

Quantel's Director of Marketing Steve Owen also announced that its tapeless news system in a box, Newsbox, will now include high-definition capabilities at no additional cost. That means Newsbox HD will be available for the same competitive price as the SD version of Newsbox.

In addition, the previous fixed Newsbox configurations have been replaced, allowing customers the flexibility to choose the number of seats, ports and various other options to configure Newsbox HD to their own business requirements.

"This will give broadcasters the flexibility to make the switch over to HD when their business model demands it, rather than when their technology imposes it," Owen said. ©NAB



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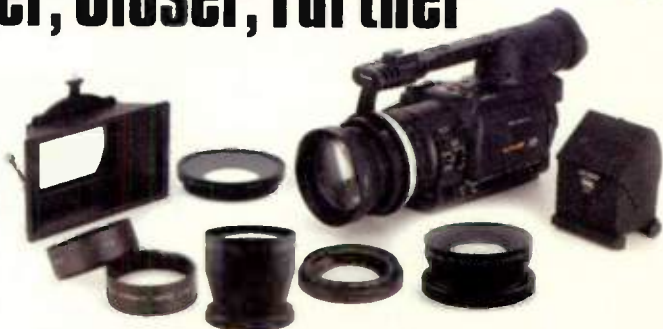
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# New CEO, New Products for Pixel Power

## Real-time 3D graphics add-on rolled out

by Walter Schoenknecht

LAS VEGAS

**P**ete Challinger wanted to introduce the NAB2007 crowd to a brand-new broadcast graphics company—one that's been around for 20 years, 12 of them in the United States.

As the newly-minted CEO of Pixel Power's U.S. operations, Challinger is unafraid of the task he's been charged with: Raising the company's profile among U.S. broadcasters and production facilities. "We're the best-kept secret in broadcasting—but we're going to change that," he said.

Challinger, whose previous leadership roles in firms such as Grass Valley Group and Abekas Video Systems earned him recognition in the United States, said that he had watched Pixel Power's success for some time before joining the firm, admiring its "track record of innovation."

Among Challinger's first official moves: Establish the firm's U.S. headquarters in Burbank, Calif., close to one segment of its existing user base.

"I can see at least six of our customers by looking out the window," Challinger said. "I've told the folks at Disney to hang a red flag out the win-

dow if they need help."

Challinger noted that a New York office was in the works with plans to bolster the company's bid to pursue network broadcasters. Pixel Power's former U.S. flagship office in Florida will remain a base for support operations.

### NEW PRODUCT ROLLOUT

Challinger used the company's tradeshow press conference to announce several new products and



Pixel Power's new LogoVision logo generator

partnerships for Pixel Power.

Citing the expense and complexity of currently available 3D broadcast graphics systems, Challinger announced the debut of CG-3D, a \$7,000 real-time 3D add-on for the firm's Clarity family of switchable SD/HD graphics generators.

CG-3D offers the ability to create 3D graphics and import complex 3D models from other applications, and yet requires no special training to permit current operators to create and

integrate 3D broadcast graphics.

A built-in software toolset includes animation and lighting controls,

low-priced logo insertion devices with limited functionality and flexibility, and the commonplace use of expen-

**"We're the best-kept secret in broadcasting.**

**But we're going to change that."**

**—Pete Challinger, Pixel Power**

keyframe support and parametric primitives. More significant, however, is the system's ability to inte-

grate live data feeds, such as those from sports scoring systems or election results, into the 3D environment, either by mapping these data onto the 3D objects' surfaces, or by using them to alter the object itself.

### BUILDING LOGOS

Also announced for NAB2007 was a family of affordable standalone logo generators dubbed "LogoVision."

Challinger characterized LogoVision as aiming to fill a gap between

sive graphics systems for relatively routine logo tasks.

"The idea behind LogoVision is that we're taking the technology from our Clarity systems and putting it into an affordable box," Challinger said.

The compact, rackmountable unit is self-contained and requires no host workstation, and is targeted at a \$10,000 price point.

Pixel Power also used NAB2007 to announce "Newsroom in a Box," an innovative, affordable product designed to allow small operations to create news programming with minimum staff and hardware. The combination switcher, clip player and graphics generator is already seeing service with Britain's ITN news service as a generator of news content for mobile phones. ©NAB

# BMS Touts Tandberg AVS Acquisition

## Quarter century anniversary observed

by Craig Johnston

LAS VEGAS

**B**roadcast Microwave Services turned its NAB2007 press briefing into a party, complete with cake, to celebrate its 25th year in business and 25 years at NAB.

The company had more to celebrate, including its acquisition of Tandberg Television AVS GmbH, which specializes in the manufacture of COFDM transmitters and receivers. The European operation has been renamed BMS Europe.

BMS said the former Tandberg products will complement its microwave products, give the flexibility to grow into new geographical territories, and offer the customer service and support necessary for the company's global expansion plans.

### BUSINESS RELATIONSHIP

Robert Bauer, BMS director of marketing and sales, introduced Reinhard Kühn, managing director of BMS

Europe. They explained that Tandberg Television and BMS have also established a business partner relationship.

Bauer emphasized this new acquisition will not pull the company's attention away from broadcasters.

"If ever there was any doubt by anyone about the BMS commitment to the broadcast industry, let me lay that to rest right now," he said. "BMS has the

microwave transmitter was developed by BMS.

By using the camera's own encoder, customers can save tens of thousands of dollars. The system was demonstrated by BMS and JVC.

BMS has put a particular focus on stations involved in the 2 GHz relocation equipment swap.

Bauer and Kühn reviewed a number

detects COFDM MPEG parameters and outputs PAL, NTSC, SDI, ASI and 70 MHz output. Both the TCII and CRS-DCII are designed with simple control interfaces.

The BMS TCII media router sends IP traffic in spare bandwidth while a live video signal is being transmitted back to the studios, allowing a speed of up to 6 Mbps.

BMS Europe added its Heli-transmitter to the product line, designed for ENG and point-to-point microwave links. It is capable of operation from 900 MHz to 14 GHz.

The company also showed the Mini-Coder II HD transmitter wireless camera system, which mates the BMS lightweight HD transmitter to a Sony HDC-1500 camcorder, giving a camera operator portable wireless freedom when doing a live shot.

On the question of the likely delay in the BAS relocation frequency switch deadline, Bauer said BMS is continuing to upgrade its BAS-eligible equipment with the company's latest technology. ©NAB



The BMS Truck-Coder II encoder/transmitter

most robust line of digital microwave solutions for the broadcast industry."

One of those solutions is a collaboration between BMS and JVC, which has introduced the wireless ProHD Libre microwave-equipped camera system. JVC supplies the camera, which outputs an encoded HD signal. The camera-mounted digital

of BMS products displayed at the tradeshow. One focus was on the Truck-Coder II, a COFDM digital and analog encoder and transmitter combination designed for ENG or OB microwave applications.

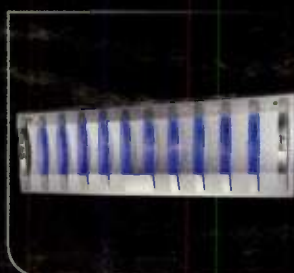
The company's Central-DeCoderII, a COFDM digital central receive site decoder, is an agile receiver that auto-





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# OmniBus Promotes Eco-Friendly iTX

## Updated Opus content manager also unveiled

by Craig Norris

LAS VEGAS

There's a saying in baseball: You can't steal second base without taking your foot off first.

In that light, OmniBus CEO Mike Oldham quipped in his NAB2007 press conference that his company's move toward generic IT hardware for its future automation products seems to have reduced the number of NAB show parties to which he is invited.

For sure, the traditional broadcast hardware vendors may not be comfortable with the idea of a new-generation automation system that does not require a standalone video server, character generator or master control switcher. But according to OmniBus Chief Technology Officer Ian Fletcher, the strong demand for greener systems requires a whole new system design approach in order to significantly reduce the power consumption of television broadcast stations.

### NEW PLATFORM

The iTX platform introduced by OmniBus at NAB2006 has achieved a strong foothold in emerging television broadcast markets such as IPTV and mobile TV. Some major industry names in those new markets are in the process of launching their services from sys-

tems based on OmniBus's iTX. And many existing traditional TV broadcasters are adopting iTX to launch their HD channels.

"This isn't just a channel-in-a-box, but an enterprise-wide platform," Fletcher said. "It's our next-generation automation engine."

It can run on generic IT rackmount servers as a channel-in-a-box configuration, and it can be run as nodes across a cluster of IT servers controlling legacy traditional broadcast hardware. One customer is implementing 160 nodes to create 80 fully redundant channels of play-out.

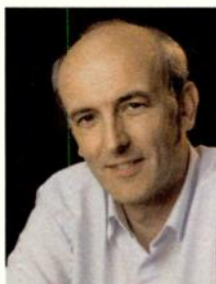
According to Fletcher, many European projects are now demanding as a mandatory requirement that the new broadcast systems consume far less power than traditional equipment. The OmniBus iTX platform is reducing power consumption by at least 40 percent.

This has a knock-on effect of reducing the required capacity for air conditioning systems, UPS units and backup power generators. Fletcher said that this has "a massive effect on the total power

bill" for a broadcaster.

The immediate benefit of cost savings for the customer is supplemented by the reduction of greenhouse gases associated with electricity production.

With more than three years of development, one year of field use, and a year of QC testing by Accenture, the iTX platform is now being enhanced with



Ian Fletcher, chief technology officer of OmniBus

**"This isn't just a channel-in-a-box, but an enterprise-wide platform."**

— Ian Fletcher,  
**OmniBus**

20 to 30 major features. Among the enhancements in iTX 1.1 debuting at NAB2007 are advanced 3D graphics, multiple audio tracks for multi-language play-out, HD ingest, MXF/GXF support and live instant playback for news, sports and entertainment programs.

### TIGHTER INTEGRATION

Fletcher was careful to point out that this iTX next-generation automation engine could also be used by existing

OmniBus Colossus automation customers to control their current hardware platform. One of the major benefits in doing so is a much tighter integration with the OmniBus Opus content management system. Opus 2.0 was released at NAB2007.

One of the major improvements available in Opus 2.0 is the use of generic Web browsers to access content management applications, but with a much more interactive and satisfyingly responsive user interface than that which one usually associates with Web browsers.

This enhanced responsiveness and greatly improved look and feel were achieved through new and currently unannounced enhancements in code from Microsoft, yet the benefit is available regardless of the Web browser on the client workstation.

Fletcher demonstrated the new Opus 2.0 user interface on a Macintosh with a Mozilla Firefox browser.

According to Fletcher, the new iTX broadcast platform is capable of not only replacing traditional broadcast hardware, but it also makes for a much more flexible operational style. For example, monitoring of the signals going into and out of the system can be done at any workstation by joining any of the IP streams in the system. Dedicated routing switchers are not required. ©NAB

# Network Electronics Preps for 1080p

## Routers given configurable Web panels

by John Merli

LAS VEGAS

Network Electronics, which has made a name for itself in recent years with its line of VikinX routing systems, demonstrated eight new routers at NAB2007, ranging in size from 32x32 to 256x256.

As the industry gears up for more 1080p in its future, the company conducted a live 3G demo with a direct link to the Gennum booth, both located in the upper level of the South Hall.

### FIBER DOMAIN

At a press briefing on the tradeshow floor, CEO Oddbjorn Bergem and other Network executives detailed the firm's modular routing concepts. The 256x256 models (VD256256L and HD256256L) allow for hot-swappable module cards and

internal dual-redundant power supplies, similar to its 128x128 and 64x64 units.

NAB2007 also marked the firm's introduction of its 16-single-wide Bridge Line bus, which permits any signal in the router to throughput to the plug-in Flashlink signal processing and to various fiber-optic devices. Bridge Line makes it possible to switch line or frame synchronizers, A/D and D/A converters or fiber interfaces internally into the signal path with the goal of suppressing signal error and allowing fiber domain conversion and trunking.

"Simplicity rules," Bergem said. "We say don't over-engineer the product. We try to make all our products easy to operate and easy to install."

That principle, he said, aptly applied to his company's new Web panel, which was developed to simplify the use of routers in a comput-

ing environment by enabling users to configure their own Web panels.

Bergem said his Sandefjord, Norway-based company's VikinX System Configurator provided several Web panel templates with the features provided in its VikinX IP-based hardware control panels.

### VIDEO TRANSPORT

An increasing array of the firm's new wares was engineered with 1080p HD in mind.

"We're seeing that from the consumer now," Bergem said, "where people are starting to ask for 1080p. I think it's the future of HDTV."

"This is really more a concept for the next generation to come, rather than reality today, since 1080p cameras are not really out there yet. Today if you really want to be future-proof, you really should consider 3G-1080p, in my view. The challenge, of course, is higher bandwidth and

more data displays, so you need all new equipment. But by far, it's the best HD format."

The firm uses three methods to allow the transport of 1080p 50/60 HD video over one 3G link, which it says provides both cost-effective and technical advantages over the typical alternative method (two 1.5 Gb links). In its live demo with Gennum, 1080p video was transported over fiber to the Network Electronics booth, using Network's router and fiber-optic transport devices.

The signal was converted into the optical domain using the firm's Flashlink 3GHD-EO-2 electrical-to-optical converter, before being transported to Network's booth using a single-mode fiber. Upon reaching the booth, the signal was converted back to electrical mode by a Flashlink 3GHD-OE-2 rather than EO converter, and finally displayed in 1080p at 60 fps. ©NAB



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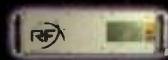
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## TV Pro Gear opens new factory to produce \$80,000 multi-camera high definition flypaks

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TVPG Audio Stage Box

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Clearcom MS-232 2-Channel Intercom

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# Apple Overhauls Final Cut Studio

## New version includes color grading, motion graphics and audio upgrades

by Jay Ankeney

LAS VEGAS

**“W**e have an obsessed focus on the Final Cut editor,” Robert Schoeben, Apple vice president of applications product marketing told the crowd at the company’s NAB2007 press conference. “We have taken all of our user’s feedback and brought out a complete overhaul of Final Cut Studio by improving every aspect of it. We know who our customers are, with 10,000 of them attending NAB2007 and 790,000 more around the world, and with the new Final Cut Studio 2 that we are introducing here is designed to meet their needs,” he said.

The solutions offered in Apple’s new Final Cut Studio 2 are not only significant upgrades to its suite of post-production software, they also include a brand new color-grading component, simply called Color. Color is the progeny of Apple’s purchase of Final Touch software from Silicon Color last October.

But at the core of Final Cut Studio 2

is the new Final Cut 6 editing application, which now includes an open format timeline on which editors can mix and match virtually any video format and frame rate without transcoding.

Also part of Final Cut Pro 6 is the new ProRes 422 that produces HD quality images at SD file sizes, optimiz-

behaviors in Motion 3 let editors slip and slide retiming effects on the timeline without key frames. Motion 3 templates with video drop zones can be edited directly in Final Cut Pro 6.

A new version of Apple’s audio editing application Soundtrack Pro 2 enables editors to create stereo and

industrial strength encoding tool with a new streamlined interface and simplified workflows. Compressor 3 extends support for MPEG-2 and H.264 codecs to include new drag-and drop presets for delivery to broadcast television, Web, iPod, Apple TV DVD and mobile phones.

Final Cut Studio 2 will be available this month and will sell for the same price as the original Final Cut Studio, \$1,299, even including the new Color.

The second major announcement from Apple was Final Cut Server, a new server application designed to work seamlessly with Final Cut Studio 2.

Final Cut Server is a scaleable application supporting workgroups of any size and provides media asset management and workflow automation for post-production and broadcasters. Final Cut Server automatically catalogs content, while also generating low-resolution clip proxies in the process. It also includes a shot selection and editing tool supporting drag-and-drop integration with Final Cut Pro 6 projects. Final Cut Server will be available later this summer. ©NAB



Apple has rolled in many new features to Final Cut Studio 2, including new capabilities for color grading, motion graphics, encoding and surround sound.

ing the possibilities for editing high-definition projects in the field on a laptop.

### IN MOTION

Included in Final Cut Studio 2 is Motion 3, the latest version of Apple’s motion graphics software, which extends the familiar Motion tools into a 3D environment. New retiming

5.1 surround sound mixes in the same project, and includes a heads-up spotting display that lets editors precisely align effects and dialog with picture.

Reflecting Apple’s conviction that output to multiple formats, especially IP, has become increasingly important, the new Compressor 3 component of Final Cut Studio 2 combines an

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## Motorola Acquires Terayon for \$140M

SCHAUMBURG, ILL.

Motorola Inc. has agreed to buy Terayon Communication Systems Inc. for \$140 million. Under the terms of the agreement, Motorola will acquire all of the outstanding shares of Terayon's common stock for \$1.80 per share in cash.

The acquisition of Terayon, which provides real-time digital video networking applications to cable, satellite and telecommunication service providers, gives Motorola technology that lets service providers offer video based on regional and local interest and allows for digital ad insertion, motion and graphical overlays.

"The acquisition of Terayon will enhance Motorola's end-to-end portfolio for the delivery of next-generation services such as targeted advertising and program insertion solutions," said Dan Moloney, president of Motorola Connected Home Solutions. Upon completion of the transaction, Terayon will become a wholly owned subsidiary of Motorola and will be integrated into the Motorola Connected Home Solutions business. Motorola intends to maintain Terayon's operations in Santa Clara, Calif. The deal is expected to close in the second or third quarter of 2007.

## DG FastChannel Acquires Pathfire

DALLAS

Digital media service provider DG FastChannel Inc. is acquiring privately held Pathfire Inc. for \$30 million through a stock purchase transaction.

Pathfire, which generated revenues of about \$16.2 million in 2006, distributes third-party long-form content through a proprietary server-based network via satellite and Internet channels. The Roswell, Ga.-based company is focused on distributing syndicated programming like "Jeopardy" and "The Oprah Winfrey Show," as well as news stories from ABC and CNN to their affiliates. Pathfire technology is installed in about 1,400 U.S. television stations.

The combined DG FastChannel and Pathfire networks will provide a one-stop source for all video forms including ads, news, syndicated programming, movies and video news releases and electronic press kits, according to the companies.

Scott K. Ginsburg, chairman and CEO of DG FastChannel said, "Pathfire's separate and distinct IP multicast digital satellite delivery network and blue chip customer list are excellent add-ons to DG FastChannel's business. Pathfire has

a leading position in news, entertainment, and video news releases. These media segments greatly expand DG FastChannel's existing positions..."

DG recently purchased Point.360's advertising distribution operations. Ginsburg said upon completion of both acquisitions, DG FastChannel anticipates an annual revenue of about \$113 million to \$118 million and EBITDA will be in the range of \$35 million to \$38 million.

"The strategic expansion of our electronic delivery platform will deliver further value to our shareholders, particularly in the era of high-definition television," Ginsburg said. "Over the next two years, television and cable outlets will transition primarily to HD broadcasts. Importantly, both the DG FastChannel network and the Pathfire network are already fully capable of electronically and securely transferring high-definition as well as standard-definition content to the broadcasters."

The transaction is expected to close in the second quarter of 2007.

## Scripps Q1 Profits Down

CINCINNATI

E.W. Scripps reported a 9 percent drop in profits in its first quarter.

The diversified media company—which owns 10 television stations as well as several cable channels, several Internet search engines, and daily and community newspapers—logged net income of \$68.5 million (42 cents per share), compared to \$75.1 million (45 cents per share) in the same period a year ago. Revenue for the quarter was up 2 percent to 601.4 million, versus \$589.7 million for the first quarter of 2006.

Profit for the Scripps Television Station Group was \$16.4 million, compared to \$22.5 million in Q1 2006 and profit for the newspaper division was \$31.6 million compared to \$49.9 million in the same period a year ago. Coverage of Super Bowl XL on ABC and the Winter Olympics a year ago helped increase profits in Q1 2006, a fact the company cited in its lower profit report for its television stations for Q1 2007.

Scripps Networks, which includes its cable channels, fared better, with profits of \$128 million in Q1, compared to \$107 million for the same period in 2006.

In recent years, Scripps has increased its focus on interactive media properties, particularly its Internet search businesses, uSwitch, which it acquired a year ago, and Shopzilla. Revenues rose at those divisions, but profits were down due to "changing business conditions," which

included increased competition, increased investments the company is making in Internet search technology and lower energy costs in the United Kingdom, which has resulted in a softer switching market.

Scripps expects second quarter total revenue to be up 8 to 10 percent compared to the same period a year ago and that total revenues for the year will be up 10 to 13 percent.

## Meredith Profits Up on Strong Online, Publishing Growth

DES MOINES, IOWA

Meredith Corp. reported a 12 percent jump in third quarter profits, fueled by strong growth in its publishing and online properties.

Net income for the quarter was \$45.3 million (92 cents per share), compared to \$40.6 million (80 cents per share) in the same period a year ago. Revenues were up 4 percent to \$409.8 million versus \$394.9 million a year ago. Adjusted earnings were \$43.6 million (88 cents per share).

Broadcast revenue from its 14 television stations was up \$79.4 million, compared to \$75.9 million for the same quarter a year ago and publishing revenues increased to \$330 million, up from \$319 million last year.

Commenting on the TV revenues, Meredith Corp. President and CEO Stephen M. Lacy said "the results of the February book reflect growth in our local station brands and news programming, which are the keys to attaining higher ratings, increasing market share and generating more revenues. The combination of strong local brand franchises and solid execution of our news content strategies is reflected in the growth we are experiencing in both late and morning news at many of our stations."

In April, the company launched its new broadband initiative, better.tv, featuring more than 20 channels of original video content and programming targeting women's interests.

## Belo Reports Lower Earnings in Q1

DALLAS

A "challenging newspaper advertising environment" was the main reason Belo Corp. reported a 10 percent decline in net earnings for its latest quarterly financial report.

The company, which owns 20 broadcast stations, seven cable news channels and four newspapers, among other media entities, reported net earnings of \$15.5 million or 15 cents per share for

the first quarter of 2007, compared to \$17.3 million or 16 cents per share in the same quarter of 2006.

Consolidated revenue for the quarter, ending March 31, 2007, was \$354 million, down 4.8 percent, versus the first quarter of 2006.

Robert W. Decherd, Belo's chairman and CEO, said while the company's first quarter results reflected good performance by its Television Group and expense management across the company, the soft newspaper advertising market tempered the company's bottom line. He also noted a recent partnership with Yahoo illustrates the company's move to work with new media outlets.

"We are realizing the benefits of our proactive approach toward re-engineering Belo's newspaper businesses, and we are diligently seeking efficiencies across the company," he said.

In Q1, Belo's Television Group revenue was up 2.1 percent over the same period last year. Belo's Newspaper Group was down 11 percent.

The company said its total operating costs and expenses are down 3.5 percent, benefiting from headcount reductions during 2006 at The Dallas Morning News and The Press-Enterprise, and significantly lower newsprint expense.

## Ericsson Completes Offer for Tandberg

STOCKHOLM, SWEDEN

Ericsson has completed the voluntary public cash offer for Tandberg Television, a deal that helps the company increase its presence in the IPTV market.

Ericsson has received favorable rulings from competition authorities to acquire all outstanding shares in Tandberg Television. All conditions in the terms and conditions set out in the offer document have been met and Ericsson said in a statement it would complete the offer in accordance with the offer document.

The Swedish telecommunications company made an unsolicited offer in February to acquire Tandberg Television for \$1.4 billion in cash.

As soon as possible following settlement, Ericsson will proceed with a mandatory offer for the remaining shares in Tandberg Television as required under Chapter Four of the Norwegian Securities Trading Act.

Ericsson also plans to acquire the remaining shares in Tandberg Television in accordance with paragraph 4:25 of the Norwegian Public Limited Companies Act. Ericsson also intends to have Tandberg Television delisted from the Oslo Stock Exchange after the mandatory offer is completed.



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