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# NAB 2005

Preview Issue

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Audio By Design

In the first installment of Audio by Design, we identified the pin-1 problem that unfortunately resides in much audio equipment... The pin-1 problem crops up when the shield of a signal interconnection cable is allowed to enter the piece of gear.... Page 8

**NAME:**  
Charles W. Rhodes

**COLUMN:**  
Digital TV

Last month, this column reviewed the paper Gary Sgrignoli of Zenith and I wrote for the International Conference on Consumer Electronics (ICCE), which closely followed the Consumer Electronics Show (CES) in Las Vegas. The CES had about 130,000 attendees. ICCE had some 400 engineers.... Page 14

World Radio History

**NAME:**  
Mario Orazio

**COLUMN:**  
The Masked Engineer

You might not have noticed that HDTV can be analog. I ain't talking about the 1930s, when some British political committee declared HDTV to be a couple-hundred scanning lines of spinning-wheel video. No, I'm talking, for instance, this year in Japan... Page 20

Super Bowl ads reveal editing élan

Something NAB2005 this way comes

New gear this year



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## FROM THE EDITOR

# NAB: The More Things Change...



In the months leading up to the broadcast industry's biggest event of the year, we in the trade press meet with a number of the NAB show's biggest exhibitors to discuss new technologies, trends and booth sizes. This year was no different; however, I detected a certain defensiveness on the part of some of the exhibitors with regard to the broadcast industry.

"We want people to know that we are still committed to broadcasters," was usually how it went. The exhibitors—usually large multinational corporations—are under constant pressure to target the "next big thing," whether it be the Internet craze of five years ago or the current emergence of telco video.

When they launch new products or services that may not specifically target broadcasting, they become justifiably concerned that broadcasters may think they're about to be left behind in the rush. Over the years many broadcasters have developed close, loyal relationships with their

vendors, and they want to be assured that that company will answer their calls next week, next month or next year.

What a golden opportunity then, for the annual NAB show to maintain and strengthen those ties. Employee turnover rate is as high as ever, but it can be reassuring to know that in the broadcast business, at least, loyalty counts for something. Getting the chance to see old friends and colleagues, test the new gear and debate the issues is what NAB is all about; and despite the massive growth the show has seen over the last decade, many of the same people return again and again every year for their NAB fix.

Nonetheless, NAB2005 promises to be more interesting than usual, with the news that this show will be NAB President Eddie Fritts' last as its leader.

For almost 25 years, Fritts has provided the organization with the kind of strong, steadfast leadership that has made the association so effective in Washington and its show such an influential har-

binger of future technology. Some say broadcasting is becoming irrelevant in an age of cable, satellite and the Internet, but those naysayers need to remember that many of the technology and programming foundations were laid by broadcasters, and that broadcasters are helping to lead the way into the future of high-definition television. Too many associations these days tend to look to leadership that knows how Washington works rather than how its industry works. Fritts was—and is—first and foremost a broadcaster, and whoever succeeds him will need to maintain that focus.

Tom Butts  
Editor  
[tbutts@imaspub.com](mailto:tbutts@imaspub.com)

### ERRATUM

In the Feb. 16 issue, it was reported that Wegener Corp. is based in Duluth, Minn; the company is located in Duluth, Georgia. TV Technology regrets the error.

## LETTERS

Send to Editor, TV Technology at e-mail [tvtech@imaspub.com](mailto:tvtech@imaspub.com)

### Shocked!

Dear Mario:

I look forward to your column in **TV Technology**; it's the first thing I read in the magazine.

But I must tell you that I was shocked, shocked to read you advocate against neat cabling in racks ("Labels, Cables and Other Assorted Rantings," Nov. 24, 2004). Egads man, have you lost your mind?

Properly laced and run cable is absolutely key to running a smooth operation in a TV facility. Not only can you see what you are doing, you can disconnect and reconnect equipment much faster.

Here's a rack that is properly cabled.

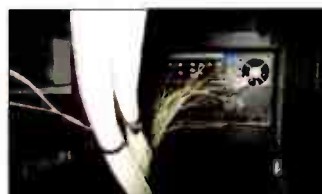
Notice the service loop that allows the patchbays to be removed from the front for service without cutting cable ties. These racks were built nine years ago.

The end of each cable is labeled with source and destination info about the rack location, the piece of equipment, and the connector it attaches to. It's absolutely essential to label cables fully.



Here's a typical situation where you might extend a VTR out for service of some sort.

With proper cabling and the right length service loop, this is a simple task. If you have a "Medusa's-hair mess," you just can't do these things.



I will agree that people can make bad choices trying to tie wrap cables that cause problems, but it's no reason to advocate messy cabling. I expect a full retraction next issue!

Michael Pusateri  
Burbank, Calif.

### Mario responds:

If you re-read the piece, you'll see I called for service loops. But, as for tie wraps, you may be deluding yourself. I suggest you attend one of the Belden seminars offered by Sieve Lampen. Tie wraps at periodic intervals are worse for cable performance than running it over with a steamroller and attaching mangled stubs to that flattened mess.

If you're using relatively low frequencies, neat periodic cable ties are no big deal, but in HD-SDI land it can mean the difference between a usable signal and a useless cable.

You ain't gettin' any retraction from me, but maybe you'll change your own tune after you see Belden's test results.

Yes, it's counterintuitive. So is the narrowband FM that finally made videotape recording practical.

Your pal,  
Mario





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## FOCUS ON EDITING

Jay Ankeney

# The Goal of Post at Super Bowl XXXIX

Like the outstretched arms of the goal posts, digital technologies extended the Feb. 6 broadcast of Super Bowl XXXIX into multiple levels of communications accessible to many more people than the 133.7 million who actually watched the game. Increasingly, it's the video elements only tangentially relevant to passing the pigskin that are becoming the hits of the show.

Did you enjoy the one-minute digital open that kicked off the spectacle? Created by Digital Dimension in Burbank, Calif., the sequence combined fictional live-action character Donny Tucker smashing through computer-generated football heroes of the past, including Bruce Smith, Reggie White, Mike Singletary and Ronnie Lott. At the end, he blasts his way through a 100-foot image of the Vince Lombardi Super Bowl trophy before all the images shatter to the ground and the game begins.

This Super Bowl curtain raiser was crafted using Discreet 3ds max animation software by the Digital Dimension creative team led by Jason Crosby, CG supervisor; Justin Mitchell, lead animator; Leandro Visconti, lead compositor; and Senior Technical Director James Coulter. They found that the normal mapping feature of 3ds max technology allowed them to create the illusion of extra geometry in real time while the Cebas Thinking Particles plug-in effectively produced the fireworks and shattering glass effects.

## THE REAL ATTRACTION

But as usual, it was the ads that caught this editor's eye. In fact, a recent poll conducted by the Retail Advertising and Marketing Association found that among the coveted American 18- to 24-year-old demographic, 24.5 percent tune into the Super Bowl primarily to watch spots. Costing a record \$2.4 million to fill a 30-second slot (that's \$80,000 per second!), we have come to expect these Super Bowl spots to be the epitome of commercial post production.

Way too much has been said about Ms. Jackson's unintentional costume goof from last year, but Budweiser cleverly managed to capitalize on it this time around by releasing an ad supposedly too controversial for Fox called "Wardrobe Malfunction," which you can still see all over the Web. My favorite site for it and the other ads mentioned here is iFILM ([www.ifilm.com/superbowl](http://www.ifilm.com/superbowl)) and the site's executive producer, Roger Jackson, assures me these video gems will be available for viewing for the foreseeable future.

Just before the team introductions, DirecTV ran a spot called "Forward" that

depicted a boy growing into old age in what appears to be one continuous shot while he morphs from one stage in life into another. As a youngster, he begins watching Lucille Ball's famous "Vitameatavegimin" bit on an old Philco set with his grandfather. Then he steps through a doorway into a diner hearing "...a fiery horse with the speed of light" blaring from a countertop RCA screen. He moves on seamlessly through six other

one remember why Burt Reynolds was dancing with a bear, who Brad Pitt was calling for a pick-up, or what GoDaddy.com was actually advertising?

But then with the Patriots up 14-to-7 over the Eagles with 10:59 left in the third quarter, there came a magnificent Super Bowl memory edited by Dick Gordon on an Avid Media Composer at Spot Welders in Venice, Calif. It was subtle, and caught many people off-guard on several levels.



*Above: Created by Digital Dimension in Burbank, Calif., fictional live-action character Donny Tucker mows down computer-generated football heroes of yore. Right: A scene from the Budweiser "Applause" spot.*

slices of his life accompanied by classic TV programs until he ends up in a living room as an old man watching a plasma set with his own grandson as the voice-over intones, "It's time to rethink TV."

The live-action images in "Forward" were shot by Biscuit Filmworks of Los Angeles, but the visual effect of morphing the character into old age as he steps through each successive portal was accomplished at Method Studios in Santa Monica, Calif., by lead 2D visual effects supervisor, Alex Frisch, along with 3D VFX artists Gil Baron and Hatem Benabdallah. They used Alias Maya 3D modeling software for previsualization and accomplished what they called the "creative wipes" in each doorway, using the boujou automated camera calibration and tracking system made by 2d3 Limited.

Then the game was interspersed by a popular beer ad in which a skydiver throws a full six-pack out of a plane; an odd " Fargo" knock-off introducing a new Mustang convertible with its driver freezing to death in a snow-swept wasteland; and a woman somehow getting tanned from McIlhenny Tabasco sauce. Does any-



We see a woman dialing a cell phone in an airport lobby, a man reading a newspaper and a couple talking quietly. Then filing past the ticket counters is a group of soldiers in fatigues. People notice, put down their laptops and magazines, stand up, and slowly begin applauding. No words, no symbols, just pure, honest, understated emotion.

Throughout a total of just over two dozen cuts edited with a brilliant juxtaposition of reinforcing screen movement, the GIs in transit walk through the concourse carrying their duffle bags as the civilian clapping grows, accompanied by reverently synthesized tonalities on the soundtrack that only fade in around shot No. 5. After a woman reaches out to shake one of the soldier's hand in shot No. 19, close-ups of the soldiers' faces

reveal a modest surprise. Finally, as the uniformed group leaves the hall in shot No. 27, one of them turns back to look over his shoulder in gratitude.

## SPONTANEOUS REACTION

Entitled "Applause," the spot's sponsor, Anheuser-Busch, was only identified by a brief tail-slate that appeared after the black-and-white words "Thank You" dissolved on and off the screen. The moment was so effective, and the audience response where I watched it was so intense, the rest of the game was only a blur. The previously rowdy beach crowd at Sharkeez Baja Grill was clapping so loudly by the time the spot ended that it was only after reviewing the videotape I realized the applause on the soundtrack faded out by shot No. 21, leaving only the musical tone poem on the soundtrack.

Greg Popp, group executive producer at DDB, the Chicago agency responsible for the spot, tells us "Applause" was based on a real-life experience that Art Director Steve Bougdanous had witnessed at the Dallas/Ft. Worth airport.

Famed veteran commercial director Joe Pytko intentionally chose a documentary-style approach when he filmed the spot using an Aaton Super 16 camera with a long lens on the upper level of the Los Angeles International airport. One hundred extras and 25 principles were caught in unscripted poses and directed to react to the scene as it unfolded.

But the military personnel were real, on active duty from every branch of the service donating their free time to the project. It is Staff Sgt. Sekou Taylor who hefts his kit over his back in shot No. 21, Capt. Colleen Johnson is the soldier who looks around smiling at the crowd in shot No. 24, and Cpl. Anthony Logan is the one who looks back in wonder in shot No. 27.

It's a Super Bowl highlight well worth reviewing on the Web for photographic style, editing technique and heart. Oh, by the way, the Patriots won 24-21. ■

Jay Ankeney is a freelance editor and post-production consultant based in Los Angeles. Write him at 220 39th St. (upper), Manhattan Beach, CA 90266 or at [JayAnkeney@aol.com](mailto:JayAnkeney@aol.com).



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World Radio History





AUDIO BY DESIGN

Mary Gruszka

# How to Test for the Pin-1 Problem

In the first installment of Audio by Design, we identified the pin-1 problem that unfortunately resides in much audio equipment and I discussed why you don't want it. The pin-1 problem crops up when the shield of a signal interconnection cable is allowed to enter the piece of gear (via the panel connector and internal wiring) and ultimately be connected to the internal signal ground. When that happens, any noise flowing through the shield will flow through the audio circuitry. Various grounding and shielding schemes have been developed to circumvent the problem, but it is best tackled at the source.

The remedy for the pin-1 problem, in addition to proper circuit design and layout, is to tie all shields from interconnecting cables to the equipment chassis at point of entry. The equipment chassis should also be connected to a common ground. This happens (to greater or lesser degree) through normal three-prong power plugs with the ground connections still intact, or by rackmounting without isolation washers. Gear with "wallwart" external power supplies will usually need an external connection between the chassis and a good system ground.

## LOOKING FOR PROBLEMS

How can you find out if your audio equipment has the dreaded pin-1 problem?

First, do a visual inspection of the gear. Where does the shield on the input and output connectors go? Sometimes you can follow the wiring or trace from the connectors to the circuit board. Be wary of PC-mount connectors. They may be cost-effective solutions for efficient manufacturing, but by their very nature, they bring along pin-1 problems inside the box. Also, pay special attention to multipin connectors and audio connectors on computers. If you don't see the shields connected to the chassis at point of entry, then suspect a pin-1 problem.

If you've tried every good grounding and shielding known to television engineers and nothing seems to work, look for pin-1 problems in the gear itself. Ask manufacturers how they are addressing the pin-1 problem in equipment design and if anyone else has discovered a problem.

## TESTING FOR PROBLEMS

Pin-1 problems don't show themselves on the test bench with normal measurements for frequency response or total harmonic distortion-plus-noise. That's probably one reason they went undetected for so long.

For a piece of gear already installed

and wired, a quick test can be made by removing all inputs and outputs from the device under test (DUT). Connect a wire from the shield of the cable connector to the shield pin on the corresponding connector on the DUT. Monitor the output with a meter or by a listening on a powered loudspeaker (more details on metering and monitoring below). If you detect hum or buzz, then it's a good bet that the piece of gear has a pin-1 problem.

**Pin-1 problems don't show themselves on the test bench with normal measurements.**

the equipment chassis. An output on the DUT is monitored for any change in the noise level. An increase in the noise level with the Hummer signal applied means that the noise injected on the shield is getting into the signal output—a sure sign of a pin-1 problem.

Building a Hummer is a good do-it-yourself project. Start with a 110 V to a lower voltage (6 V to 24 V) transformer (like a wallwart). The current rating on the transformer should be 50 mA or more.

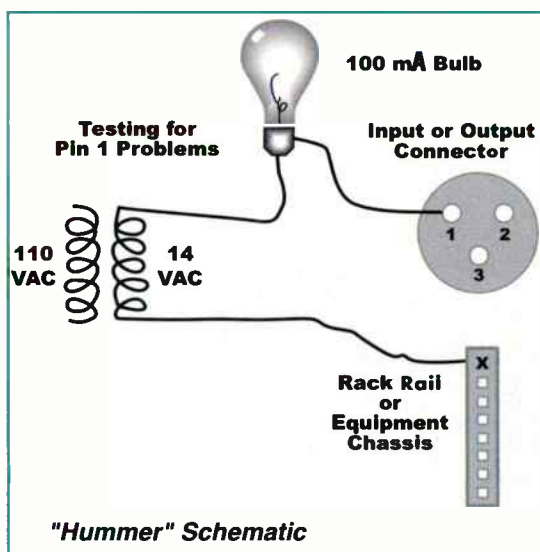


Fig. 1, Courtesy of Pat Brown, Syn-Aud-Con

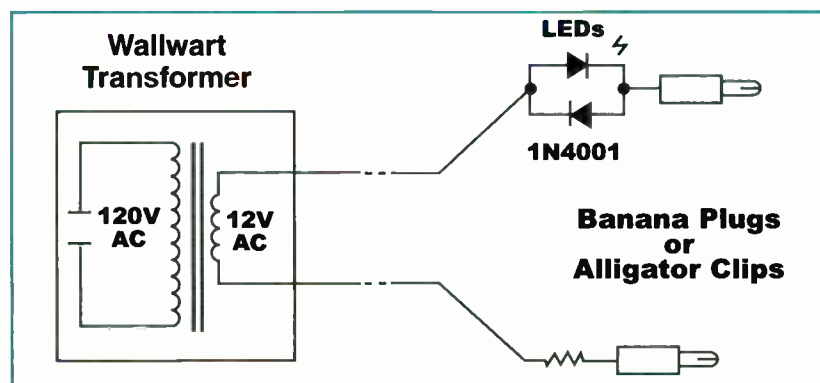


Fig. 2, Courtesy of Bill Whitlock, Jensen Transformer. Both figures based on concepts developed by John Windt.

John Windt developed a tester to detect pin-1 problems and presented his ideas at an AES workshop in 1994. His paper, "An Easily Implemented Procedure for Identifying Potential Electromagnetic Compatibility Problems in New Equipment and Existing Systems: The Hummer Test" was subsequently published in the Journal of the AES in June 1995.

"The Hummer" is the name Windt gave the tester that is used to inject a 60-Hz signal (about 50 mA) into the ground system of a device under test, between the shield pin on an input or output connector (pin-1 on an XLR) and

Fig. 1 and 2 show two different circuits for a Hummer. Both of these are based on the concepts that Windt developed.

Fig. 1 uses a normal electric 100 mA light bulb. Fig. 2 shows the wiring of an LED and diode in parallel (in one leg of the low-voltage transformer) and a current limiting resistor in the other leg. In Fig. 2, LED indicates current flow, the diode protects the LED, and the resistor limits the current when the two leads are shorted.

These versions deliver basically a 60 Hz sine wave current. Bill Whitlock, president of Jensen Transformers, noted that other variations use a diode in series

in order to deliver a more harmonic-rich half-wave rectified current, which can be more audible.

Use an appropriate housing and connectors (alligator clips, banana plugs, spade lugs, or whatever type of connector that will allow easy connection to the equipment.)

Before hooking the Hummer to any piece of audio equipment, test the tester (like you would for any test equipment). You may not want to start by testing that \$150,000 audio console. Try something simpler instead. It should go without saying, but I'll say it anyway—use common sense.

## USING THE HUMMER

First, disconnect all inputs and outputs to the device under test. Then, connect a meter and/or self-powered monitor loudspeaker to one of the audio outputs that you wish to measure. This would be pin-2 and pin-3 on an XLR connector; tip and ring on a balanced 1/4-inch phone connector; tip on an unbalanced 1/4-inch phone or RCA connector; and the appropriate signal connections on a multipin or terminal strip.

It's a good idea to listen to the output even if you are metering it. The monitor loudspeaker doesn't have to be fancy, but it will have to reproduce 60 Hz. The meter can be a voltmeter, oscilloscope or any kind of audio level meter, as long as it has the range to measure lower noise levels.

Power up the device under test. Monitor the output. Note the noise and its level. Is it white (hissing) noise? Normally, that's what would be expected.

Now you're ready for the Hummer. Plug in the 110 V side of the wallwart to a normal AC outlet. (We're talking about U.S. voltages here.)

Then connect one lead out of the Hummer to pin-1 of an input XLR connector, sleeve of a phone plug or RCA connector, or the shield connection of a multipin connector or terminal block. Connect the other lead of the Hummer output to the chassis of the equipment.

Listen and meter. Does the noise level increase? Can you hear a 60-Hz hum? If the answer is yes, the device under test has a pin-1 problem. If there is no increase in the noise level, then the DUT doesn't have a pin-1 problem, at least at audio frequencies.

Try different combinations of inputs and outputs. On a large console this will be a lot of work. Document your findings. Don't be surprised if different permutations of inputs and outputs result in different levels of noise.

Try the test by connecting the Hummer to pin-1 of both input and outputs, instead of one side to chassis.

Next time: What to do when you find a pin-1 problem. ■

Mary C. Gruszka is a systems design engineer, project manager, consultant and writer based in the New York metro area. She can be reached via TV Technology.

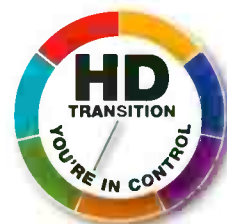


## KAHUNA - THE PRODUCTION SWITCHER THAT DEFIES DEFINITION

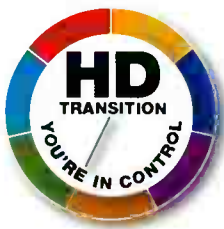
Standard definition? High definition? With Kahuna you don't have to worry. It can handle either of them - separately or at the same time. It can even incorporate SD sources into HD productions without upconversion.

Kahuna is the most versatile switcher on the market. And the most economical. Kahuna lets you take control of your transition to HD without having to re-equip with all-HD sources - and without having to put an upconverter on every SD input.

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- Timeline, DMEM and Macro capability

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- Its own FormatFusion engine to integrate SD and HD sources
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user-configurable mnemonic  
identification



# KAHUNA - THE WORLD'S FIRST TRUE MULTI-FORMAT SD/HD PRODUCTION SWITCHER

## Example of HD Output from a Single M/E Using Mixed SD/HD Inputs

HD background B

Wipe bar provided by Utility Bus

HD background A

SD character generator output using FormatFusion and resize engine

POS	PLAYER	SCORING TO PAR		
		TODAY	THRU	TOTAL
1	Carter	-6	F	-10
2	O'Meara	-7	F	-15
3	Mella	-1	F	-13
4	Zaller	-7	F	-12
T5	Green	-6	F	-11
T6	Price	-5	F	-11
T7	Kenney	-2	F	-11
T8	Rees	E	F	-11
T9	Cross	-1	F	-10
T10	Forsyth	E	F	-10

Animation via one of the internal clip stores

HD camera studio shot 'squeezed back' using picture resize engine

SD hand held camera shot using FormatFusion and resize engine

### Benefits

- Legacy-compatible and future-proof
- Feature set and formats field-upgradable through software
- Puts you in control of your transition to HD
- Competitively priced throughout the range
- Integrates SD sources into HD productions
- No need to replace all SD equipment
- No need for expensive upconversion
- Can cut SD and HD simultaneously
- Resource-sharing maximizes M/E use
- Familiar, intuitive control panels
- Robust system design ensures reliability
- Compact size, less weight, lower power consumption

### Features

- 1, 2, 3 and 4 M/E versions
- All functions, options and PSUs contained in a compact 11 RU chassis

- Accepts all SD and HD standards
- Up to 80 field-upgradeable inputs
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- 4 keyers per M/E with flexible layering
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- DMEM and GMEM snapshot save and recall memories

- RGB & YUV color correction for all SD & HD outputs with full broadcast specification legalizers on each output (including auxiliary)
- Programmable clean feeds per M/E
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- Powerful machine control
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- Highly intuitive color touch-screen GUI
- Very powerful macro facility
- DMEM and GMEM snapshot save and recall memories
- Off-line PC applications supporting still/clip transfer to switcher system
- Multi-panel and multi-frame capability

### Options

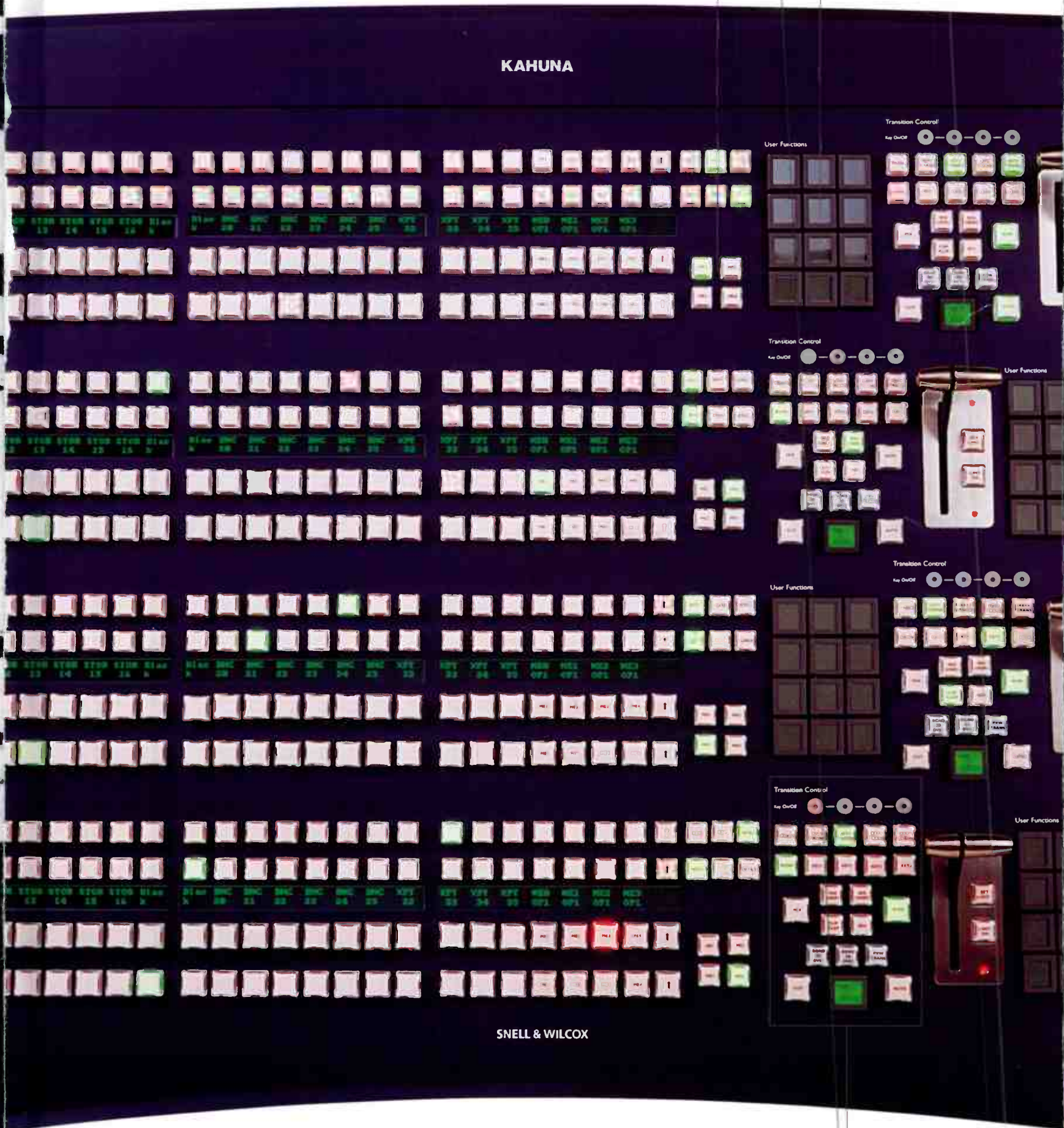
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3 M/E Control Panel



2 M/E Control Panel

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area with T-bar  
for the creation of  
timelines and for  
key-frame editing

M/E background  
and key layer  
enable assignment  
pushbuttons

GMEM and DMEM  
snapshot, store  
and recall

Tracker ball  
for control  
of parameters  
and DVEs

Key layer  
priority indicators

Automatic parameter  
control adjustment

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Kahuna is a truly multi-format system that puts you in control of your transition to HD. It gives you the flexibility to use existing SD equipment, without the cost of completely re-equipping with HD.





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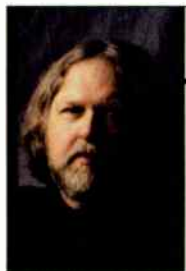
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THE BIG PICTURE

Frank Beacham

# Broadcasting Comes To a Crossroads

Just as members of the FCC assembled on a cold rainy Thursday morning in February to deny multicast must-carry to television stations, a who's who of electronic media executives gathered in a New York City conference room to talk about the future of American television.

On panel after panel at the McGraw-Hill Media Summit, there was hardly a mention of over-the-air television. To the up-and-coming new media players, most under 40 years of age, traditional broadcasters were out of sight, out of mind.

In fact, in a far-reaching keynote interview with NBC Universal CEO Bob Wright, the subject of terrestrial broadcasting wasn't even mentioned. Occupied with a full plate of media opportunities in his new job, traditional TV seemed to be the last thing on Wright's mind.

Afterward, I asked Wright, who has run the NBC network since 1986, about the must-carry decision. He offered a terse response to the FCC's negative vote:

"We'll go back to Congress."

Later in the day came another sharp response from NAB chief Eddie Fritts: "In Washington, there are no final victories and no final defeats."

NAB, he added, will be working to overturn the FCC decision in both the courts and Congress.

I was struck by the arrogance of these reactions. After hearing dozens of bright, passionate entrepreneurs speak of their ideas for a new world of electronic media, the traditional television broadcasters seemed to be playing a retro game of demanding protection of their old ways from the courts and Congress.

This mindset bothered me. I kept asking myself... what's wrong with this picture? It was the broadcasters, after all, who asked for the DTV transition. Now, for some vague reason, they seem not to want to fully embrace it—some even suggesting it is being "imposed" on them by the government.

Not only is the enthusiastic promotion for the possibilities of DTV largely missing, but one has to wonder at this late date if many of the broadcasters even have a solid business plan for their future? For all the talk about multicast must-carry, how many broadcasters have genuinely explored its potential? Outside of some PBS stations, I would suggest very few.

## RESISTANCE IS FUTILE

It appears that the main game plan of many broadcasters is resisting change. Do the station owners think the government is always going to protect them from

the rapid changes taking place in media distribution? It certainly appears so.

The grumbling is everywhere. Even the broadcast industry's staunchest supporters in Congress are losing patience over the resistance of station owners to set public service obligations and a hard date for the return of analog spectrum. It was this hardheaded resistance—acknowledged by more than one FCC commissioner—that contributed to the defeat of must-carry.

As NAB2005 begins, it's a fair question to ask what's next for terrestrial broadcasters. Will they continue to fight to

**A station with five must-carry channels is far more valuable than a station with a single channel.**

preserve the past or embrace the future? Assuming the FCC's multicast must-carry decision sticks and Congress makes it untenable to hold on to analog spectrum beyond the end of next year, what will the broadcasters do?

Obviously the answers to these questions apply differently to network owned-and-operated stations, as opposed to groups and independent station owners. The networks—with their global news operations, extensive original programming and pay television outlets—are in a stronger position to support their O&Os than are independent stations who must chart their own course.

Here are three possible scenarios for the future:

Scenario No. 1: Create station coalitions; consolidate bandwidth. At the Media Summit, a small broadcaster got this advice from Tim Hanlon, a senior vice president of Starcom MediaVest Group, one of the world's largest media brand communications companies.

Group-owned and independent stations have greater flexibility than O&Os but are more squeezed in the current situation, Hanlon said.

"Pooling resources makes sense. Recognize you are all in this together. There's a lot of bandwidth that can be pulled together. Companies like iBlast and Geocast... those conversations happened a little too early. I think the time to have those is right now," he said.

Others who agreed that the future of broadcast stations is in aggregating bandwidth questioned whether broadcasters would bring together the necessary business leadership and investment capital to reinvent their businesses in time.

Scenario No. 2: Recognize the local broadcaster's role in the multichannel

Scenario No. 3: Maximize station value and then sell out. It has long been predicted that as many as half of the current owners of television stations are simply waiting for the right moment to sell. This has been cited as a reason why so many station owners have been sluggish about upgrading their facilities for the DTV era.

This also could be the reason some see a protracted court battle ahead on multicast must-carry. A station with five must-carry channels is far more valuable than a station with a single channel. Right? Maybe—that is if a broadcaster wants to risk the overall



NBC launched WeatherPlus as a multicasting option for its affiliates.

pay television universe and focus on becoming the best information source in the home market. Such a strategy means using the station's primary channel to build and promote audiences for multicast channels, making them desirable—or even essential—for cable operators to want to carry.

Becoming the leading information source for a community through a mix of cable/satellite, terrestrial broadcast and Internet distribution is a solid foundation for a long business future.

As for television, be the first in the market to originate local high-definition programming as a way to remain competitive when viewers flip across the cable/satellite dial to an increasing choice of HDTV program sources. With the rapidly falling cost of HD production and editing technology, local content—including news, live programming and commercials—can finally be produced cost-effectively in-house.

A proactive station that embraces the new capabilities of DTV and uses the technology to enhance its local brand can overcome virtually any of the barriers presented by competing media outlets.

value of his franchise for years of legal battles on what most legal experts think will ultimately be a losing cause based on First Amendment grounds.

Of the three scenarios presented above, those who want to see local broadcasting survive and prosper in an increasingly consolidated media universe will hope for scenario No. 2, perhaps with some combination of No. 1.

For station owners embracing scenario No. 3, it would be nice if they'd execute their exit strategy sooner rather than later. At least that would give a new generation of license holders a chance to reinvigorate local broadcasting with some fresh blood.

A shift from a protective retro strategy to one of boldness and vision would bring a huge relief to everyone—members of Congress, members of the FCC, the creators of television programming and technology, and most of all, to the viewers at home.

It's NAB time again, we can always dream. ■

Frank Beacham is a New York City-based writer. You can contact him through TV Technology.



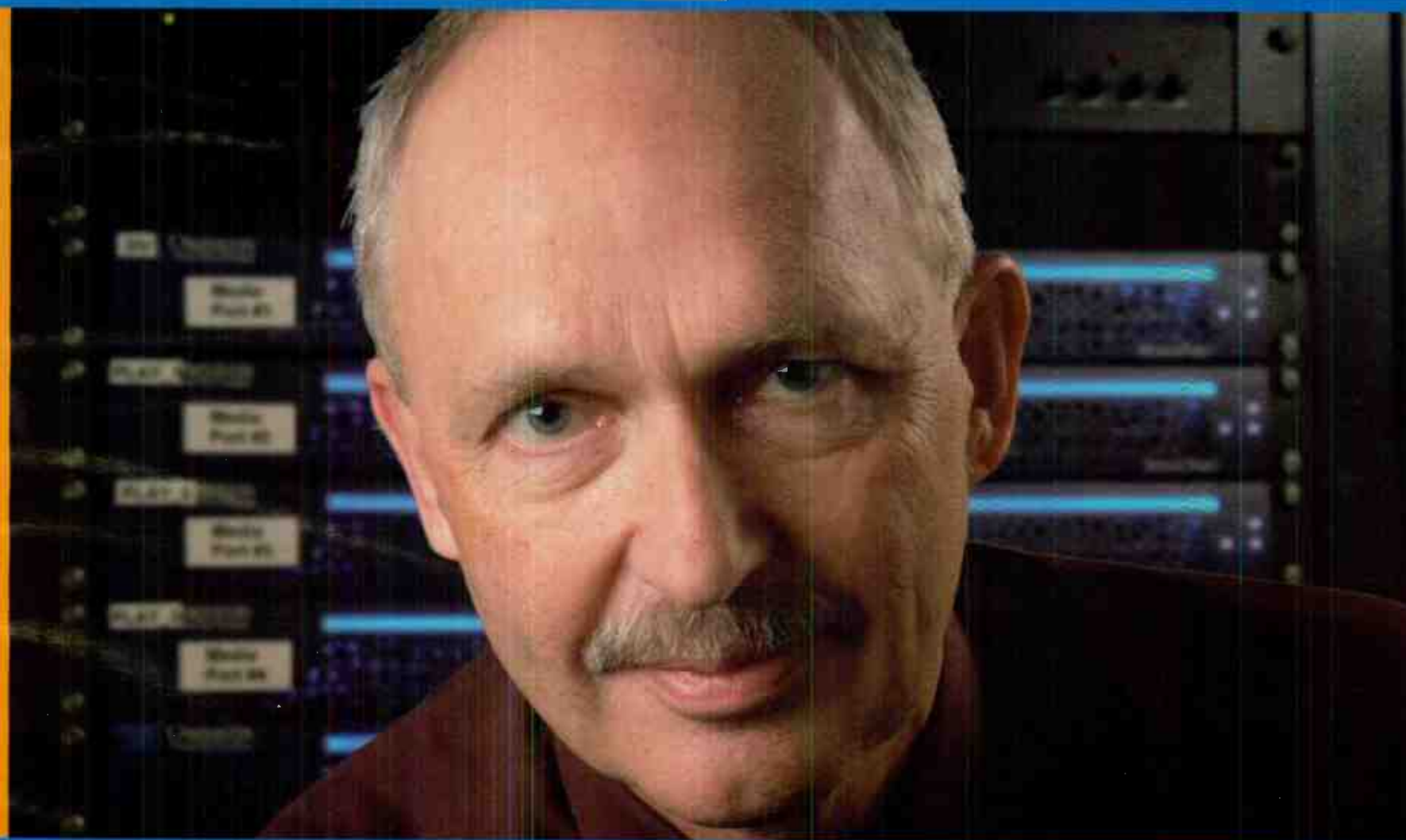
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TUNING IN

Gary Arlen

# Access Becomes Focus of Retail Video Value Chain

It used to be so easy. The electronics store sold devices. You plugged in the device, or inserted batteries, and the device (usually) worked. Maybe you bought a maintenance contract, but that was about the only ongoing option you could get for using that nifty electronic product.

Now, as we all know, nothing is very easy, and electronics retailing is not simply about products. Dealers are peddling access—not in the sense that Washington lobbyists use that term, although there is a connection (read on).

As more and more products require a subscription, retailers are extending their reach deeper into the value chains. As a result, consumers are tied more to the dealer, with subsequent questions about responsibility.

## LET THERE BE ACCESS

The first widespread access products were mobile phones. Thanks to oft-confusing package deals between cell phone carriers and handset makers, consumers got a “free” or “cheap” device by signing up for years of access, usually at a retailer or at the carrier storefront. Satellite TV also burst on the retail scene with subscription access integrated into the retail sale that seemed, at first glance, to focus merely on the receiver.

Ironically, the first widespread access service involving consumer-purchased equipment went in the opposite, and more understandable, direction. Court rulings in the 1970s that allowed customers to buy and attach their own telephones to the old Bell network launched entire new industries. In that case, the legacy access service was still sold by an existing provider. Customers were simply buying cheap retail devices to plug into a familiar service.

In the past few years, product-plus-

service packages, with the emphasis on access, have become a pre-emptive business model. The hardware is not much good without the access fee for digital video recorders, satellite radio and sporadically to broadband access, such as the sale of cable and DSL modems and service at selected computer retailers.

The iPod phenomenon—which has put those music devices into nearly one of 10 American homes in just over a year—extends the process into a slightly different direction. The hardware is a standalone product that can be fed from existing music resources. But Apple seeks to make it clear that customers will get the greatest benefits from iPods

age deal. Somewhere, sometime, shoppers will be paying for access service—and probably paying again and again on a monthly subscription or per-use basis.

## THE GRAVY TRAIN

For retailers, the setup is immensely appealing; sometimes it offers a short-term annuity, assuring a revenue flow for the life of the product. In other cases, the “access” sale represents just another one-time spinoff for performing as a sales agent. In any situation, the access fee is an addictive additional revenue source that retailers will not want to lose.

For consumers, the growing depend-

**Consumers are being acclimated  
to a process in which hardware  
is not enough; the tools are merely  
entry points to a package deal.**

via access to iTunes (a highly profitable ancillary Apple business).

Even the new Napster, sold as a retail product in the form of prepaid access cards, has found its way onto store shelves without taking up room as a tangible device. And we're waiting to see how access and pricing are structured for the new TV-to-cell phone services, such as Verizon's VCAST.

Digital television, for now, is not directly part of this emerging access value chain, but its retail presence is, in many ways, tied to the trend. Consumers are being acclimated to a process in which hardware is not enough; the tools are merely entry points to a pack-

age on access services is coming at a price—about \$250 per month for a typical American family. That tally includes cable and/or satellite subscriptions, Internet access fees, wireline phones (local and long distance for the old fogies who still are tied to land lines) and mobile phone charges (for two or more family members). It also encompasses outlays for add-ons, such as pay-per-view or video-on-demand, DVR subscriptions, Netflix, and maybe phone ring tones and WiFi fees at Starbucks. Overall, a family's monthly communications, information and entertainment bills are nearly a magnitude higher than a generation ago, when

\$30 covered local phones (plus the occasional long-distance call) and a newspaper subscription—the entire available lineup (except for those rural and Manhattanable customers).

As consumers pay more and as they expect access reliability as part of what they buy, positions shift within the value chain. The retailer on the front lines becomes the face of access—even though most customers recognize that he is just a storefront representative of access providers.

Nonetheless, he is the only identifiable face in front of all those video-, voice- and data-access services. Through intricate service-provisioning relationships, the retailer is truly just a façade—but there's a valid concern that consumers cannot appreciate the hierarchy of responsibility.

It does not help, of course, that the retail industry is traditionally in constant flux. How appropriate that Circuit City was the subject of a takeover attempt during the same week in February that Best Buy unveiled plans to build 60 “next-generation” superstores this year.

It is part of the tectonic shift that constantly alters the face of retailing. Of course, a change in Circuit City ownership may not resonate through to individual customers. But it can affect the relationship with service providers, and it creates a sense that alteration is always looming, whether for product rearrangements, pricing structures or the inevitable shortages.

Nonetheless, that retail environment is the one in which digital TV will confront its audience. It is a landscape in which profitable and ongoing access services are critical. The continuing chaos about selling Digital Cable Ready devices is a reminder that the cable industry knows how to stymie access when it wants to, or more specifically, how to control the way access is administered, no matter what rules the FCC mandates.

(That is what I meant above about Washington access peddlers. The cable industry's notoriously aggressive and successful lobbyists—fresh from their FCC victory in the digital TV must-carry skirmish—are certain to be watchful about other factors affecting access to cable facilities, by broadcasters or consumers.)

In the new digital environment, it is still fun to make and play with bigger and better toys, er, products. But the only way to use many of them is through system access. And a very small cadre controls that access. It is not going to be easy. ■

Gary Arlen is president of Arlen Communications Inc., a Bethesda, Md., research firm that has tracked the convergence, emergence and divergence of media technology since the days of two-inch videotape. He can be reached at [Garlen@columlist.com](mailto:Garlen@columlist.com).

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DIGITAL TV

Charles W. Rhodes

# Sorting Out Reception Obstacles

Last month, this column reviewed the paper Gary Sgrignoli of Zenith and I wrote for the International Conference on Consumer Electronics (ICCE), which closely followed the Consumer Electronics Show (CES) in Las Vegas. The CES had about 130,000 attendees. ICCE had some 400 engineers. At CES, you would have looked in vain for broadcast receivers with their 4:3 aspect-ratio CRT displays in the 19- to 35-inch screen-size range. Gone were traditional CRT displays and 4:3 screens; plasma panels as big as 102 inches and LCD and DLP displays have taken over!

In short, the future is digital, 16:9 and gigantic. And I believe the future is now.

The future has arrived at my home. I now have a HTDV set-top tuner/decoder. We view the output on a 42-inch HTDV plasma panel. You know, it looked pretty large when this panel display replaced our 27-inch NTSC (4:3) receiver. That lasted several weeks, now the 42-inch screen looks just about right, or maybe a little small.

I recall visiting New York City in June 1946. TV was taking the city by storm as night baseball was being televised "live" in glorious monochrome. Everywhere one looked, banners and signs identified those bars having TV. In fact, it was from watching baseball in bars that the public learned they needed TV at home. When I saw those giant widescreen displays at CES, I was sure

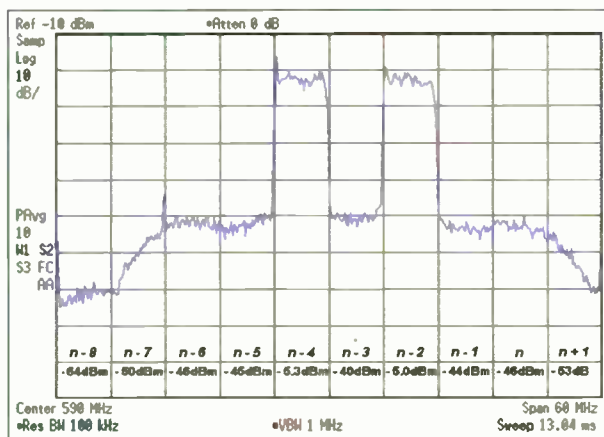


Fig. 1

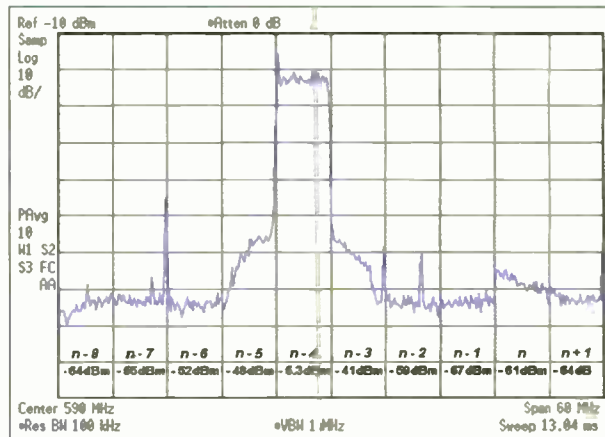


Fig. 2

can see that the noise drops off in channels n-7 and n+1. Fig. 2 shows the effect of reducing the signal power in channel n-2. The IM3 in the other channels is greatly attenuated—proving that it is due to IM3 generated between the signals on this pair of channels.

If receivers are designed to avoid being overloaded by multiple strong

CEA members were betting history repeats itself.

Readers will be wondering what DTV tuner/decoder I found to work at my terrain-challenged site 16 miles from the Washington towers, and 26 miles from the Baltimore towers. The bearing angle from my home to the DC towers and those in Baltimore is about 80 degrees. So I have always had my rooftop antenna on a rotator.

## "SO-CALLED" HDTV

The good news is that I can receive and decode the HDTV signals, but I had to calibrate my antenna rotator very carefully. My rotator swings the beam too fast for DTV. The line-of-sight to D.C. is blocked by a hill. It would not be appro-

priate to identify the brand or model number in this column, but we are now enjoying HDTV, and we find that we are watching more TV. But when "so-called" HDTV (actually NTSC upconverted and re-branded as HDTV) is broadcast, we channel-surf or slip a disc into the DVD player.

My antenna rotator swings past the best angle so quickly that the receiver has trouble locking up on-the-fly. What a proper DTV antenna rotator would do is to slew the antenna to, say, within 10 degrees from where it is set to stop, and then creep up to the stopping point. Now that would claim to be an HDTV antenna rotator.

A more serious problem with the rotator is that despite my efforts to calibrate it, when the weather changes, the rotator needs a slightly different angle, so I can't just rely upon my calibration. But I can and do make it work. When spring springs and the trees leaf out, UHF signals are going to be attenuated here. I will probably replace my VHF-UHF antenna with a top-of-the-line UHF log periodic, but I am in a wait-and-see mode for now.

## INTERFERENCE ANALYSIS

Last month, this column featured some spectrum plots I used in the ICCE presentation. One of those (slightly modified) is reproduced here as Fig. 1. It shows two undesired DTV signals on Channels 33 and 35 that are identified as n-4 and n-2. This pair of channels can produce third-order intermodulation (IM3), which fall in channel n-6 and channel n. Either might be your channel, as this column has noted several times now.

Take a closer look at the noise level of the other channels in this figure. Channels n-6, n-5, n-3, n-1 and channel n all have about the same noise level, which is due to IM3 being generated in the overloaded amplifier under test. You

DTV signals (up to -5 dBm average power, 0 dBm maximum symbol power per channel), this potential problem would not materialize. The current FCC DTV channel-allotment plan tacitly assumes no receiver overloading. How could manufacturers half-way around the world suspect that our channel plan is based on this assumption?

The bad news is that the n-4, n-2 and the n+2, n+4 channel pairs may be real threats to the reception of your signal on any of a whole host of channels near either of them. This is due to the spectrum-spreading aspect of these particular channel pairs. Spectrum spreading is even greater where both channel pairs—n-4, n-2 and n+2, n+4—are in the same community.

The odds against you have just gone up with this spectrum plot, and they may go even higher as more stations maximize their DTV facilities. But the good news is that if just one of either channel pair is not used near the other, this problem is solved, as Fig. 2 illustrates.

In the case of n-2, n-4 channel pair, n-2 should be banned because that gets rid of two of the most infamous channel pairs—n-4, n-2 and n-2, n-1. In the case of the n+2, n+4 channel pair, there may be better reasons to ban the n+4 member of that infernal n+2, n+4 pair. That is under investigation.

Broadcasters could bring this to the attention of the FCC before the final DTV channel allotment plan is developed. Stay tuned. ■

Charlie Rhodes is a consultant in television broadcast technologies and planning. He can be reached via e-mail at charleswrhodes@worldnet.att.net.

Editor's Note: In the Jan. 19 edition of TV Technology, the illustrations labeled Fig. 1 and Fig. 3 in this column were inadvertently transposed.

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## INSIDE BROADBAND

Will Workman

# Why WiMax Has Maxed Out

I'll admit it; I fell for the hype. You'd think as one of those former hard-bitten, nihilistic reporter-types, I would have asked tougher questions about all the WiMax window dressing popping up over the past year. Last August, when I wrote about the new technology in the wake of significant backing by Intel, I heralded it as a hopeful competitor to DSL and cable broadband. (I also plugged into power-line broadband, but that's another story.)

Now it's time to fess up—this tech is nowhere near ready for primetime consumer solutions. Its business applications are limited and its long-term ability to provide mobility is questionable.

WiMax, short for "worldwide interoperability for microwave access," is essentially radio technology that uses fixed antennas to provide two-way broadband connections (up to 75 MBps) to users up to a 30-mile distance (though half that is optimal).

It's got some killer advantages. First, it's actually here; providers have been popping up in several metro areas. Second is price—for about \$500 a month, one of the early WiMax providers, TowerStream, offers a 1.54 Mbps connection. That's nearly half the price of a standard T-1 line. And WiMax providers can do this because they don't have to lease lines from big telcos. Any customers within a 15-mile radius of a WiMax antenna can pick up the signal, even using it to power WiFi hotspots within their premises.

Though there's a narrow but profitable market for this technology with small businesses, it's hard to see how it can break out of that niche.

Big companies need security and reliability. Though WiMax providers can offer QoS guarantees and encrypted service, they can't match secure landlines and backup power supplies of T-1 service

providers. That makes WiMax little more than a backup.

And WiMax may never attain widespread home use. Installing a receiving antenna can cost hundreds of dollars.

and with notebook adoption expected to double in the next few years and cell phone use exploding, there are too many competing technologies that promise broadband-on-the-go. Cell phone companies are building third-generation (3G) networks, but several, including Nextel, have announced they will not opt for WiMax.

The WiMax 802.20 mobile wireless standard is still a pipe dream in the works, say critics, who estimate it may be four or five years before true deployment. Meanwhile, other wireless solutions on tap, such as Flash OFDM and UMTS

**This tech is nowhere near ready  
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Its business applications are limited  
and its long-term ability to provide  
mobility is questionable.**

Meanwhile, DSL and cable broadband providers have been upping speeds and lowering prices.

There are also larger issues holding back WiMax that combine to serve as an illustration of the bugaboos that can derail a promising technology.

## INTERFERENCE POTENTIAL

The litany runs a familiar gamut. WiMax signals use public airwaves rather than licensed spectrum, so interference can result, particularly if multiple players saturate a market. Patents and legal issues could at least delay rollouts, and the ever-present standards issue remains a pressing concern.

Last June, the IEEE approved the 802.16-2004 standard, promising equipment interoperability as tested by the industry group WiMax Forum. But some reports indicate developers looking at the standard are reeling from its complexity, which could bode further delays from ongoing modifications.

Additionally, a Yankee Group report projects WiMax CPE (consumer premises equipment) costs will drop from the current \$250-\$600 range, but not until 2006.

The report goes on to anticipate the most significant impact on WiMax will come from new silicon embedded in laptops and other mobile devices after 2007, based on the 802.16e standard, eliminating CPE. Intel's support will be critical. The company has announced it will release chips for WiMax elements, such as relay stations and towers, in the coming months, and add WiMax support to its notebook PC processors by next year. But skeptics say 2006 or 2007 is a far too optimistic timeline in which to have effective equipment.

The mobility cloud remains the gloomiest on the WiMax horizon. Users want to take their broadband with them,

TDD, offer mobility and could deliver on their promise earlier.

Why did WiMax get so hot last year, only to fizzle?

This is largely a product of its primary backer, Intel, overstating its case to overcompensate for previous misfires in the broadband arena.

If you go back to recent, but dim, history, Intel backed its favorite wireless standard, HomeRF, over WiFi, only to get steamrollered by the latter. Now it's getting hammered for its WiMax bragadocio.

The chipmaker behemoth has been productive in promoting municipal wireless, calling on state and local officials to spurn lobbying by phone and cable broadband providers seeking to block municipalities and other public agencies from setting up public networks.

For this effort, Intel merits kudos. But turning its PR gang loose to wax on WiMax deserves opprobrium.

While all the hoopla dust settles, small businesses can turn to WiMax as a low-price alternative, or backup, to T-1 service. Larger broadband providers are also looking at WiMax as an effective last-mile backhaul solution. And there are plenty of rural areas that could use WiMax by putting the antennas on transmission towers.

But none of that restores the glitter to WiMax as a near-term solution for providing ubiquitous, mobile, low-cost broadband.

In the future I'll try to save my waxing for something more productive—perhaps a snowboard or skis while it's still winter. ■

Will Workman is a former senior editor of *Cable World* magazine and editor of *MediaView*, a monthly newsletter for the Asian cable industry. You can reach Will at [wworkman@aol.com](mailto:wworkman@aol.com).

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**PRODUCTION MANAGER****Craig Johnston**

## Lights, Camera... Ouch!

I was swapping war stories with a former tech manager for one of the networks when he told me about the day new cameras went into service on one of the news magazine shows.

Zing... his cell phone rang.

"Hey, [insert anchor's name] looks terrible!"

He pointed out that the anchor's likeness was faithfully reproduced by the camera. In fact, it was too faithful.

The rest of his story was a kind of Chinese fire drill, where everybody did whatever each could so that (insert anchor's name) no longer looked terrible on-camera.

The tech manager's story got me thinking about a camera change that's eventually coming up for all TV stations that do newscasts—the change to HD.

For a recent story I wrote on studio-type cameras, camera makers told me they've seen the pendulum swing heavily in favor of HD-capable studio cameras in the last year. They said in almost all cases, the cameras are to be used initially for SD production but will allow purchasers to switch to HD at any point.

That switch-over day may not be right away, but there's no time like the present to start experimenting with what it's going to take to make good high-definition pictures of your talent in the studio.

I've not been through this for HD, but I've experienced it plenty in SD. From those experiences, I can tell you it's not a case of fixing one thing, then the next, then the next. It's a dynamic process of adjusting many elements until they all work in unison. That's why you can't do it in an afternoon.

I mentioned that many elements are involved. In addition to the skin detail and other camera adjustments, they include lighting, clothing, set design, makeup, lens treatment and camera blocking.

There are experts either in the station or available for hire who know a lot more about each of these elements than you or me. But since this is a production management column, I'll tell you where you come in—you've got to orchestrate.

### WORKING TOGETHER

I use that symphony metaphor because you've got to get everybody working together. Any change that you make in one element, such as lighting, can require adjustments in makeup, camera setup and the rest.

Where to start? How about arranging to have the cameras switched over

to HD after a news program and take shots of the talent from all the angles the show currently uses? Capture them in high definition so you can play them back on a high-quality high-definition monitor.

much better before an HD newscast hits the air.

I don't know that there's any one next step, except to get help. If you're part of a group that has a station or so that's already gone HD, you might send a copy



**There's no time like the present to start experimenting with what it's going to take to make good high-definition pictures of your talent in the studio.**

This can scare the giblets out of the talent, because it may be their first look at themselves in HD. But the fact you're working on this with lots of lead time should assure them it's going to get

of the test recording to your counterpart.

It doesn't have to be someone in your group. If you know someone who's been through this HD transition anywhere, you might ask that person for help.

Help can come in a couple of forms. Whoever you consult can tell you they'd do this, that or the other as a start. Or maybe what they'll do is identify someone else you can work with. Either way, it's good to have someone to bounce your experiences off of, and if you're lucky, you can send them progress recordings to get more advice as you go along.

Here's a suggestion, a strong suggestion, almost an order—document, document, document. When someone makes a suggestion, write it down.

There's one section of your orchestra that makes changes at a relatively glacial pace. While you can move a light, tweak a camera or dab a new shade of makeup in a matter of minutes, changing the news set, even a background color, is a time-consuming and potentially expensive undertaking.

Find out what's working for new sets among the pioneers. Is there a different depth required? Are there colors that work better? Is a greater level of finish detail required to satisfy all that additional resolution?

Arrange to get the members of your orchestra together in the studio where they can experiment with the elements they control. You're not going to get the anchors to sit there for hours on end, but ultimately they need to be the guinea pigs because this is all for them.

And the reason I said document, document, document is that since everything's got to be returned to the status quo for the next SD newscast, you want to know what your orchestra did to make the progress they did. Get the results on tape and the steps to get there on paper.

With enough lead time and enough teamwork out of your orchestra, the phone call you get when the HD switch is thrown may contain a compliment. ■

*Craig Johnston is a Seattle-based Internet and multimedia producer with an extensive background in broadcast. He can be reached at [craig@craigjohnston.com](mailto:craig@craigjohnston.com).*

**COUNT ON IT****André V. Mendes**

## Walking the Talk

I have, over the last year or so, written several columns on topics related to the growing influence of information technology and related disciplines over the broadcast industry.

I tackled the incredible pace of technological change, tried to dispel the myths about the reliability and security of IT-based systems, encouraged the creation of technological abstraction layers and addressed the fundamental migration from deterministic to nondeterministic distribution platforms.

I wrote of the all-powerful multimedia consumer, on whether IT belongs in the broadcast center, on the growing importance of application integration in streamlining workflows and, finally, about the ruthless but inevitable nature of organizational change.

At the end of the day, it is one thing to talk about what needs to be done and why, and another to actually put these concepts and processes to work in one's environment. So that is what we will tackle in my next few columns.

For the next 18 months, PBS and its member stations will undergo several major technology deployments that combined, will profoundly affect every single aspect of its end-to-end content distribution workflow.

### INGEST ASSURANCE

Starting in early April, PBS will shift from a standard tape-based workflow to a file-driven environment. It will leverage tightly woven integration among the

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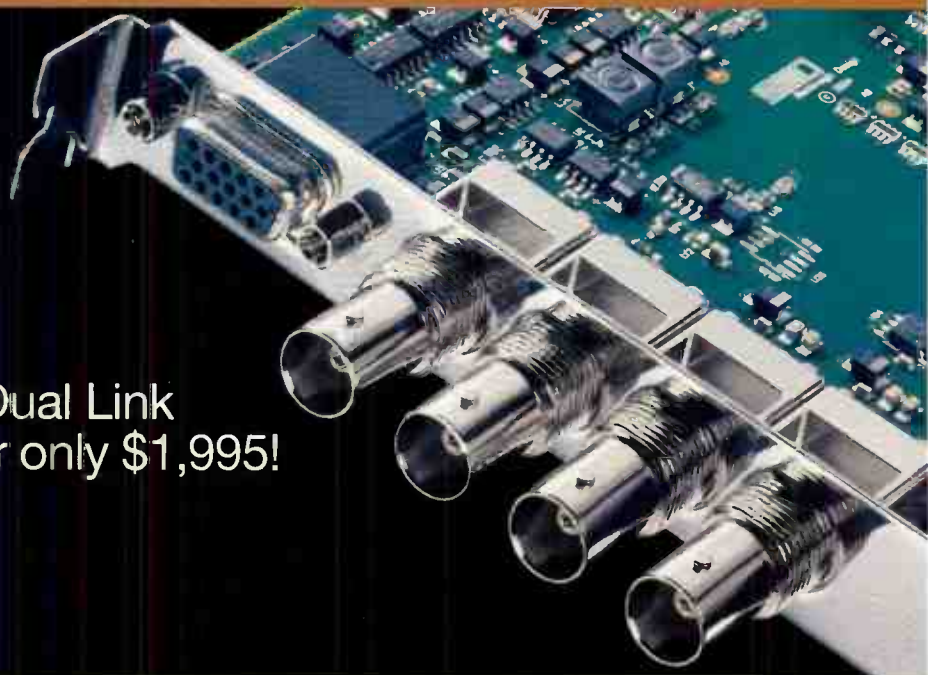


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## THE MASKED ENGINEER

Mario Orazio

## Which Transition Is Which?

**Y**ou might not have noticed that HDTV can be analog. I ain't talking about the 1930s, when some British political committee declared HDTV to be a couple-hundred scanning lines of spinning-wheel video. No, I'm talking, for instance, this year in Japan where a whole bunch of folks are still watching HDTV via analog satellite transmissions and will be able to continue for at least another couple of years.

Let me start over. You might not have noticed that it makes no sense to say "You can't compare apples and oranges." Why not?

## AND BOTH ARE ROUND

They're both fruit. They're both round. They're both about the same size and weight. They're both usually colored in the long-wavelength part of the spectrum. It's only when you get into nitpicky stuff like not being able to rhyme with orange that they have any incomparability (and the genius Marilyn vos Savant says even that's not true). If you want to

point out incomparability, say "That's like comparing DTV and HDTV."

Hey, far be it from me to say there ain't any transition going on in TV technology. But there sure as heck ain't just one transition. There's a transition to digital in video that started maybe in the 1960s with the digital character generator or in the 1970s with the digital time base corrector. Just about anything anyone watched on TV then was at some point digital on account of going through one of those TBCs (or, for live stuff, a frame sync).

So far, we've still got analog imagers (yes, Virginia, CCDs are analog) and picture tubes. But those are getting close to being the last holdouts (not counting all signal transmission and distribution equipment being essentially analog). So that's one transition.

There's another transition to higher-resolution pictures. This one moves in fits and starts: eight scanning lines, 12,

30, 60, 120, 240, 377 (active, out of 405 total), 483 (525), 575 (625) and, to make a long story short, 1,080 (1,125). And it ain't stopped there. There have been demos of 2,160 and 4,320 for years. If you want to call that the HDTV transition, I ain't about to bite your head off.

There's a transition from nar-

**Disney happens to have transmitted its data via analog PBS stations, not digital.**

rower-screen to wider-screen images. If you want to fold that one into what you're calling the HDTV transition, your neck is still safe.

There's a transition from really deep TV sets to thinner ones. Heck, color picture tubes alone have moved from 90-degree deflection to 110 to 125. Then you've got plasmas, LCDs and microdisplay projectors. They ain't necessarily HDTV. As a matter of fact, back in 2003, plasmas were running around 70 percent HD; in 2004, they were 60 percent non-HD. So that's another transition.

There's one more to digital media, like going from VHS to D-VHS and from LaserDisc to DVD. Cable's been going digital, and satellite's been going even faster.

All the transitions I've mentioned have been taking place without any intervention from Our Beloved Commish, better known in someone's stomach (ain't that what "inside the beltway" means?) as the FCC. Oh, sure, they approved 525 lines, and they established a committee to consider 1,125, but that's about all.

Nowadays, those of us in the United States have another transition that sure-enough was started by Our Beloved Commish. It's the transition from analog TV broadcasting to digital.

I'll allow that it didn't start out to be a transition to digital broadcasting. It started out being about getting broadcast HDTV. Then, in 1990, GI mentioned digital and, by the time rules came out in 1997, they didn't require anyone to broadcast any HDTV. They still don't.

Digital TV broadcasting (I'll call it DTB) sure-enough allows for HDTV. It also allows for multicasting and data-casting. But all any DTB station has to

carry is TV "comparable" to what it carries in analog.

So what's the advantage? Our Beloved Commish figures DTB can be packed into fewer channels than analog, so the public can reclaim some spectrum. Never mind the colossally idiotic decision to make the post-transition core extend from Channel 2 to Channel 51 (about four octaves) instead of just UHF (less than one). There is a clear desired public good to the transition.

There's just one thing—receiving DTB requires a DTB receiver, and the first of those cost a pretty penny, were scarce and didn't work so well either. So the TV-promoting folks over at the Consumer Electronics Association (CEA, or, as I like to say, "See-ya") or its predecessor started hoopla over something they called "digital televisions."

Here's the deal. The ATSC DTB standard included a table of 36 different types of video that had to pass through a DTB receiver, 35 of them being different from plain old ordinary TV (POOT). Our Beloved Commish rejected that table, but See-ya figured any display that could handle at least higher H-rate video than POOT ought to qualify as a "digital TV," even if it ain't any more digital than a nondigital TV.

One whole heck of a lot of TVs—including all projection TVs—qualify for See-ya's "DTV" designation. And Our Beloved Commish has decided that those TVs must represent the transition that they're in charge of.

So Our Beloved Commish's latest budget document says there were more than 7 million "DTV households" at the end of 2003—mighty impressive for just six years into the transition. Too bad that many DTB receivers hadn't even been built by then—not by a long shot.

It ain't even just the See-ya stuff. Our Beloved Commish's 11th annual report to Congress on cable and satellite (called "multichannel video programming distributors," inside the beltway) competition has some stuff on DTB. It says Disney uses PBS stations' DTB spectrum for its MovieBeam home-movie delivery service.

Disney has a home-movie delivery service, all right, and they use PBS stations' broadcast channels for it, too. But Disney happens to have transmitted its data via analog PBS stations, not digital.

Maybe someday they'll learn. ■

Mario Orazio is the pseudonym of a well-known television engineer who wishes to remain anonymous. E-mail him at Mario\_Orazio@maspub.com.



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## Talk

CONTINUED FROM PAGE 18

Avid editing platform, the Broadview traffic and scheduling software, the MassTech archive management system, the Schedu-All resource allocation and scheduling system, the Remedy trouble-ticketing system, the Oracle Financials software and the Omneon play-out servers. This intri-

cate ballet of metadata and essence files will be made possible by a combination of standard and custom interfaces and APIs, extensive use of XML-based interactions, as well as some messaging translation, queuing and management performed by a Microsoft BizTalk server. More details about this deployment will be covered in my next column.

Next, we will tackle the migration away from our in-house legacy applica-

tion (NOLA/PDB) onto the BroadView software set. This launch culminates a several-year process of exhaustively studying our existing operational requirements, our expected future needs and the new workflows required to operate at a higher level of efficiency in a mostly tapeless environment. I can truthfully say the complexity of this deployment has rivaled any and all enterprise-level implementations with

which I have been involved over the span of my entire career. Although I will probably end up writing a book on this endeavor, you will hear about it far more succinctly in a future column.

### ACE DEPLOYMENT

Simultaneously with the first two items, we will be deploying the first ACE Master Control system at Iowa Public Television. I will defer to my esteemed colleague and fellow columnist, William Hayes, the elaboration on that particular effort. The initial installation will be quickly followed by several other such efforts in those public television stations that have made the decision to deploy this type of master control solution. At present, we expect to have completed six such installations by year's end. They, too, will be the topic of a future column.

Later this year, and as part of the consolidation of the PBS Technical Operation and Satellite Operation Centers, PBS itself will be deploying the ACE infrastructure as it updates its master control environment. As with any other major mission-critical relocation, this particular odyssey will probably merit several columns.

### INTERCONNECTIONS

Finally, the mother of all projects! Public television is migrating from the classical satellite-based real-time streaming of content that it pioneered into the brave new world of hybrid networks and packet-switching technologies, using a combination of satellite-based, real-time streaming for live/near live content; satellite-based faster than real-time IP multicasting file delivery of "in the can" content; and plain old Internet-based delivery confirmation and control back channel.

Public Broadcasting will substantially increase the efficiency of its content distribution processes, improve the picture quality of the content delivered to its member stations, and facilitate more efficient workflows at both ends of the process while simultaneously reducing its transport-related costs.

The successful completion of these projects will be highly dependent on the stamina and labor of love by the staffs (technology and otherwise) at PBS and its member stations. But together, they have proved time and again that they can bring tremendous innovation and benefit to the broadcasting community. I am constantly humbled and awed by their ability to deliver on their missions, despite obvious resource shortcomings.

Amid all the technical details, mumbo jumbo, acronyms and hoopla, I will also try to appropriately convey those magnificent human efforts that, after all is said and done, will actually get the job done.

Count on IT! ■

Andre V. Mendes is the Chief Technology Integration Officer for PBS.

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# TECHNOLOGY HEAVEN AWAITS

Gear comes and goes, but the NAB remains the same

## LAS VEGAS

Is there anything better than the smell of freshly unboxed electronic equipment accompanied by the low hum of warm power supplies?

Those of us on the technology side of television vibrate with anticipation the closer it gets to NAB time, knowing that our gear fix will soon be sated by the massive display of electronic expertise. How can so many people be manipulated by equipment instead of the other way around?

If NAB2005 is your first trip to the big show, you are in for a treat—although what you see there will become your baseline. To someone who first made the trip 21 years ago, much of the equipment on the floor today would have been unfathomable at NAB'84.

Back then, a server brought you your meal at a restaurant and multiple programs of video were played from analog VTRs inside large and very expensive tape-loading robots. Do you remember what those things cost?

As you walk the aisles of NAB2005, stop at a server manufacturer and ask what a four-channel system costs with storage for, say, 100 hours. You could buy a luxurious house with the difference in cost between today's server and yesterday's tape-loading robot. This doesn't consider the far-better quality of new gear.

Back then, the price of a top-quality camera would make you wince and you knew in your heart that you'd have to replace the expensive Plumbicon tubes every three years. For every production, you'd have to point even the best camera at a registration chart and check the alignment of the three tubes to make sure they were dead on. On a good day, you wouldn't actually have to tweak them.

At NAB'84, CCD cameras were still-unproven technology that just hinted at what was to come—now, when was the last time you even saw a registration chart? You never worry about accidentally pointing your cameras into the lights anymore, either. (Okay, this wasn't a problem

for Plumbicons but does anyone remember Saticons?)

Take the explosion of video recording formats... please! What used to be a couple of costly analog formats is now a sometimes bewildering array of recording possibilities, all of which are digital. Some of them eschew tape and it looks like we'll see more tapeless formats in the next couple of years.

Believe it or not, high-definition equipment was at NAB'84, although it was an analog system based on the Japanese Hi-Vision format. The purchase and maintenance costs would make your head swim and precious little Hi-Vision gear was ever used in the United States.

At NAB2005, you will see several HD camcorders for less than \$10,000, as well as plenty of advice on how you can use them on news, entertainment and documentary programs. Nonlinear editing systems—another concept unspoken at NAB'84—to handle HD video are now common and inexpensive.

UHF was a backwater part of broadcasting way back when, and high-power UHF meant inefficient klystrons and diacodes. If the cost of the transmitter didn't get you, the recurring power cost would steal the spring from your step.

At NAB2005, UHF is solidly in the mainstream of the DTV revolution and major technology improvements spin out more power even as it spins down the old electric meter. Broadcasters today face serious challenges to complete their PSIP requirements, transition to 2 GHz BAS and get up to full power before the FCC carves up their service areas.

Where do technologies such as distributed transmission and surround sound fit into the mix? Now there are computer networks that let you send HD video over a simple twisted pair. There has never been a time when technology has changed so radically in the television industry.

Whether you are a jaded NAB veteran or a first-timer, take a few minutes to appreciate how far we've come and how much we expect of our technology. Take a deep breath and savor the sights, sounds and smells of the world's best technology.

—Bob Kovacs





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# Redefining the Business of Television

## Digital technology puts consumers in control

by Frank Beacham

NEW YORK

Two "tectonic shifts" in electronic media—high-definition video and personalized on-demand entertainment—are having such a high impact on viewers that the core business models of television are now being redefined, industry executives say.

As broadcasters prepare to gather again for the annual NAB convention in Las Vegas, viewers are subscribing to new pay HDTV and video-on-demand (VOD) services at a brisk rate. Once they experience the new technology, few turn back.

VOD at Showtime has become "a beloved product," said Judith Pless, senior vice president of the network's Digital Media Group. "We're seeing usage grow in quantity and breadth. The volume is going up, and what subscribers are watching is expanding across more categories."

"Personalized television is getting here sooner than we thought. It's almost like the iPod of video," Pless said.

Mitchell J. Weinraub, senior director of new media initiatives for the cable operator said, "At Comcast we found

value HD more. They think the movie is more important in HD than in SD."

### SCRATCHING THE SURFACE

Pless and Weinraub made their comments last month at the 2005 Media Summit New York, an industry conference sponsored by the McGraw-Hill Companies. Two days of panels featuring dozens of industry executives focused on topics covering the television, cable, satellite, broadband and advertising businesses.

Panel after panel debated how digital technology is transforming media businesses and extending the same content available across multiple platforms including linear television channels, VOD, broadband, the Internet, mobile devices and packaged media such as DVDs.

"All business models are going to be challenged when the digital domain becomes more of a reality," said Peter Lee, vice president of business development for new technology at the Walt Disney Company. "We are already seeing what consumers want to do and are starting to do with that digital domain. But we are nowhere near where it's going to be three to five years from now."

"That change is coming very, very

raub told the conference.

The first, he said, is what the cable operator terms "high-value, high-refresh programming," which includes timely sports highlights and topical news clips. Describing this material as "enormously popular," he said Comcast had more than 600,000 views in this category in the first week it was launched.

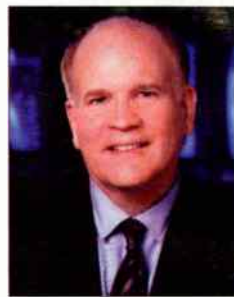
A second category is "after-the-fact" content.

"As an example, we took the political conventions from C-SPAN and broke them up into individual speeches and put those on VOD," Weinraub said. "One that stood out was Barack Obama. Nobody had heard of him at the time and most missed his speech live. But everybody woke up the next morning to read the headlines about him in the newspaper. On Comcast, VOD customers could watch Obama's speech in its entirety after they had heard that it was really important."

The third significant VOD category is new channel launches (highlighted programs before the full-channel debuts), and the fourth is custom DVD content. The fifth is described by Weinraub as "micro killer applications... extremely important programs to a niche of viewers who find them alone worth the price of the entire cable service."

He cited "Hispanic sampling" as a successful example.

"We are taking Spanish language programming from about 15 different countries and creating a 120-hour package," he said. "That's a target market, and this is invaluable content to this audience. It's the most important thing they get on television, and we're the only place they can get it."



Bob Wright, NBC Universal



Tim Hanlon, Starcom MediaVest Group

### HAVING IT ALL

The other important technology is HDTV. Showtime's Pless said high-definition service is "taking off" with premium subscribers, who tend to be the earliest adopters of new technology. "They are in there first. They want it all. HD viewers favor sports and dramatic series," she said.

"We've seen in focus groups that people who own high-definition sets go to their HD channels first," Pless said. "If there's nothing there they want to watch, then they will go elsewhere. So if they like what's on HD, they will stay with you."

Pless said she could see a day in the future when viewers will regard standard-definition programming as a second-class product. "That's why we

work hand-in-hand with the studios to make sure that a lot of the classic movies get transferred to HD. But it's a push."

NBC Universal CEO Robert Wright went out of his way to portray his new consolidated media company as technology agnostic. "We are a very simple business," he said. "We develop programming, produce it and we market it. We recognize that technology is our friend over the long haul, but it doesn't have to be developed by us. We only have to be compatible with the changes in technology to get the value out of the content we create."

Wright, long an advocate of adding television-generated transactions to traditional advertising revenue streams, predicted that sports programming will soon migrate away from the broadcast networks to pay media.

"I believe that one day you'll be able to buy a virtual seat at Madison Square Gar-

TELEVISION, PAGE 28

**"All business models are going to be challenged when the digital domain becomes more of a reality."**

**—Peter Lee, Disney**

that when you launch on-demand, cable churn goes down something like 20 to 30 percent. It becomes very sticky. Viewers are finding value.

"As to HD, we've seen the usage and the interest of folks paying attention to these channels just skyrocket. In fact, we've begun testing HD VOD together in a couple of different markets. Customers

quick," Lee said. "When consumers can start moving content around to all these digital devices, that's where the big impact to business models is going to come; not just from an advertising perspective, but from a programming perspective."

Comcast has identified five categories of video content that could turn VOD into its own standalone medium, Wein-

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# Television

CONTINUED FROM PAGE 26

den," he said. "You could buy a 10-game ticket. We've envisioned having different camera positions for different prices of tickets. So if you wanted a courtside ticket, you'd be able to get a view from the court. We've haven't gotten there yet, but things of that nature are happening."

There was general agreement among panelists that the industry is about to see an explosion of new programming choices—from hundreds to thousands—through VOD technology.

Stacy Jolna, an early TiVo executive and now senior vice president of TV Guide's television group, said traditional electronic program guides will no longer be adequate to help viewers navigate through the vast expanse of program

choices to come.

"We are going to be launching the first on-demand television network across all digital platforms," he said. "I can't say a lot about it yet, but it's a short-form video programming concept that speaks to entertainment guidance. Whether it's sports, astrology or movies, it's an opportunity for consumers to cut through that sea of choices to find the best."

Jolna, who revealed that TV Guide

will launch the new network with Comcast, Time Warner and on tvguide.com through broadband, said the opportunity to integrate entertainment programming and marketing is "wide open" in the nonlinear world.

"There are amazing new ways to integrate entertainment and marketing outside the realm of the 30-second spot," he said.

## MAKE LEMONADE

How television advertising will fare in the new universe of technology was a highlight of discussion. Tim Hanlon, a senior vice president with Starcom Media-Vest Group, a major branding firm, was clearly annoyed with the doomsday talk he heard from many advertisers and traditional media outlets.

"The time is here where we should focus collectively as an advertising industry on the possibilities and the opportunities, not on the challenges and threats," he said. "Let's face it: as traditional media companies and traditional media buyers—in those old conventional roles—it's always a threat and challenge. It's always 'how do we prevent this from happening?' 'How do we counter this?' I would suggest it's time to go beyond that and embrace [the future.]"

There's an urgent need, said Hanlon, to find new ways to accurately measure media across the new digital platforms. "The media buying community comes from the school of that which gets measured gets bought," he said. "But let's also be honest that the Nielsen sample-based methodology of television measurement doesn't do a decent job of keeping up with today's television, let alone tomorrow's television."

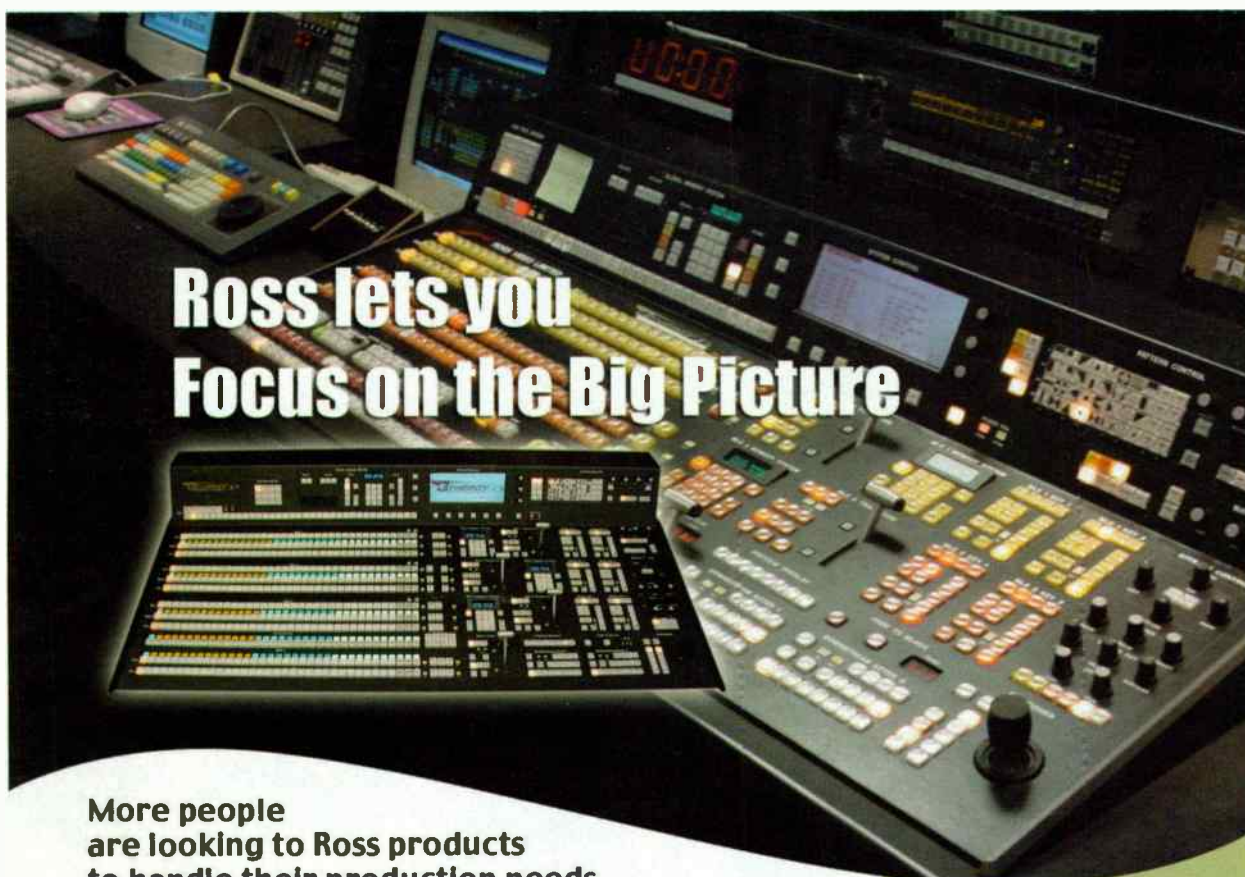
Audiences, Hanlon insisted, have demonstrated that they want to be in control of how and where they use media. "I think consumers are starting to get very ornery about not being able to do what they want with stuff they've paid for—whether it's to take video with them or watch it in another part of their home."

"Whether the business models work or whether the media companies can or cannot control the use of media, they've got to recognize that inevitably that's where it's all going," he continued. "Consumers told the music industry 'we're mad as hell and not going to take it anymore.' Now it's happening to video."

Skeptical of overly zealous digital rights management (DRM) schemes, Hanlon said finding ways for consumers to share content on a peer-to-peer basis is essential to advertisers, whose messages will increasingly be embedded in the programming. The viral marketing that comes from sharing is highly valued and most effective, he said.

Adam Bain, vice president of production and development at Fox Sports International Media, shot down all the talk he hears about personalized media bringing an end to tradi-

TELEVISION, PAGE 34



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# Mobility, Format and Security

## Tackling the big questions at the NAB Super Sessions

by Robin Berger

LAS VEGAS

**N**AB Super Sessions are the organization's response to the show attendees' quest for "a concise way of finding out about the new technologies," said John Marino, NAB vice president of science and technology.

"We're talking about a lot of mobile technologies this year—competition to broadcasters; how broadcasters might use them," he said.

### IS IT SAFE?

Mobility has made its way into at least two of the Super Session titles, but security and formats seem to loom larger on the agenda.

Hewlett-Packard's chief strategy and technology officer, Shane Robison, will kick off the sessions at 2:00 p.m. on Monday, April 18, with "Convergence and Content on the Move: Riding the Digital, Mobile, Virtual and Personal Wave."

"The message I hope the audience takes away from the session is that information technology will help shape the future of the media and entertainment industry," Robison said. "We need to securely manage the buying, selling, licensing and, importantly, the digital rights management for all content that moves across wireless networks, IP networks and traditional switched networks."

On Tuesday, April 19 at 10:15 a.m., Steve Saylor, vice president of digital video and audio for Adobe Systems, will keynote "Video—The Next Wave in Publishing."

Tuesday at 2 p.m., CNN/U.S. President Jonathan Klein will start a session on "IPTV—The Technology and Market Outlook."

At 3:45 p.m., Avid president and chief executive officer, David Krall, will begin a forum called "Look Before You Leap—The Dollars & Sense of Transitioning to HD."

Given the proliferation of formats to produce content and deliver it to consumers, Krall insists that producers and distributors must question tradeoffs and choices. The questions start at acquisition, and travel all the way down the workflow pipeline.

In fact, HD may easily require a "wholesale turnover" of a company's infrastructure as players "grapple with the fact that HD is six times the bandwidth of standard definition," he said.

### SPIRITED DEBATES

Krall's intention is to illustrate just what happens to content as it goes

through multiple compression cycles, and to have all the members on the panel "share problems that we run into."

The panel will include representatives from Gannett, the BBC and post houses from both coasts.

"There are good solutions out there for people to use to solve their problems," he said. "All the bits and pieces are out there today, you just need to put them together in a coherent fashion."

On Wednesday, April 20 at 10:15 a.m., Mark Cuban, president of HDnet, will speak about high-definition programming, noting, "HDTV will evolve to places people don't expect."

At press time he did not specify what these places were, except to indicate that mobile devices would not be on his agenda.

Filling in the gap right after his speech will be Allison Dollar, chief executive officer of the Interactive Television Alliance. She will host a panel called "Taking It to the Streets: Mobile Devices Add Drama to Sports & Reality Programming."

The "credible brand-name sports, agency and technology" panelists will discuss the outlook for TV content accessed by phone, PDA, mall kiosks, airplane and hotel receivers and networked home appliances, she said.

The Super Sessions will conclude Wednesday afternoon at 2:00 p.m., with Ken Williams, chief executive officer at Ascent Media, on "New Technologies for Digital Media." His focus will be digital rights management, specifically an analysis of the elements used by particular companies to safeguard content distribution.

"There's been real progress, especially on the B-to-B side," Williams said. "But with the end distribution channels, there's still a lot of work to be done."

His goal is to go beyond the conceptual, examining real-world examples, both in his speech and in discussion with fellow panelists including Tony Beswick, Sony Pictures Entertainment vice president of technology and operations. Hopefully, the speech and panel will lead to "a spirited debate about what really needs to get fixed," Williams said. ■



David Krall, Avid



Ken Williams, Ascent Media

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# Designing Next-Generation Master Control

## SBE, PBS team up on annual Ennes Workshop at NAB

by Fred Baumgartner,  
CPBE, CBNT

WASHINGTON

For many years, PBS has sponsored a technology conference in Las Vegas just prior to the NAB convention. At the same time, the Society of Broadcast Engineers (SBE), has supported the Ennes Educational Foundation Trust in providing a daylong workshop on the Saturday that kicks off the NAB Broadcast Engineering Conference (BEC). Problem was, attendees couldn't be in two places at once. This year, PBS and SBE have come together to sponsor the Ennes Workshop, which will constitute the third and concluding day of PBS's annual Technology Conference.

### INTENSE TRAINING

The Ennes Workshop at NAB is the single largest event that the Ennes Trust sponsors and is designed to be an intensive tutorial. The speakers are overwhelmingly engineers and the topic is always a reflection of the subject material most needed by front-line engineers as well as directors and vice presidents of engineering.

This year's program, held April 16 in Room 110 at the Las Vegas Convention



Bill Hayes, Iowa Public Television

**The topic is always a reflection of the subject material most needed by front-line engineers as well as directors and vice presidents of engineering.**

The Ennes Educational Foundation Trust is a nonprofit, charitable organization with SBE. Backed by individuals, chapters, manufacturers and broadcast groups, the trust provides scholarships and educational programs to the broadcast engineering community, and on occasion, the mechanism to collect and distribute funds for special causes such as a fund for the families of the engineers lost in the World Trade Center disaster. Harold Ennes wrote the first set of now classic books for training broadcast engineers, and upon his passing, first at the Indianapolis chapter of SBE, and then at the national SBE took on the task of supporting education in his name.

Center, will cover building the next-generation master control for radio and TV. The day begins with opening remarks at 9:00 a.m., followed by the first session in which Bob Kovacs, TV Technology's technology editor, will discuss the basics of design and future-proofing.

Another morning session will deal with the tools and rules of thumb needed to calculate real-world facility availability. The problems of scheduling outages or contemplating the effects of various architectures on reliability will be addressed. Five nines, Six-Sigma, and MTBF might take a back seat to Ohm's law in broadcast engineering, but everything from the subtleties of power

supply redundancy to the number of shelf spares has a predictable effect on the stability of a broadcast facility.

Options for master control include the PBS ACE project, where you'll get a look "under the hood" and lessons learned from one of the first installations at Iowa Public Television (IPTV). Bill Hayes, director of engineering for IPTV and writer of TV Technology's monthly "Digital Journal" column will provide details on the project. Other topics will include surround sound for both radio and TV in the master control room, which will be covered by Omnia Audio founder and President Frank Foti.

Will data networks replace crosspoint routers? Neil Maycock, Pro-Bel's chief technology officer says it's not "if" but "when," and broadcasters are already in the midst of the transition. Clear Channel Senior Vice President of Technical and Capital Management Steve Davis, CSRE, will discuss the company's well-tuned process and tricks of the trade.

Branding has gone from novelty to a mainstream master control function. Leitch's Steve Sulte, manager of command and control systems applications, will cover advances in GPUs (general-purpose graphics processing units) and how these affect the core design and workflow of TV master control rooms.

Fundamental trends in the digital video broadcast domain drive the business toward a compressed IP environment. Terayon's Michael Adams, vice president of video architecture and technology, will explain how a transition to



An example of today's master control environment can be found at Court TV, whose MC room was designed by Ascent Media (Used with permission of Court TV).

this environment will result in simple, open standards and inexpensive, scalable, future-proof solutions for the broadcast industry.

And what of SCTE 35/30 and its implications for multichannel spot insertion? Paul Woidke, vice president of technology for Comcast Spotlight, will discuss the nuances of everything from stream splice marking and audio and data insertion and substitution under this standard that is fast finding its way into broadcast facilities.

Luke Freeman, senior staff member for solutions development at SignaSys Inc., and Bill Van Bloom, director of technology for AF Associates/Ascent Media Systems and Technology Services, will address construction and design of master control rooms from the perspective of systems integrators.

The Ennes Workshop requires a full NAB convention registration. SBE members receive a significant discount by registering at the NAB Partner rate—a \$300 discount off the NAB nonmember rate. ■

Fred Baumgartner is a Senior Systems Engineer for Leitch Technology. He is a trustee of the Ennes Educational Foundation Trust and chairs the SBE Education Committee.



Neil Maycock, Pro-Bel

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# Raising the Resolution Bar

## Viper gets its Super Bowl close-up

by Scott Lehane

### HOLLYWOOD

With its advertising reaching a record high close to \$2.4 million for 30 seconds of airtime, the Super Bowl has become the hottest night on television for the advertising community—a real showcase of creativity and innovation (See “Focus on Editing,” p. 6) The spots that make the cut have high production values, often with A-list Hollywood directors, and big-name talent that normally passes up commercial work coming out to play.

During this year's half-time show, Heineken's “Beer Run,” starring Brad Pitt, directed by David Fincher, (“Fight Club,” “The Game” and “Se7en”), was the first Super Bowl commercial to be shot with a Viper, the Thomson Grass Valley Group high-end uncompressed 4:4:4 electronic cinematography camera. It was lensed by cinematographer Claudio Miranda. Fincher and Miranda have used the camera for three spots now, including Nike's “Gamebreakers” and the Clio award-winning Xelibri spot, “Beauty for Sale.”

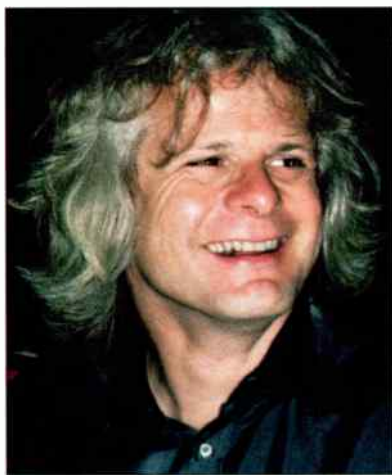
“Beer Run” features Pitt as a celebrity being chased through the streets of Los Angeles at night by thousands of paparazzi (or “stalker-azzi”).

“The more I use Viper, the better I get with it. The more I understand it,” Miranda said. “It's different from film. There are advantages and disadvantages. Currently, the disadvantage is this huge FilmStream tether.”

When Thomson first introduced its Viper FilmStream camera at NAB2002, there was only one hard-drive manufacturer that made a drive big enough and fast enough to accommodate its uncompressed 4:4:4, 2K output—Director's Friend.

The camera had to be tethered to a clumsy hard-drive array with a dual link, 2.2 Gbps HD-SDI connection. But

Moore's law is catching up with Viper and uncompressed 4:4:4 data in general. Today there are about eight different types of drives that can handle its output, and



Claudio Miranda

at NAB2005, Thomson is poised to release Venom—a new portable hard-drive “magazine” that can hold about 10 minutes of uncompressed footage.

But still, working with uncompressed 4:4:4 data poses some real challenges in production and post. The drives fill up fast and the data has to be sent off to post production to be uploaded to a server like a Specter FS Virtual DataCine or a Quantel iQ.

For storage, Miranda used S.two's uncompressed HD field disk recorder, the Digital Field Recorder (DFR). It is based on the company's removable D.MAG Digital Film Magazine, which comes in either 18- or 36-minute “magazines.”

Post production for “Beer Run” was handled at Venice, Calif.-based Digital Domain. Eric Barba served as visual effects supervisor. Much of the visual effects work involved crowd replication and motion capture. (The spot was shot with about 100 extras, which were replicated to look like thousands.)

One of the key advantages of Viper is that it offers an extra 2.5 stops of expo-

sure latitude, enabling users to lighten or darken an image in post production without losing details in the highlights or the shadows. Most video cameras give very little latitude to adjust an image without crushing the blacks or losing detail in the whites.

“It was great. It was amazing how low

**“The more I use Viper,  
the better I get  
with it. The more I  
understand it.”**

**—Claudio Miranda**

light levels we can work with, and it's also nice that you can see what you're doing on HD monitors,” Miranda said. But he stressed that “sometimes to make a darker image, you want to give it a little something extra. You don't always want to be on the toe end of the camera itself. Sometimes if you try to bring up a dark image, it gets kind of grainy. So it's actually easier to bring it in, which we did a lot. It just looks better.”

### OTHER PLAYERS

While Thomson has a good head start as the first to market with an uncompressed camera, other film camera manufacturers are coming out with products to give cinematographers the kind of dynamic range they're used to working with in film.

Canadian camera manufacturer, Dalsa caused quite a stir in cinematography and post circles when it announced that it would release a 4K uncompressed 4:4:4 camera called Origin. The company recently acquired Los Angeles rental house Broadcast Plus to make the camera available in Hollywood for a cool \$3,000 per day.

Arri has been working on an uncompressed camera for two years called the D-20, but the company has yet to release a product. Last year, Panavision unveiled Genesis, its high-end electronic cinematography camcorder.

But the thought of doing an entire feature as uncompressed data is still a daunting prospect. Viper outputs huge amounts of data that is challenging to move, manage and store. Hence, it's only been used on a handful of projects. Michael Mann used Viper to shoot parts of the film “Collateral.” Director Randal Kleiser used Viper for the film “Little Red Riding Hood,” but most of that was shot in the Viper's 4:2:2 HDStream mode.

It's also been used on TV shows including “The 4400,” and the upcoming miniseries, “Terminal City,” both lensed by cinematographer Thomas Burstyn, CSC.

“Silence Becomes You,” currently in post production in the United Kingdom, may be the first feature film to attempt to shoot entirely in uncompressed FilmStream mode.

With cheaper tools and formats like HDV threatening to commoditize the post market, the industry needs to keep developing new high-end services to drive business growth.

Miranda believes that Viper FilmStream is ready for a full-length feature, and that the post capacity is out there to handle uncompressed data.

“I think there's enough capacity out there. With the results we've been getting, I think it's ready, and it can only get more streamlined,” Miranda said.

He pointed out that it really isn't all that different from doing a digital intermediate in terms of data.

“I just finished this movie called ‘A Thousand Roads,’ which premiered at Sundance. That started out on film, but then the whole film was loaded onto a server at Laser Pacific while we timed it and did a DI,” Miranda said. “It wouldn't be much different.” ■

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## Television

CONTINUED FROM PAGE 28

tional television spot advertising.

"The answer is 'no' to the end of the 30-second commercial," Bain said. "It's probably the birth of the 60-second commercial, the 2-minute commercial, the 10-minute commercial, even the 5 or 10-second commercial. It's all about finding new ways to wrap advertising

into the programming."

Stuart Lipson, vice president of content solutions at SeaChange, the VOD technology company, described the new media scene as about "choice and control." However, he warned that high-tech companies must make their increasingly complex technology more simple for use by non-technical people.

Noting that part of his job is helping SeaChange's VOD customers

develop new business models for content distribution, he said an increasing number of clients now want to deliver their programming to a wider variety of technology platforms, including linear broadcast, VOD, virtual networks, broadband, narrowband, Web and portable media players. "As the world gets more complicated, companies want to know how many chips they can put on the table," Lipson said.

Sony's Scott Smyers, a vice presi-

dent who focuses on network architecture for the electronics maker, expressed concern during a panel on the "connected consumer" that ordinary people are going to find it difficult to make all their new digital electronic devices interact together.

"Are consumers going to have confidence that all these new products work together?" he asked, only half joking that he's already the non-paid IT manager for his friends and relatives. "To make (networked) products simple to use makes the products immensely more complicated. We are going to have to give consumers confidence that the product does what it claims to do on the side of the box."

Alcatel's Tim Krause criticized U.S. government regulators, led by the FCC, for retarding progress in media technology, such as preventing devices from easily shifting functionality between different wireless networks. Regulators have also held the U.S. back in broadband development when compared to other nations, he added.

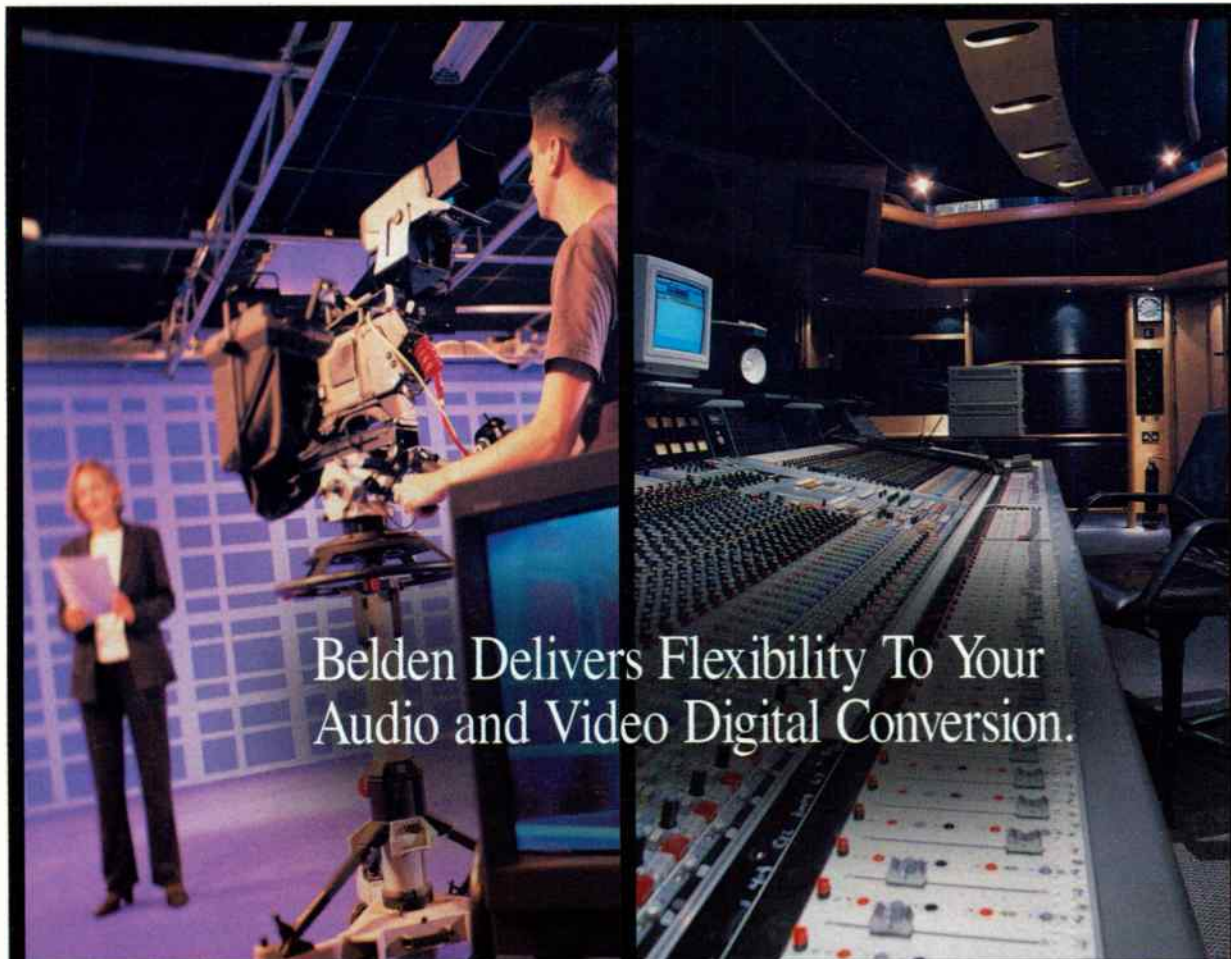
"The rest of the world knows broadband better than we do," he said, noting that Alcatel supplies about half of the world's DSL telco lines. "We supply about four-fifths of the DSL lines in the United States and that almost doesn't even show up on our operating income," he said. "That's how much disparity there is. Here at home we've created a climate of limitation."

Another impediment, said Bill Taylor, a senior marketing executive at Motorola, is content rights management, which he termed "a pretty sticky wicket." He also suggested that the rest of the world is ahead in broadband connectivity and cellular phone technology largely because they didn't have the investment in infrastructure that was already in place in the United States. "It's very expensive for companies to swap out this type of infrastructure," he said.

For the future, panelists cited IP video as the next big technology platform for wide adoption—first by telco companies now deploying video networks and later by cable in upgrading their distribution technology. Telephone companies now deploying broadband video services and constructing fiber optic networks are being welcomed as the next big competitors to cable and satellite.

In wrapping up a panel called "Transforming Television," Hanlon closed with a prediction: "I think the industry has a couple of more tectonic shifts to come. Some which we'll see and some which we won't see.

"One that I'll take a guess on is satellite and telco are going from holding hands to perhaps walking down the aisle together. Perhaps leveling the playing field against cable. It will be interesting to watch how the bandwidth is bundled." ■



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# High Hopes for HDV

Will NAB bring a clearer picture of the new format?

by Carl Mrozek

WASHINGTON

**H**D weighed heavily on the minds of producers and programmers alike attending the "RealScreen Summit," a conference on nonfiction TV production in Washington, D.C., last month. Producers wanted to gauge the interest of programmers at various cable channels in HD production and delivery; surprisingly, many cable execs pronounced plans to beef up their HD libraries to launch HD services in the not-too-distant future when the HD audience reaches critical mass.



Veteran director/cameraman Jody Eldred (r) and stunt coordinator Eric Norris use the Sony HDV camcorder on the set of "JAG."

**The audience for HD isn't there yet, but it will be soon enough, so we're building our library so we're ready to go when the time is right."**

**—Bill Harris, A&E/History Channel**

John Ford, executive vice president at the National Geographic Channel declared that interest in HD at National Geographic was quite strong.

"It doesn't make sense to commission programs that may not be completed this year, and may have a shelf life of several years or more, in anything other than HD," he said.

Also at Real Screen, Dan Hurst, communications manager with Scripps Networks announced a goal of 300-plus hours of new HD programming by the end of this year.

## BUILDING THE LIBRARY

How to pay for all this HD production with a limited or no HD revenue stream was also a topic of discussion among programmers and producers alike.

"The reality is that without a ratings system and advertising revenues to pay for HDTV, there is no viable economic model for delivering HD programming today," said Bill Harris, vice president at A&E/History Channel. "In fact, we could actually hurt our ratings and bottom line with a successful HD channel by peeling viewers away from our standard channels, which do generate income through advertising."

Still, he affirmed the need to stay on the HD path.

"We were the first on cable to produce in HD almost 10 years ago. The audience for HD isn't there yet, but it will be soon enough, so we're building our library so we're ready to go when the time is right," he said.

Many programmers agreed that despite improvements, the additional cost of producing in HD versus SD is 15 to 30 percent, a major impediment to building an HD library and launching an HD service. But some cable execs expressed hopes that this gap could narrow quickly and even disappear if new economical formats, like HDV, are judged "broadcast quality" by programmers—at least for a range of applications.

That verdict may be rendered sooner rather than later, with JVC and Sony showcasing HDV production systems at NAB2005. Both will demonstrate new cameras, accessories, edit decks and desktop editing solutions developed by, and with, their partners.

At this point, Sony leads in the race to bring to market a pro-style HDV camcorder that offers the features and quality that programmers and producers both need and expect. Sony began shipping its HVR-Z1U handycam-style camcorder in February and at press time, "almost all of the cameras have sold out," according to Alec Shapiro, senior vice president of marketing for Sony Broadcast.

The Z1 features three Super-HAD 1/3-inch CCDs with native 16:9 imaging and includes a noninterchangeable Zeiss 12x HD lens with autofocus and built-in image stabilization. It also has a 3.5-inch flip-out LCD monitor for easier focusing. Among its strong suits are 1080i HDV recording of one hour of HDV video on a standard mini-DV/DVCAM cassette, 14-bit digital signal processing and A/D conversion and the ability to record in

multiple HDV, DVCAM and DV formats, and downconvert from 1080i to any of the SD formats in-camera.

Both 60i or 50i 1080i formats are supported—and in the 480p mode at 24, 25 and 30 frames per second—and hence can be used as a non-HD 24p camcorder. Moreover, the Z1 uses Sony's CineFrame technology to help achieve the elu-

GY-HD10U 1-CCD camcorder.

"From the ground up, this camera was designed for professionals, including the Fujinon 16x HD lens, which can be swapped for a wide-angle HD lens or you can use 1/2-inch lenses with an adapter, focus assist, true 24p HD recording, four audio channels [two at 48 KHz], easily accessed pro functions like skin tone and cine gamma control... the ability to transfer camera settings via smart cards and much more," Walton said.

A companion editing deck, the BR-HD50U, will play and record all the HD and SD formats recorded by the GY-HD100U camcorder, as well as

720p/30 MPEG-2. It also can play back and output 1080i, and feed it and other formats to an NLE, via a full suite of I/Os from composite and component to iLink.

Many software designers that already support the HDV codec also are expected to support JVC's ProHD upgrade. While the status of ProHD edit support could not be

confirmed for this report, those to watch at NAB2005 include Adobe, Apple, Avid, Canopus, CineForm, Heuris, Lumiere Media, Mediaware, Pinnacle Systems and ULead.

If the performance of the new Sony and JVC HDV production systems exceeds or even meets expectations, they could substantially transform the HD production landscape in much the same way that DV changed the broadcast and production landscape in the past decade, in part by democratizing it. Even if deemed somewhat inferior to HDCAM or DVCPR100 at this stage, the cameras, in particular, will enable progressive producers to push the envelope by using HD cameras in ways they have not been used to thus far to create content that allows viewers to see things not seen before. The result is a larger wave of HD programming, from news and documentaries to reality TV, music videos and extreme sports, filling the void in the ever-expanding HDTV landscape.

The format has cable executives like Ali Hossaini at Gallery HD (an HD channel on Voom DBS service) awaiting the results with baited breath.

"We plan to loan the new HDV cameras to many kinds of artists to produce experimental projects for our 'Lab TV Channel' and to others in risky situations while producing programs for our 'Equator HD' [channel], where we wouldn't want to jeopardize an \$80,000 HD camera," he said. ■



The author checks out the JVC JY-HD10U HD camcorder.

sive "film look" prized by so many. All recorded formats, including 1080i, can be played back on the Z1 and output to an NLE via iLink and analog I/Os.

For editing, Sony has released its HVR-M10U VTR with a built-in 3.5-inch LCD monitor with composite, YC and HDV/DV iLink I/Os and component output. Besides playing back 1080i, 480p formats, DVCAM and DV 480i—recorded by the HVR-Z1 in NTSC and PAL—it also plays back 720p/30, the original HDV format, and can also downconvert 1080i to 480i and 480p formats.

## LESS COMPRESSION

JVC, which started the HDV revolution two years ago with a single CCD HDV camcorder, will introduce a truly professional 3-CCD HD camcorder that uses a new professionalized version of HDV, called "ProHD," which records 720p/60 in the MPEG 2 broadcast codec and can also record 720p/24. JVC is hailing the GY-HD100U as the first affordable camcorder to offer true 24p HD recording, at full HDTV (19.39 Mbps) bandwidth.

"With less data to compress [than at 720/60p], image quality at [720] 24p will be outstanding, as we'll demonstrate at NAB this year," said JVC spokesman, David Walton.

Despite the nearly identical product code, JVC hails the GY-HD100U as an entirely different beast from its prosumer



# Harris Sharpens Products, Targets Support

## Full power and expanded software to be paraded in NAB booth

by Bob Kovacs

CINCINNATI

**H**arris believes this is the year for high-power DTV.

In its spacious NAB booth, the company plans to highlight ways to achieve full DTV power, a timely consideration this year. Harris also stepped up its already-strong position in the station automation business with the recent acquisition of Encoda Systems, a development that will ricochet through its NAB2005 presentation.

The first thing on the company's agenda will be to remind attendees that Harris is one of the preeminent suppliers of broadcast products and services, and that it is in this market to stay—and grow.

"Transmission has always been a core competency for us and it always will be," said Jeremy Wensinger, president and general manager of Harris Broadcast Communications Division.

The company expects to demonstrate this in several ways, starting with upgrades to its PowerCD line of high-power UHF transmitters for DTV broadcasting. The PowerCD taps into technology to reduce broadcasters' electricity costs while operating at high



Jeremy Wensinger, Harris

power. The company uses multistage depressed collector IOTs from e2v and real-time adaptive correction to maxi-

mize power output with minimum power input.

Another energy-saving technology employed by the PowerCD transmitter is Harris' Apex exciter with its real-time adaptive correction capability. This system samples the transmitter's output and uses the information to make corrections to the exciter in real time, main-

Harris hears this message and the company is working to augment its engineering with components and systems that provide convenient ways to monitor the performance of its transmitters. The PowerCD line also features the company's eCDi monitoring and control system, which lets an engineer check a transmitter's operation with a Web

**"The inception of the new Software Systems business unit... represents an important proactive position for Harris."**

**—Jeremy Wensinger**

taining the signal within the boundaries of the 6 MHz channel and producing the least out-of-band energy.

Broadcasters have a simple requirement with respect to transmitters: A transmitter must never fail.

browsing on a networked computer. The system will even work with a Web-enabled cell phone.

"On the air all the time is what we're known for," said Wensinger.

HARRIS, PAGE 44

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## Panasonic Expands P2

### Company focuses on partnerships, HD, new display technology

by Tom Butts

SECAUCUS, NJ

**T**apeless workflow, HD and display technologies head the list of new product and technology announcements from Panasonic at NAB2005.

The company's broadcast division enjoyed a healthy 2004, announcing double digit sales increases for the third year in a row, with a notable 47 percent increase in sales in its third quarter.

"We've seen growth in every product category [in 2004]," said Joseph Facchini, director of product marketing for Panasonic Broadcast.

The strongest areas of growth are in the company's plasma displays, projectors and 24p cameras. Panasonic, the third largest manufacturer of plasma displays in the world, is partnering with Hitachi on product development and marketing the display technology. Projector sales have doubled in the last two years and company officials note that its AG-DVX100A 24p camera has become the "de facto camera" for DV



A new proxy video option for the P2 camcorder allows for simultaneous copying of low-resolution video on a laptop, desktop PC or PDA.

filmmakers.

But its Panasonic's P2 solid-state format that has gotten the most attention since it was unveiled at NAB2003. Panasonic says the format is gaining ground in TV stations across the country. And, almost as important, other companies, such as Avid, Apple, Leitch and Thomson are integrating P2 capabilities into their product lines.

"All of our partners will have hardware shipping that is compatible with P2 at NAB," Facchini said.

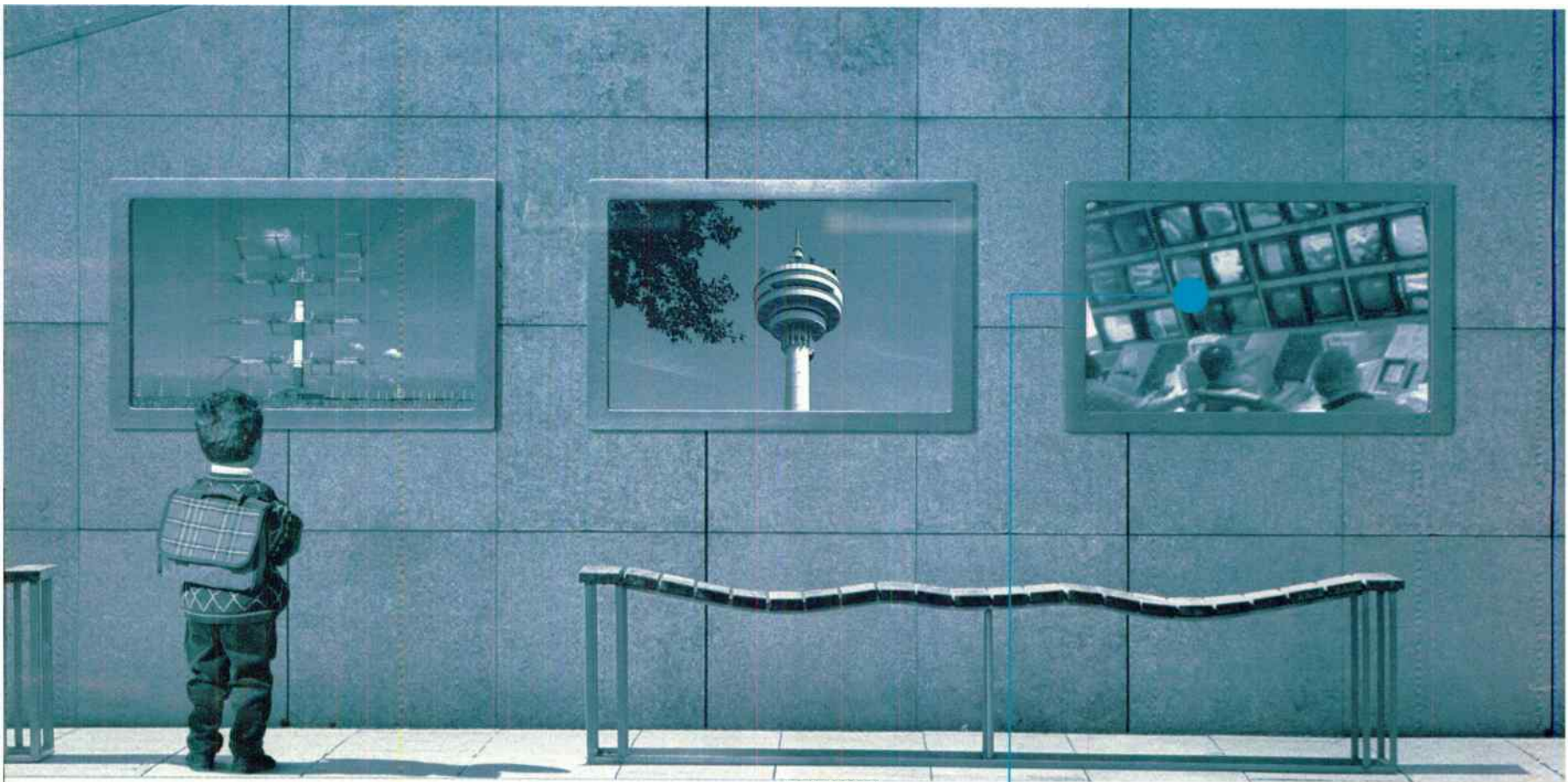
The cost of storage continues to fall rapidly, just as Panasonic officials predicted two years ago when they intro-

PANASONIC, PAGE 42



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# Sony Focuses on HD, Revised Products

## Company puts the pedal to the metal on the "HD Highway" at NAB2005

by Bob Kovacs

PARK RIDGE, N.J.

This is the year that Sony intends to get the lead out—literally. In keeping with the Kyoto Protocol requirements on pollution, Sony intends to re-engineer all its products to remove lead from its manufacturing. This includes the company's entire professional television line, as well as all VCRs, camcorders, switchers and monitors—and all 6,000 products in the Sony Broadcast and Professional catalog.

"After 2005, we won't manufacture any products with lead," said Alec Shapiro, senior vice president of Sony Electronics, broadcast and production systems division.

If you notice a lot of products at NAB2005 with model numbers slightly different from last year's show, the reason is the lack of lead and the Kyoto Protocol. It's interesting to see global regulations at work in the village that is the television industry.

Of course, losing lead is not the only thing happening at the massive Sony booth at NAB2005; in fact, most other changes are a lot easier to spot. Sony has a bouquet of new products and technologies to show off, and a few products that the company will only discuss at the show.

The theme of Sony's 24,000-square-foot booth this year is "HD Highway," with an emphasis on high-definition products from low- to high-end. Topping the bill are products for the company's HDCAM-SR format, including machines that record 12 channels of audio.

Introduced at the show will be the SRW-5500, an HDCAM-SR studio recorder that can also record and play back in the HDCAM format. For field HDCAM-SR recording, Sony will debut the SRW-1 field recorder, which mates with the Panavision Genesis HD camera.

The company's existing HDW-2000 HDCAM recorder now supports 24p recording and it will sport the CineAlta logo at NAB2005. Also new in the



The Sony SRW5500 HD multiformat VTR

HDCAM line will be the HDW-S280 half-rack recorder and a serial controller that enables cuts-only editing.

At the other end of Sony's HD line is the HVR-Z1U HDV camcorder and there will be a dedicated space in the company's booth for HDV acquisition and editing. The HVR-Z1U is a three-CCD camcorder that uses DV tape to record 1080i images.

Complementing the HVR-Z1U camcorder is the HVR-M10U VCR, both of which started shipping in February. Sony expects to deliver 6,000 of these products before NAB2005 opens.

in performance, quality and cost between Sony's HDV products and its HDCAM/HDCAM-SR gear. With the high and low ends covered, what's left but the middle?

To that end, the company will lift the curtain on its HD-XDCAM technology, showing how HD can be recorded on

optical disks. Although Sony is now saying there will be no HD-XDCAM products at the show, this technology demo indicates what is in the near future.

"Nobody knows more about HD and nobody can offer as diverse an array of HD solutions as Sony," said Shapiro.

Other new XDCAM products will be liberally sprinkled throughout the company's booth, including the PDW-X1 drive that has an iLink (IEEE-1394) port for easy connection to a computer. For both media and data storage, Sony also will show its XDCART, a "juke-box" that has four drives and holds up to 80 disks.

As far as the industry debate on opti-

SONY, PAGE 48

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## JVC Launches ProHD

### Company hopes to capitalize on HDV buzz

by Tom Butts

WAYNE, NJ

With HDV catching on like wildfire, JVC is planning on taking advantage of its expertise to promote the format to broadcasters. After all, the company was one of the original developers of HDV, along with Sharp, Canon and Sony.

But, as it often happens these days, the lines blur when you try to determine the target market. Is it a consumer, professional or prosumer format? And does that matter?

Dave Walton, marketing communications manager for JVC Americas thinks it does, and that's why the company is unveiling a new name for its HDV format—ProHD.

### PROFESSIONAL FEATURES

Although the company has used

the ProHD brandname for several years, the introduction of JVC's new HDV gear helped bring the ProHD name into focus. What separates ProHD from the consumer HDV format, according to JVC, are additions such as four-channel audio, true 24p HD and dual-media recording to hard disc. The first JVC HDV camera, the JY-HD10U HD, which debuted at NAB2004, marked the company's entry into the format, but Walton intimated that the camera wasn't ready for professional primetime.

"The whole notion of the ProHD brand is HDV production compatibility that goes beyond the specs of HDV," Walton said. "For example, we couldn't do 1080p on an HDV camcorder but under the ProHD auspices we could. JVC is planning on expanding ProHD into other products that will be non-tape-based in the future."

The ProHD line introduced this year will feature the more sophisticated GY-

JVC, PAGE 46

See us at NAB booth # SU10000



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# Thomson Launches 'dMAX'

## New initiative to bring asset management, services and monitoring under one roof

by Tom Butts

PALM SPRINGS, CALIF.

**T**homson Broadcast & Media Solutions is heading to NAB2005 with an aggressive growth strategy that targets new markets such as Pro-AV and expands its presence in IP.

Declaring the worldwide economy "relatively stable" compared to a year ago, Thomson Broadcast and Market Solutions President Marc Valentin said the company aims to be a world leader in IP devices and solutions and that the key to the company's research and development is investments in its "transversal technology," i.e. compression. New compression technologies will help spur growth in electronic content such as digital cinema, VOD and IP.

"New distribution channels will significantly contribute to [our] growth over the next five years," he said. The company has also created a new division to develop technology targeting the telco market as well. "We are poised to become a leader in telco headend solutions," he said.

The largest market on the horizon in terms of revenue, however, is the Pro A/V market, which encompasses government, corporate, religious and educational markets and their expanding use of audio and visual technology. That market represented \$18 billion in U.S. revenues in 2003, dwarfing broadcast market revenues of \$8.7 billion; and the Pro A/V market is expected to double in revenues by 2009.

The personnel makeup of the Pro A/V market is different from other markets



Thomson's NetCentral facility monitoring software will play a key role in "dMAX."

Thomson has targeted; the people making and distributing the content are less likely to hold engineering or other technical backgrounds. So the natural response is to increase services and enhance content management.

### TYING IT TOGETHER

Enter "dMAX," a new initiative from Thomson Grass Valley that brings asset management, facility management and monitoring (including systems integration and support services) under one umbrella. "dMAX" is poised to play an important role in the company's overall products and services strategies across its broadcast, post production, IP and Pro A/V markets over the next several years.

"The asset management technology we're working on will be embedded in the DNA of all of our products," said Mike

Cronk, vice president and general manager, servers and digital news production for Thomson.

Under dMAX, Thomson is adding two new software packages for its Grass Valley C2MD program: Net Central 4.1 facility monitoring software and an expanded Grass Valley XMS 3500 network management system. The company also will expand the market for its software-based work-

flow management applications to target smaller broadcasters, production studios and post-production facilities, tying together Thomson Grass Valley's servers, ingest tools and editing and facility-monitoring systems as well as create a new Grass Valley OnCall service level agreement, which features expanded tech support and parts replacement and will be available on a one-year subscription basis.

Two new cameras also will be introduced at Thomson Grass Valley's NAB booth: the LDK 4000, a 720p camera designed for small-to-medium sized digital production studios and media creation companies; and the LDK 400, a lower priced 14-bit camera compatible with Triax, Digital Wireless and DigiLink.

New Digital Triax and Digi-Link systems also will be launched at the show. Replacing the Grass Valley TTV 1707 system, the Digital Triax system is com-

patible with the 12-bit LDK 300, the 14-bit LDK 500 and the new LDK 400. A new compact digital adapter for the Grass Valley Digi-Link also supports the 300, 400 and 500 series of cameras and targets studio applications with an installed base of multi-core cables, but can also be deployed for remote applications, using a dual-coax cabling infrastructure.

### NEW LIFE FOR CAMERAMAN

The first new product as a result of Thomson Grass Valley's purchase of ParkerVision will debut at the show. The scalable Ignite Integrated Production System integrates the Grass Valley "CameraMan", LDK 300 cameras, GVG KayakDD switcher, Grass Valley Concerto routing switcher, analog and digital audio mixing/processing and Thomson's advance automation control software. Ignite also works with the Grass Valley NewsEdit production suite, GVG Profile servers and the M-Series iVDRs and includes a "WebSTATION" feature for live or on-demand Web viewing.

Ignite also integrates with the new Grass Valley Aurora suite that includes automated ingest, NLE and playlist management features and supports formats from MPEG-1 to WM9 for low resolution proxy as well as SD and HD video.

Venom, a new flash-based storage system for the Viper Filmstream camera system will debut at the booth. Mounting directly onto the camera and described as a massive "memory stick" for Viper, the 100 GB Venom Flashpak holds 10 minutes of uncompressed output or 18 minutes of HD material. ■

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**World Radio History**



# Panasonic

CONTINUED FROM PAGE 36

duced P2. At the time, the concept of using memory-based SD media in professional broadcast equipment was an unknown and unproven concept, but Panasonic executives note that its customers are better aware of the advantages of tapeless workflows, despite some doubts about the cost of the media.

"If the discussion [about P2] is 'cost of media,' P2 can't win," said Phil Livingston, vice president, Panasonic Broadcast. "But users see P2 as a 'no media solution.'"

The other tapeless format that competes with P2 is optical disc-based, but Panasonic executives insist that its solid-state memory card format is the better path to broadcasters' inevitable goal—high definition. P2's DVCPRO-based standard has "upward compression com-

patibility," according to Livingston, making it easier for DVCPRO customers to upgrade P2 to high-definition, especially when paired with Apple's Final Cut Pro HD, a partnership that was introduced at the last NAB.

"The real payoff from P2 comes from the seamless integration with our partners," Livingston said. "We didn't develop a nonlinear editing solution for P2 because our customers said there were already enough devices [on the market]."

The storage demands of HD will require P2 cards with increased storage; current cards hold 4 GB at the most. Livingston says the anticipated 8 GB P2 card is "in the pipeline," but he wouldn't reveal when it would be released.

One year after shipping, 36 stations have adopted and two rental houses are offering P2 gear. Recent customer wins for P2 include Fox O&Os WNYW and WWOR in the New York City market. P2 also will be used at the 2006 Winter Olympics in Torino. DVCPRO has been the official tape format for the Olympic Games for the past decade and with increasing worldwide interest in HD, the 2006 Games will feature much more high-definition coverage; Panasonic says its DVCPRO50 and DVCPRO-HD formats are expected to be used in providing more than 3,200 hours of coverage in SD and HD at the Torino Games.

NAB2005 will see the introduction of new P2 gear including the AJ-PCS060, a ruggedized 2.5-inch high 60 GB DVCPRO P2 hard disk drive, which can hold the contents of up to 15 4 GB P2 cards. New options for the AJ-SPX800 include 24p recording and proxy recording with three quality levels. An optional 4.7 GB DVD-RAM/DVD-R recordable drive will be made available for the AJ-SPD850 P2 VTR.

A new half-rack size VTR for NLEs will also debut at the show. Also new is the BT-LH1700W, a broadcast quality 16:9 HD/SD LCD monitor for studio and field applications as well as the TH-32LHD7UY, a 32-inch 16:9 LCD display, Panasonic's first professional LCD panel.

On the camera side, the AW-E860, a native 16:9 2/3-inch 3-CCD convertible camera, along with new pan-tilt heads and controller will be introduced at NAB. In addition, Panasonic will introduce the Advanced Master Quality (AMQ) line of professional DV tape.

Panasonic also is outfitting its booth this year to feature a newly built 200-seat HD 3D theater, showing 3D footage shot on the Panasonic AK-HC900 compact HD camera.

No NAB is complete these days without discussing HDV and Panasonic has some definite opinions about the emerging format. The company has chosen its own path vis-à-vis HDV.

"If you look at HDV, the conclusion I draw is that it's bitrate-starved," said Livingston. "It would be nice if the pictures were not so compressed."

Without revealing too many details, Livingston promised that Panasonic would introduce its own sub-\$10,000 camera to compete in the HDV space "in less than two years," but that the camera and gear would be based on "what is already in a station's infrastructure."

Could it be P2-based? Livingston isn't saying, but he added, "what promoted this camera," Livingston said, "is that there are already committed workflows and partners." ■

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World Radio History



## Harris

CONTINUED FROM PAGE 36

eCDi is a Linux-based system that can be established with different password-protected access levels. In addition to monitoring and control over the transmitter's parameters, eCDi can send an e-mail in the event a parameter falls outside a specified window.

### VIDEO NETWORKING

Also featured in the company's NAB2005 booth will be enhancements to Harris' NetVX video networking platform. New for NetVX is HD capability in multiple formats, contained on a single MPEG-2 card that plugs into the company's NetVX chassis.

The new encoder supports multiple HD formats, including 1080i/30, 720p

and 1080i/25, and it also maintains support for standard-definition formats.

Another upgrade to the NetVX line is the Harris Transrating Transport Stream Multiplexer (TMX) module. This device reduces the bit-rate of multiple programs into a single transport stream that maintains signal quality while paring bandwidth requirements. TMX can support up to 16 SD channels simultaneously, and also allows for

video-over-IP distribution.

One big recent announcement from Harris was its acquisition of Encoda Systems, a major supplier of automation products for the television industry. Harris was already a big name in the automation side of the industry, particularly after acquiring software vendor Louth several years ago.

The company now will be considerably strengthened as a software and automation vendor. A new division of Harris will develop and market the software products, and the Encoda name will be discontinued.

"The inception of the new Software Systems business unit... represents an important proactive position for Harris," Wensinger said.

### GLOBAL SUPPORT

Although the first word in NAB is "national," Harris has not missed the fact that attendees come from around the world and broadcasting is a global industry. Supporting broadcasters where they work is receiving new attention at Harris.

"If you want to go global, you have to be local," Wensinger said. "You can't expect people to call support that's eight time zones away."

To address this, the company is beefing up its international offices and providing support for broadcasters in the nation or region in which they work. Already a significant player internationally, Harris says it will increase its overseas presence to improve its global support.

Systems integration will be on the table for discussion at the expansive Harris booth, as the company wants to show that it can tackle massive upgrades and installations for broadcasters. One recent integration project the company completed was the first phase of improvements to S.N. Radiocomunicatii, Romania's state broadcaster. The \$85-million contract was completed two years ahead of schedule.

Another big integration challenge Harris undertook was to upgrade—build from scratch, actually—the broadcast infrastructure in Iraq. This massive project recently shipped from the company in more than 80 40-foot containers.

With everything going on, Harris officials say they are still actively looking for companies to acquire, particularly companies with computer hardware and software backgrounds. This makes it sound like there could be an interesting announcement not long after NAB2005 wraps up—if not sooner.

According to the company, the focus this year at the Harris booth will be on solid technology and a commitment to customer support. Efficiently flinging watts of RF into the ether is the core of the product line at Harris, which is right on target for broadcasters. ■

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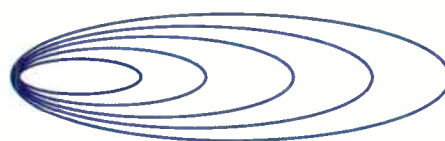
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## JVC

CONTINUED FROM PAGE 38

HD100U, a three-CCD camcorder that adds 24 fps recording in the 720p format.

The 24p feature is "the real benefit of the camera," Walton said. "The camera can be used for news and independent filmmakers as well will eat this up."

The camera also will feature JVC's Direct-To-Edit (DTE) disc-recording option that the company has been working on with Focus Enhancements for the past several years. DTE eliminates the file transfer process and allows editing instantly. For those who want to take advantage of the ability of HDV to record to DVCAM cassettes, the camera allows dual-media recording, which allows camera operators to record

simultaneously to disc and to tape, providing an instant backup.

The camera includes a standard detachable 16x Servo Fujinon lens. Other available options include a 13x (3.5mm) wide zoom lens, a wide-angle converter for the standard 16x lens, and an adapter allowing standard 1/2-inch lenses to be used on



The JVC GY-HD100U ProHD HDV camera

the camera. The camera features two XLR audio inputs and records CD-quality digital audio.

Rounding out the new product line is the BR-HD50U ProHD recorder/player. JVC plans to add 1080-interlaced and progressive recording in the future, according to Walton.

#### HD NEWS ON THE HORIZON?

The boom in HDTV set sales that started in 2005 will prompt broadcasters to take a more serious look at HDV as a way of introducing HD footage into their newscasts. Whether HDV will be the panacea is yet to be seen, but the competitive pressure to go HD is increasing, Walton said.

"This is the year you're going to see news directors see a competitive advantage to HD news," he said.

**"The whole notion of the ProHD brand is HDV production compatibility beyond the specs of HDV."**

**—Dave Walton, JVC**

JVC is also priming the HD news pump by promoting its DM-JV600U encoder that was introduced at NAB2004. Last fall, JVC teamed up with BMS and E-N-G Mobile Systems to demonstrate live HD ENG during a truck tour across the country. JVC has also added the Nucomm analog coder to the HD ENG program as well.

Broadcasters began to take notice. ABC used the DM-JV600U to transmit the first-ever HD telecast of a sporting event from a blimp during an August pre-season telecast of ABC's Monday Night Football and ABC used the encoder again in January to cover the inauguration in HD. Fox has approved the DM-JV600U for on-air operation as well.

At its booth, JVC will demonstrate several implementations of its encoding and decoding products, including a completely functional news van with a live microwave link. Flanking the news van will be two stages—one dedicated to SD cameras and the other dedicated to HDV. ■

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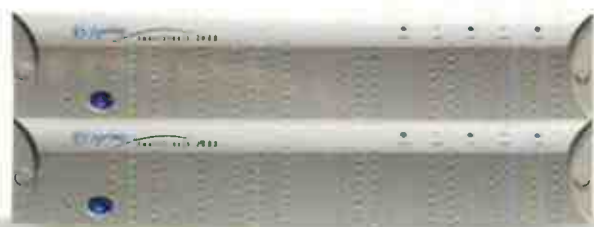
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## Sony

CONTINUED FROM PAGE 38

cal storage versus solid-state memory goes, Sony is definitely behind its optical XDCAM format.

"We are not ruling out flash memory in our cameras," Shapiro said, "but XDCAM is Sony's future format."

To date, Sony has delivered 5,000 XDCAM products to broadcasters and

television professionals worldwide.

With the company's drive toward HD and its XDCAM lines, you might assume that standard-definition products would be on the back burner. However, Sony plans to debut several new SD products at NAB2005, including two 2/3-inch DVCAM camcorders, targeted squarely at ENG applications. Both feature built-in iLink ports and the DSR-400WS/P supports 16:9 widescreen recording.

Other new SD camcorders from Sony include the DVN-970/P (Digital Betacam) and MSW-970/P (MPEG IMX) models. Both claim 65 dB S/N using their 14-bit A/D converters. Both cameras have optional 24p capability.

There's only so much that one can do with a camera on your shoulder; sometimes, one has to go to a POV camera for a really novel shot. For its already released HDC-X300 POV camera, Sony will show the HDC-X310 fiber interface



Sony's lead-free HDC-X300 POV camera now features the HDC-X310 fiber interface for long-distance applications.

that lets the camera function from long distances.

### PATH TO HD

Providing a path to HD—remember the HD highway?—will be easier for Sony's DSR series of DVCAM recorders. At NAB2005, the company will show two field-installable boards that give the DSR-2000 and DSR-1600/1800 the ability to provide 1080i and 720p from an HD-SDI connector.

In addition to offering an optional upgrade to HD, Sony's new versions of the DSR-2000, DSR-1800 and DSR-

**"After 2005, we won't manufacture any products with lead."**

**—Alec Shapiro,**

**Sony Electronics**

1600 will now come standard with an iLink (IEEE-1394) port. The new models will be distinguished with an "A" after the model name (e.g., DSR-2000A).

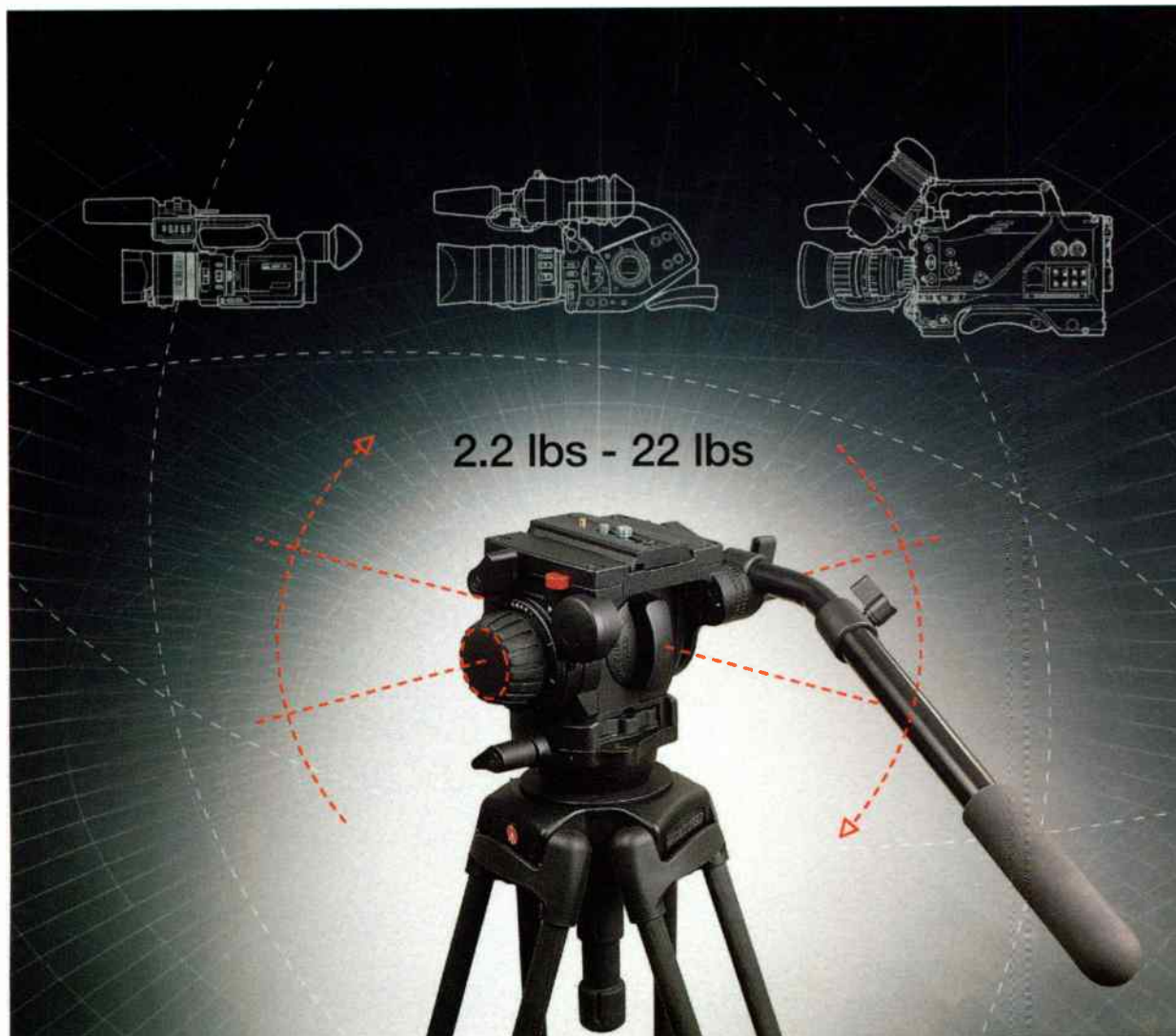
"Including iLink connectivity across our entire line of DSR decks responds to a growing industry need," said Bob Ott, vice president of professional audio and video products for Sony Broadcast.

The company will also highlight its "Anycast" AWS-G500, a Web-streaming production system in a suitcase—and a small suitcase at that.

"Much more than our tagline for the show, the 'HD Highway,' communicates a commitment to our customers," Shapiro said. "We believe Sony can provide the right roadmap for them from no matter where they are starting. We're committed to helping customers maximize the SD investments they've made in Sony products and systems, while providing them with a choice of directions they can take into the HD future."

After so many things to consider, Sony promises that there will still be more announcements made at the company's booth.

The Sony booth is always one of the highlights of the NAB and this year promises to be no exception. Attendees should consider "getting the lead out" and plan a visit during NAB2005. ■



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Karst Productions specializes in hi-definition production in the most unique and exciting locations on the planet. Their work appears regularly on the BBC, Discovery Channel, PBS, A&E, and National Geographic.



Wes and his team have filmed volcanoes, caves, underground rivers, jungles, deserts and the ocean floors to film the largest iceberg in recorded history was as challenging in its production as its images were stunning.

Karst's latest project was an exploration of the underground rivers of Florida for PBS. Diving great distances through narrow passages while being tracked from above, the team charted the detailed path water takes to reach local springs. Their Sony HDW-900/3 cameras were equipped with HyTRON 120 and Dionic 90 batteries both above and below the water in special waterproof housings.

"Our specialty is utilizing cutting edge technology to capture the experience of exploration while expanding the understanding of our planet," says Wes. "I made my reputation filming some of earth's most extreme environments. That's why I use Anton/Bauer batteries for my shoots - they're tough, reliable and versatile. Confidence in your team *and* your equipment is a must."

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# PRODUCT PREVIEW

An overview of selected products on display at NAB2005

## PRODUCT PREVIEW

## CAMERAS

studio-style cameras sold last year were HD, with brisk sales of HD portables as well. This year will see some lower-priced HD cameras.

Still, there is a market for SD cameras; cameras for electronic cinema applications will be shown, and at least one traditional film-camera maker will feature an ambitious new design.

**Ikegami Electronics** will roll out the first HD tapeless camcorder, preliminarily named Editcam HD. The camcorder features CMOS sensors for various native HD formats, and will use the new Avid DNX codec. A working prototype of the Editcam HD will be demonstrated recording to newly introduced 120 GB FieldPaks at a 148 Mbps. (The unit will also be capable of a 220 Mbps.) The camcorder can also

use new 16 GB RamPaks, which fit the camcorder's FieldPak slot.

Other HD Editcam products to be introduced will be the standalone recorder, the DNE-31 and a dockable DNR-20 recorder that mates to the Ikegami HL-45. Avid supporting products will also be demonstrated, as will an updated version of the HDK-79EC multiformat HD camera.

**Sony** will demo the first HD version of its optical disc-based XDCAM. In its first year on the market, the company reports that more than 5,000 units have been delivered worldwide.

This year the company will expand its DVCAM line by introducing two new camcorders, the DSR-400 and the DSR-450WS (switchable 16:9/4:3). Each uses three 2/3-inch PowerHAD



Panasonic AJ-HDX400 DVCPRO HD camcorder

shading correction that adjusts for the use of a lens extender. It uses DVCPRO HD-LP 9-micron recording to record 33 minutes on a DVCPRO medium-size cassette, recording 48 kHz/16-bit digital audio on all four channels. The camcorder provides a 10-second pre-recording function.

The company will also unveil new enhancements for the AJ-SPX800 DVCPRO P2 camcorder and AJ-SPD850 DVCPRO P2 VTR. For the camcorder, they include 24p frame-rate recording and proxy video recording with three quality levels. The frame-rate software upgrade allows the camcorder to capture film-like 24p images as well as 30p and 60i. The proxy video option permits recording of

CAMERAS PAGE 52



Sony DSR-400 DVCAM camcorder

EX CCD imagers, and the DSR-450WS can capture images in 60i at 24PsF, 25PsF (PAL model only) and 30PsF. The new CCDs improve imaging by including higher dynamic range, sensitivity and a 65 dB signal-to-noise ratio with -140 dB of vertical smear.

Also new from Sony—two high-end professional SD camcorders, the MSW-970 (which records in the MPEG IMX format) and the DVW-970 (Digital Betacam format).

Sony also will premier its HDC-X310 multipurpose HD camera, featuring an optical fiber interface that allows cable runs to be increased to a maximum of 3,300 feet. The new camera is designed for a range of applications including high-definition point-of-view acquisition in stadiums, conference rooms, houses of worship, or schools.

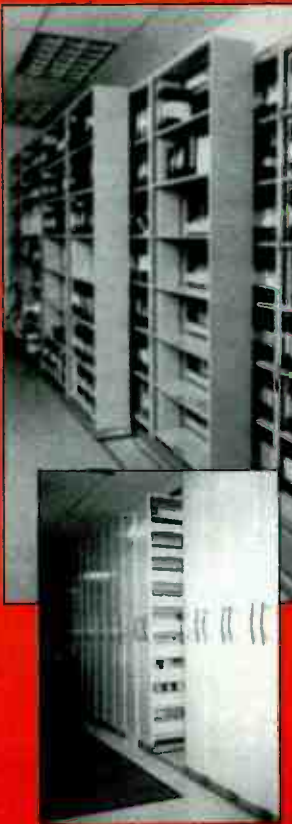
Panasonic will introduce the AJ-HDX400 DVCPRO HD camcorder, which includes such built-in image-enhancing features as a cine-like gamma curve to replicate the look and feel of film, versatile detail functions including precise skin tone detail, and

by Craig Johnston

**H**igh-definition will definitely take hold at NAB2005. Vendors report that more than half the

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by Craig Johnston

**T**wo critical factors to the videographer is how long he can shoot and where he can shoot, which make his choice of battery power systems and lighting fixtures crucial to his day-to-day operation.

The introduction of high-definition video cameras, with their increased power needs have led some battery makers to develop higher-capacity batteries. Other makers have come up with sophisticated battery analyzers that can even repair failing battery units.

Anton/Bauer will be returning with its Dionic 160, a lithium-ion battery designed for high-power military applications. The Dionic 160 is capable of loads up to 140 W, which the company notes is almost three times that of most lithium-ion batteries available.

The company also will feature its HyTRON 120 and HyTRON 50 Ni-MH batteries, InterActive 2000 Powerchargers, Titan series chargers and Ultralight, and the Stasis power support system.

An alternative to batteries for uninterruptible power supplies will be

introduced by Active Power at the show. Dubbed "CleanSource XR," the unit stores energy in the form of heat and compressed air. During a utility outage, compressed air is routed through a thermal storage unit to acquire heat energy, which spins a simple turbine-alternator to produce electric power.

Frezzi Energy Systems will unveil a new dual channel quick charger Model FQC-2, an affordable dual channel charger for professional broadcast batteries. It provides simultaneous two-channel charging of NiCd and NiMH brick style batteries ranging from 12 to 14.4 V of any manufacturer, and is designed to be rugged, robust and lightweight for field use.

IDX System Technology will show its next-generation Endura System components, including its ET-8 Endura Tower, an eight-channel simultaneous lithium ion charging system. The company will also show its i-Trax Endura Power Management System, a hardware/software solution that provides detailed data information of Endura E-80 batteries and upgraded 55 W-h Endura E-50 batteries.

Jadoo Power Systems will return with its hydrogen-powered NABII fuel cell power systems for ENG cameras. According to the company, the technology provides runtimes far superior to other batteries, allowing operators to have continuous power and mobility.

PAG Ltd., displaying in the Ste-Man booth, will introduce the PAG L95 Li-Ion Time Battery, which provides 95 W-h capacity and will power a camcorder and camera light up to 35 W. The battery displays equipment run-time in hours and minutes, and is available with V-Mount compatible, snap-on

compatible or PAGlok connector.

The company will also take the wraps off the PAG Power Circle Li-Ion ENG battery with a capacity of 95 Wh, incorporating the PAG Power Circle capacity indicator.



PAG L95 Li-Ion Battery

Also from PAG—a new dual battery mount for PAGlok batteries compatible with either V-Mount, Snap-on or PAGlok battery mounts.

## LIGHTING

The development of high-output LED, ceramic and other lamps has allowed lighting product makers to produce a growing array of flexible lighting fixtures to meet studio and location lighting needs.

Anton/Bauer will showcase its Ultralight systems. The Ultralight 2 is designed specifically for camera mounting, and though compact, it shares many of the features and accessories of the original Ultralight, including a universal mounting system for 1/4-20 or shoe-type mounting, eliminating the need for special studs or adapters.

A number of new lighting products will be unveiled at the ARRI booth, including the ARRI X Ceramic 250, based on the Philips ST 250 HR lamp that provides 3200K tungsten equivalent light. At 250 W, the lamp yields the same amount of light as a 1 kW tungsten source, running much cooler as well.

Balcar is bringing its new Spotflux 2 and 4, designed to create shadows and generally increase contrast. The fluorescent is configured to be used as a key light, accent light or hair light, with the lighting angle depending on the reflector the user installs.

Barbizon Lighting will showcase a new All-Weather (IP 54) DW 800 System Bron Kobold HMI fixture with interchangeable reflectors and a rugged design.

brightline will introduce a compact brightline motor controller for its automated T-Series Newsroom and VTC lighting systems. The company will also unveil infra-red remote control dimming with an automated light level sensor for studio, newsroom and VTC lighting systems. brightline also will roll out new digital wall stations with automated light level sensor control for studio, newsroom and VTC lighting systems, and pole-operated yokes for SeriesONE studio lights.

LIGHTING, PAGE 76

## Cameras

CONTINUED FROM PAGE 50

a low-resolution video copy for rapid viewing or transmission.

The company will also unveil its AJ-HDX400, a 1080i DVCPRO HD camcorder, with three 2/3-inch one-million pixel IT progressive CCDs to produce a sensitivity of f10 at 2000 lux. Accompanying the new camera is the AJ-HD1200A IEEE-1394 DVCPRO HD VTR and Apple Final Cut HD software.

Panasonic also will debut its AW-E860, a native 16:9 2/3-inch, 3-CCD convertible camera and complementary accessories to bolster its line-up of remotely controllable, multipurpose cameras. The AW-E860 is a native 16:9 510,000-pixel 3-CCD bayonet mount camera for indoor shooting and incorporates advanced IT CCDs that deliver 850 lines of horizontal resolution, 63dB signal-to-noise ratio, a minimum illumination of 0.4 lux, a high sensitivity of f11 at 2000 lux, and variable shutter speeds.

Finally, Panasonic announced it plans to introduce a sub-\$10,000 camera for the professional market within the next two years—not HDV-based.

Thomson Grass Valley has made inroads in the OB market,

CAMERAS, PAGE 56

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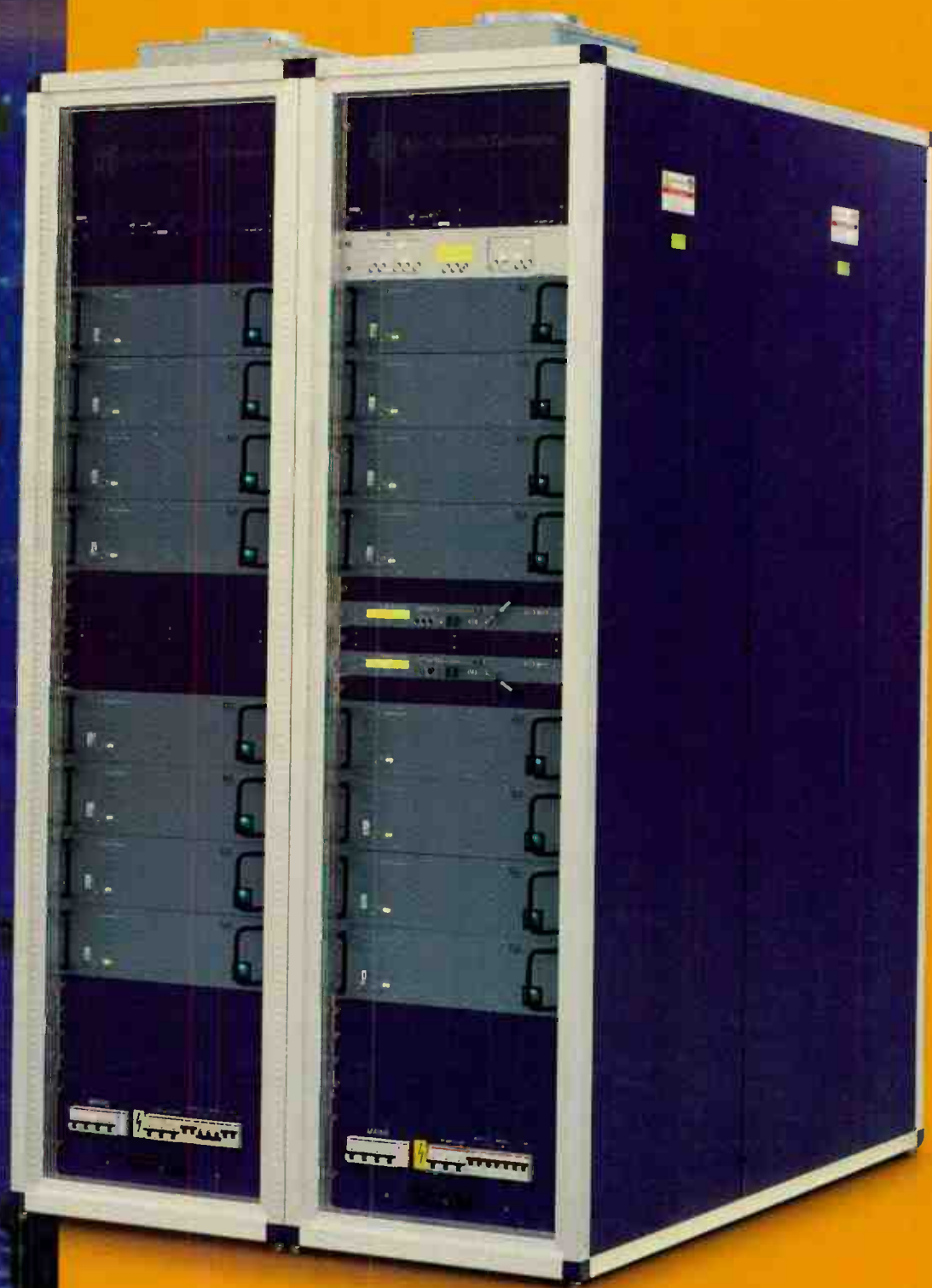
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by Craig Johnston

**W**hen people talk about video cameras and lenses, much of the focus is on specs and measurable performance. Though camera support equipment has its own set of specs, when videographers look at them, their thoughts turn more on the production values this equipment can provide.

#### CRANES

ABC Products will showcase its Minicrane, an ultra lightweight crane for cameras from 5-30 pound weight, designed for documentaries and situations where speed of setup is critical.

ATS Communications will present the new Cool Cam-XMovie Tech will introduce the MT 400 Film Crane, featuring interchangeable, lightweight segments, a 33-foot reach, new leveling remote-head mount and a strengthened base dolly.

Movie Tech will introduce the MT400 film crane, featuring interchangeable, lightweight segments, a 33-foot reach, new leveling remote-head mount and a strengthened base dolly.

Egripment USA will feature its Xtreme T12 carbon fiber telescoping crane with a maximum height of 40-feet. The company also will display its Scanner Elite Crane/Remote Head system, the latest version of its well-known Scanner system.

Polecam will present the Polecam HD, a six-meter camera crane capable of being rigged in 10 minutes, weighing about 45 pounds. It is designed to be supported on a standard lightweight

tripod, allowing the operator to work in locations previously unreachable and unworkable by conventional cranes. The company also will show its DiveBag, a molded rubber bag that fits over the Polecam camera and remote pan-and-tilt head to allow the camera to dip below the surface of water for water sports and natural history shoots.

Shotoku Broadcast Systems will introduce the TK-59VR Jib Crane, designed for use in virtual studios. It reports precise real-time camera position to the virtual system computer.

Technocrane will display its array of telescoping cranes, ranging to 30-feet in length. It features a remote head with slip rings for continuous pan and tilt, with direct drive to insure smooth, back-lash free operation. The head construction can handle any full studio camera package. A third axis is also available for remote dutching of the camera.

#### DOLLIES

ABC Products/Movie Tech will introduce its Magnum Dolly, a precision electromechanical programmable dolly, designed for advertising or TV work where repetition of extremely precise movements is a must.

Matthews Studio Equipment will introduce its new Western Dolly, a large but lightweight dolly for both transport and camera mounting, designed for speed rail mounting of camera or lights.

P+S Technik will showcase its small and lightweight Skater Mini Camera Dolly, designed to give direct control over tracking shots in any direction, as well as all sorts of precisely defined curved moves. It allows low angle camera tracking, with a height of only two-inches to the mounting surface of the camera.

VFGadgets.com will feature its Shooter Scooter, a portable dolly system that runs on and off track carrying the camera and operator. The dolly system also doubles as production cart, and folds up into the size of a suitcase. It is designed for tracking shots through doorways, down hallways, on the street, etc., and can carry up to 500 pounds of operator and equipment.

The company also will demo its new Hang 'N Shoot, a quick-mounting miniDV camera car mount system. The system enables three-axis movement, plus 360-degree tilt of the ball head that allows for many different camera angles from the same anchored position.



Vfgadgets.com Hang 'N Shoot

#### ROBOTICS

Frezzi Energy Systems' new Total Control Pan-and-Tilt System, designed for broadcast and video production, is designed as a cost-effective camera control solution for on-air usage.

Hi-Tech Enterprises will display a turn-key multi-camera system dubbed "Studio in a Box." The system features a trio of Sony's BRC-300 fully robotic 3-chip cameras. The cameras are fed into Newtek's latest 8-input switcher, and includes monitors for camera, preview, program, waveform, and vectorscope. A wide variety of other sources can also be added such as VTRs and computers, allowing recording to tape and hard drive simultaneously.

Innovision will demonstrate its new Vertical Camera Tracking (VCT) system that transports a camera along a three-meter vertical track. VCT is capable of five axes of movement (including pan, tilt, lens focus, and zoom), with 10 pre-settable camera positions and traveling speed of one meter per second.

P+S Technik will introduce its Cmotion LCS, a modular system that combines lens control, camera control and motion control in one modular remote system.

Radamec Broadcast Systems, displaying in parent company Vinten's booth, will showcase its TCPi high-end robotic camera control system, providing a clear distinctive visual display

with interactive touch screen operations that is powerful yet intuitive to use. The video from the active camera is stored as a still image, which can also be captioned on the screen as a visual prompt for fast and reliable shot recall.

Spencer Technologies will unveil the SPT 3500 Broadcast quality pan-and-tilt head, which stores 100 camera shots, is studio silent and performs smooth on-air moves.

Telemetrics will demonstrate its new CPS-ROP-5 camera control system, which provides flexible architecture for control of up to 50 cameras or devices. The system employs a GUI for ROP controls and hardware interface, and features joystick trim control of pan, tilt, zoom, focus, iris and master pedestal to emulate manufacturers' remote operating panels.

#### STABILIZERS

ABC Products will lift the wraps off a new stabilizing system designed for digi-cameras, with a low-mode option and which can be used with different spring arm and vest systems (EasyFlex, DV).

The company will also showcase its HandyMan/Clip & Go foldable aluminum stabilizing system for lightweight cameras. It allows precise shootings and features a fine adjustment to guarantee optimum balance.

Frezzi Energy Systems will unveil a new Mini-DV Stable-Cam Support System, a fully adjustable stabilizer available with integrated broadcast battery brackets. The Frezzi Stable-Cam also supplies power to Mini-DV cameras and Frezzi Micro-Fill lights.

Glidecam will debut its new Smooth Shooter, a cost-effective body-mounted camera stabilization system designed for cameras weighing up to six pounds when used with the Glidecam 2000 Pro, or for cameras weighing from four to 10 pounds when used with the Glidecam 4000 Pro. The Smooth Shooter includes a support vest, support arm, docking bracket, steel arm post, aluminum arm post and six steel weight plates.

The company also will showcase its Glidecam V-35 professional body-mounted stabilization system, designed for cameras up to 20 pounds.



Shotoku TP-80 Pneumatic Pedestal

#### STUDIO PEDESTALS

Shotoku Broadcast Systems will introduce its TP-80 Pneumatic Pedestal, a four-stage air-pedestal that can be operated with almost half the air pressure of existing pneumatic

CAMERA SUPPORT, PAGE 58

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## Cameras

CONTINUED FROM PAGE 52

particularly in Europe. The company will mark NAB2005 with the introduction of two new cost-effective cameras, the LDK 4000 and LDK 400.

The LDK 4000, for small- to medium-sized companies, offers models in 1080i and 720p and features low power consumption and

Thomson's HD Dynamic Pixel Management image sensor technology.

On the SD front, the company will debut its compact LDK 400 ITW 14-bit camera, which completes the range between its 12-bit LDK 300 and 14-bit LDK 500 cameras. The dockable design of the LDK 400 ITW allows it to support a wide range of uses, from affordable studio camera applications over multi-core cables to high-end productions over triax cables

JVC will roll out a range of products to support a new, professional level HD image-capture technology—ProHD. Record decks are capable of recording and playing back in SD or HD, sport four audio channels, time code, true 24p frame rate and dual-mode tape and hard drive recording.

The company will display its first ProHD camcorder, the GY-HD100U, featuring 1/3-inch 3-CCD imaging, and allows customizable settings to be



Thomson Grass Valley LDK400

stored on an SD memory card for recall later or loading into another GY-HD100U. The camcorder can output in uncompressed 720p/60, and it records on standard miniDV cassettes or on DTE hard drive media from technology partner Focus Enhancements.

Hitachi Denshi America will introduce a low-cost digital recording system for its Z-series cameras, which are capable of recording up to six hours of DV25 video on removable Hitachi 2.5-inch hard discs.

The company also will premier its new SK-31B series, a high-performance 1080i or 720p camera for unmanned applications. It is available with 1080i native-scan 2/3-inch 2.2-Megapixel IT CCDs or 720p 1.0-Megapixel IT CCDs, and produces an HD-SDI output directly from camera head.

The new XL2 digital camcorder will be shown in the Canon USA booth. The upgrade from the prior XL1S includes improved 3-CCD imaging, variable frame rate to allow 60i, 30p and 24p, a customizable Cine Look, 16:9/4:3 switchable aspect ratio, a new 20X zoom lens with image stabilization, and skin-detail circuitry. Like its predecessor, the XL2 records on miniDV tape.

ARRI brought a design concept to last year's NAB, but will return with a working model of the Arriflex D-20. It uses a single CMOS sensor the size of a 35mm film frame, yielding a film-camera depth-of-field and allowing the use of standard high-quality film camera lenses.

BandPro Film & Digital will show the Cine SpeedCam, a native, true HD high-speed camera system. The compact system is designed for slow-motion applications. It employs a prismless 1,536x1,024 CMOS imager to deliver true widescreen HD images up to 1,000 fps.

The company also will show its conversion of the Sony HVR-Z1U 3-CCD 1080i HDV camcorder, outfitted cinematography-style with a full range of accessories.

Cablecam International will show its new HD stabilized gimbals for suspension over televised events. The units are available for rent, and were used to cover Super Bowl XXXIX. At its core, the Cablecam system for Super Bowl coverage used the Sony HDC-F950 camera for HD imaging. ■

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# LENSES



with its line of studio box lenses introduced last year, designed specifically for portable-style professional video cameras used in the studio. Named the Digi-Super 22xs, or XJ22x7.3B 1E-D in the Canon designation, the lens brings high optical performance to HDTV or SD in a compact box-style design, exceeding the image quality of other portable HD lens or SDTV box-style studio lens. It uses

Canon's X-Element and Power Optical System. The line may be expanded this year.

The company also will bring back its line of remote controlled lenses, designed for HD and SD productions. The HJ22ex7.6B ITS, HJ17ex7.7B ITS, and wide-angle HJ11ex4.7B ITS are optically based on the Canon HD

by Craig Johnston

Lens makers, more than most other television and video production equipment manufacturers, play their cards close to the vest until the NAB exhibition floor opens each year. Still, from what early reports are available, 2005 should see some major advances in lenses and accessories for both video and electronic cinema production.

Thales Angenieux will display new high definition lenses, including the 70X HD OB/Sports Lens for studio and sports applications, featuring a unique advanced display system.

The company also will showcase its new 26X HD Telephoto Zoom Lens, featuring an extended focal range ideal for news and sports field production applications.

Carl Zeiss will lift the curtain off its DigiWide 3.9 mm T1.9, touted as the widest prime lens available for HD cinematography. The new lens approximates 10 mm focal length in 35mm cine, and offers extremely wide view and image clarity. It is engineered to eliminate geometric distortion and minimize color fringing, and is designed for maintaining natural looking perspectives when working with miniatures for special effects.



Fujinon HA25X11.5BERD HD ENG-style lens

The company will also bring production units of the ZEISS DigiZoom 6-24mm T1.9 lens, developed to enhance the potential of HD-cinematography cameras. The zoom lens focuses to 22 inches from image plane, 11 inches from lens front, and can focus tightly on objects as small as 66-by-17 mm.

Canon will wait until the show to reveal its new products but will return



The launch of the Canon DigiSuper 22xs HD lens represents the creation of the compact studio lens category.

ENG/EPF lenses of the same specifications, with the advanced capabilities of the HDxs system and the Power Optical System with the X-Element. Additionally, the company introduced an auto focus lens for the remote control market, the YH16x7 KTS-AF, which takes advantage of Canon's original auto focus algorithm.

Fujinon unveils a new lightweight HD ENG lens—the HA25x11.5BERD weighs 6.2 pounds and is targeted at nature documentary and gyro-stabilized applications. With its 2x extender, the new lens has a telephoto focal length of 576 mm, reduced focus breathing and minimum f-stop of 2.0.

Three Fujinon lenses will be upgraded to include the company's Precision Focus Assist technology that ensures crisp focus during HD acquisition. Precision Focus Assist samples a selected area in the image and provides both a manual indication of focus as well as an automatic focusing mode. The lenses that will now have the technology are the XA101x8.9BESM, HA22x7.3BRD and HA13x4.5BRD-S28K.

16x9 will unveil a new version of the Zoe zoom control for use with the Sony HDR-FX1 and HVR-Z1U, Canon XL2 and other LANC cameras. Developed for digital cinematography, the Zoe-DVL provides variable stepless zoom speed control with preadjusted

LENSES, PAGE 66

## 62x9.5AIF OB



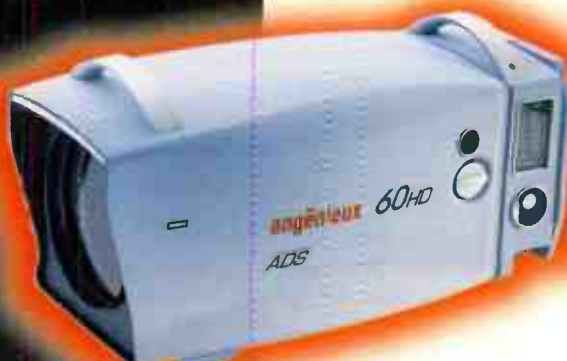
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“Selecting Thales Angenieux’s 62X OB Lens was a no brainer. The lens has great glass and

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clear choice.”

said John Salzwedel, Owner of Token Creek Mobile Television.



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“We have been using Thales Angenieux’s 62X OB for over a year now with outstanding results...and most importantly, our clients are very pleased with the performance of the lenses.”

concluded Mr. Salzwedel.

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# Camera Support

CONTINUED FROM PAGE 54

pedestals, minimizing effects caused by temperature change. The TP-80 also has a newly designed built-in easy cable guard height adjustment mechanism.

Vinten will showcase its new Quattro-S studio pedestal, designed with a small base to use in small spaces. The Quattro pedestal range offers a four-stage telescopic column, allowing minimal height that eliminates the need for raised staging. The triangular column design also offers torsional stiffness, minimizing unwanted rotational movement.

## TRIPODS AND HEADS

From the Ste-Man booth, Cartoni USA will unveil its latest Focus DV Head for cameras weighing from 2.2 to 22 pounds. Focus features an infinite counterbalance and fluid drag system, and comes equipped with a quick-release sliding camera plate, illuminated spirit level and orientable pan bar. The company also will show its E-Sensor, which features the latest technology in encoded support needed for Virtual Reality shooting. The E-Sensor is compatible with most 3D packages for real time camera/scene movement in virtual set and previsualization.

Egripment USA will introduce its MegaHead, an over-sized remote camera head designed to handle the newest generation of large HD cameras and lenses. It features the same precision of movement as the company's well-known HotHead, but is specifically engineered for larger camera packages.

Manfrotto, displaying in the Bogen Imaging booth, will introduce its Magfiber Series and 352 Carbon Fiber Tripods. The new 190MF3 Magfiber represents the top of Manfrotto's lightweight tripod range and features carbon fiber legs with quick-action lever locks in magnesium and resin. It incorporates the 3001PRO series top spider, which offers four leg-angle settings, and converts the center column into a lateral arm.

Microdolly Hollywood will introduce a new Cup Adapter Kit that allows a wide range of pan/tilt heads to be mounted on its Pro Line of jibs, dollies and mounts. The new design will accommodate camera pan/tilt heads with leveling balls of 75 mm, 100 mm and 150 mm, and is constructed of structural-grade aircraft aluminum and military-spec hard-anodized for long wear.

Miller Camera Support will showcase new Sprinter and Solo tripod combinations for its Arrow 30 head.

The Sprinter All-Terrain tripod is built of carbon fiber for SD/HD ENG and extruded alloy for SD/HD production. The two-stage Sprinter features torsional strength and leg clamping stability without any increase in weight, and fast leg clamping from reinforced dual-action Sprint-Loks for rigidity at any height.

The cost-effective alloy SOLO DV (75mm 2-Stage) and SOLO VJ (100mm 3-Stage) DV and ENG tripods will also be paired with the Arrow 30 head.

OConnor Engineering, displaying in parent company Sachtler's booth, will introduce two new fluid heads at NAB, the 1030HD and the 2060HD, which are sinusoidally counterbalanced fluid heads designed to meet the requirements of HDTV applications.

The 1030HD, weighing only 8.2 pounds, can counterbalance cameras weighing up to 39 pounds through a full +/- 90-degree tilt-range. The 2060HD, weighing just 16 pounds, can balance a camera weighing 83 pounds. Both can be configured with or without Cine Style accessories, depending on the camera configuration.

Panasonic will show pan-tilt gear for its new AW-E860 3-CCD convert-

ible camera: the AW-PH400 high-speed pan-tilt head, AW-PH360 pan-tilt head, AW-RP400 pan-tilt controller, AW-CB400 camera control unit, and the AW-RC400 cable compensation unit.

Sachtler will debut five new heads: the Video 15 Plus Speed Balance head, which uses 12 steps of counterbalance to balance any camera from 3.5-39 pounds; the DV-12 Speed Balance, which uses 12 steps of counterbalance to balance cameras weighing 3.5-34 pounds, the DV-8/100 Speed Balance head and DV-8 for 75 mm, which use 10 steps of counterbalance to balance any camera from 3.5-28 pounds, and the DV-6 Speed Balance for 75 mm tripods, which uses eight steps of counterbalance to balance any camera from 3.5 to 20 pounds.

Vinten will unveil a new member to the Vector family pan/tilt heads, the Vector 60. The new head is smaller and features LF drag, platform deadlock, illuminated leveling and pan-and-tilt brakes for ease of use. In addition, the new counterbalance system, introduced recently on Vector 900 and 450, allows up to +/-90 degrees of perfectly counterbalanced camera tilt.

## TELEPROMPTERS

Audio Video Design will introduce its AV15HB 15-inch LCD HighBright teleprompter, which accepts 15-pin RGB in and includes EasyReader Windows Dual-Screen Software that independently mirrors output to the prompter while keeping the operator monitor unmirrored and heads-up.

The company also will demonstrate its EasyReader Dual-Screen Windows Teleprompter software, touted as the only Windows software that mirrors the computer's output to the prompters while keeping the operator monitor

unmirrored and heads up. It is now available in LITE, PRO, NR NewsRoom, and ShowPro versions, one to fit budgets and needs.

Autocue will introduce Collaborative Prompting, available in QNews and Qnet. The new feature will offer ability for multiple prompters, from numerous worldwide locations, to work together in the same running order via a WAN network.

Autoscript will premier its 12-inch TFT high-bright on-camera prompter, featuring a folding hood and field and studio mounting for ENG/EFP cameras.

The company also will showcase its 17-inch TFT high-bright on-camera prompter, with an extra wide-angle hood and 12-inch telescopic rods to mount to studio pan/tilt heads for use with studio/box lenses.

Also new from Autoscript is a 15-inch TFT entry-level professional on-camera prompter.

KLZ Innovations Ltd. will demo its i-Prompt Remote Teleprompting system for loading and controlling the text. i-Prompt can be connected to a network, run as a remote unit, or run standalone on a laptop or PC.

Listec Video will lift the wraps off its Z-Prompter Series for studio and field operation, designed to fill the need for a fully professional LCD prompter to accommodate the new breed of low-profile camcorders. The unit's compact all-in-one design mounts the prompter with camera over the pan head's balance point, eliminating the need for a large balance plate and counterbalance weight, while still providing a range of adjustment.

ProPrompter (Bodelin Technologies) will take the wraps off a new, upgraded ProPrompter Pocket PC version. It is designed to work in landscape mode, and uses a Bluetooth wireless mouse and keyboard.

QTV will roll out its Spider Box software, a software-only version of the now-discontinued hardware spider box. It allows multiple prompt controllers to be connected directly to the

CAMERA SUPPORT, PAGE 60



Panasonic iW-PH360 pan-tilt head for the AW-E860 3-CCD camera.

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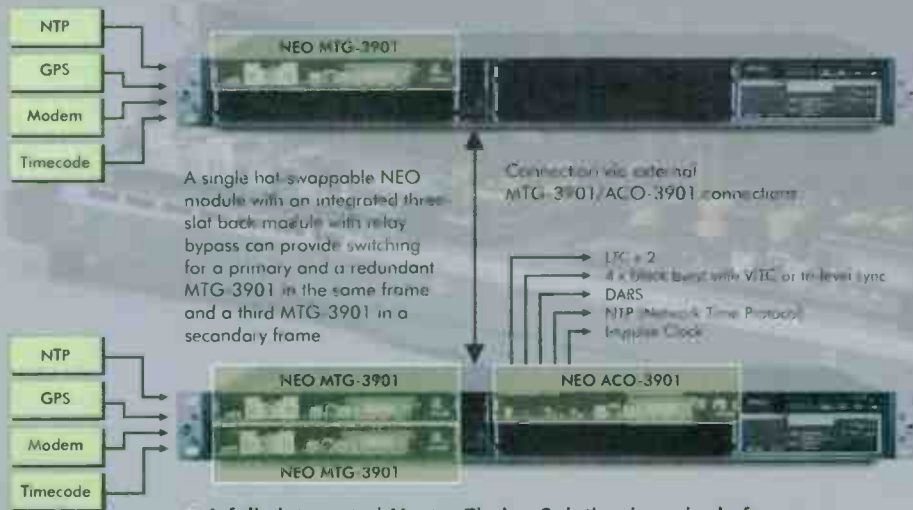
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by Jay Ankeney

There will be major edit system innovations on display at NAB2005, with several companies taking on long GOP HDV editing and others migrating to Linux. Some major players, such as **Apple** and **Avid**, did not release their news by press time, but many others announced plenty of new editing products.

**Adobe Systems** will show off its new Adobe Premiere Pro 1.5 HDV plug-in for facilitating capture, real-time editing and broadcast-quality output of the long GOP form of HD recording over a FireWire connector without additional hardware.

We'll see the shipping version of the Axial/MX hybrid online finishing system at the **Accom** booth this year, available in a more compact chassis than the previewed version last year. The Axial/MX combines all the editing capabilities from the Axial 3000 into an SD/HD system capable of "visual editing" in 525/625 and all of the popular HD formats, including 24p.

**Boxx Technologies** is bringing its fastest workstations yet to NAB2005. The Boxx 7300 series of workstations feature dual AMD Opteron processors and NVIDIA nforce processors that support the upcoming release of Windows XP x64, which processes 32- and 64-bit applications simultaneously. Boxx will also debut the GoBoxx 2200 mobile workstation, based on the new Quadro FX Go 1400 PCI-Express Open GL graphics processor.

**Canopus Corp.** will unveil Canopus Workflow, a new shared storage system combining mixed editing and transcoding technologies with LAN-based video distribution that doesn't use proprietary technologies. We'll also see Edius Pro Version 3 software for the Edius HD, SD and HDV edit systems demonstrating how the company's variable bitrate HQ codec can work with unlimited video, audio and effects layers. Edius systems will also be demonstrated supporting the MXF-compliant file format recorded on the Panasonic P2 flash memory.

### UPGRADES & REVIVALS

The D3-Edit 5000 from **Dayang International** will be on display, sporting a range of formats—DVCPRO 25, DVCAM, MPEG-2, MPEG-4, uncompressed YUV, Microsoft Windows Media and Real Media files. The D3-Edit 5000 can handle four-input multicamera editing, infinite layering, real-time compositing, and has more than 1,000 preset real-time effects.

**Discreet** will exhibit its digital content creation systems for 2K and 4K digital intermediates emphasizing

the company's datacentric workflow philosophy. There will also be major software upgrades for both the smoke and fire nonlinear editors. The entire Discreet booth will be a single interconnected unit based on a Gigabit Ethernet IT backbone combining the company's stone shared storage area network system with desktop computers and high-performance workstations. You can also get ready to use at least some Discreet HD edit systems with Linux. An extensive training curriculum will include fxguide. Master Classes for existing Discreet smoke and flame systems will be held April 17 at Caesar's Palace.

A complete digital intermediate workflow based on the Clipster real-time editing system and the DVS-SAN central storage server will be on display from **DVS Digital Video Systems**, showing how multiple workstations can work together on high-resolution HD and film 2K data in real time.

The **Editware** Fastrack SE controller will be seen with a new software update that includes an interface to the Accom A6000 video server enabling linear insert video editing, and a new interface to the Thomson Grass Valley KayakDD video switcher for complete control of all keyers, timelines and EMEM storing/recall along with fast selection of wipe patterns from icons.

Editware also will demonstrate its new Fastrack TT interface for Pime Image's Time Tailor system that reduces a program's run time without content loss and artifacts usually introduced by varying the speed of the VTR. We'll also be introduced to a new PEGS implementation that evolved from legacy Super Edit for video switcher EMEMs, dissolve/wipe/key commands and enhanced GPI control.

NAB2005 will feature the long-awaited return of Lightworks to the big show, now that it has been acquired by **Gee Broadcast**. Used on an impressive array of major feature films, the new Lightworks Touch Version 2.0 offers enhanced OMF file interchange, a wider array of video effects and 5-band parametric EQ audio effects/mixing capabilities. A new product will be the Gee Broadcast Geevs XT range of multifunction video servers for standalone, integrated and networked applications in broadcast and film. Geevs XT servers can be implemented for multi-format capture and play-out applications on single and multichannel systems.

### EDITING HDV

A new software release from **Leitch Technology** for the VelocityHD HD/SD nonlinear editing system will empower editing HDV directly without additional third-

party plug-ins and lets users combine it with other HD formats on the same timeline. In addition to two dynamic graphics streams, true real-time HD transitions and effects along with optional 3D effects, the new version of VelocityHD will also offer extensive support for Panasonic VariCam variable-speed recordings.

**MacroSystem Digital Video** will be showing off the QuadCam enhancement to the Casablanca line of digital video editors featuring Smart Sync technology, which automatically syncs up the footage of up to four DV cameras by relying on each camera's internal time clock. In addition, MacroSystem's just-released PhotoStudio will allow users to



Matrox Axio family of real-time HD and SD editing gear.

import digital stills and adjust image quality, make a slideshow, and even employ Ken Burns-style pans and zooms within a video production.

The big announcement from the **Matrox Video Products Group** will be the new Axio family of real-time HD and SD editing platforms,



Leitch VelocityHD now edits HDV.

intended to replace the DigiSuite systems previously used for SD post. Axio features HD and SD finishing without rendering in compressed and uncompressed formats under the GUI of Adobe Premiere Pro. The new Axio platform incorporates Matrox Flex 3D and Power of X technologies to leverage scalable CPU power along with dedicated 3D graphics hardware to accelerate both SD and HD editing.

Demonstrating evidence of a reinvigorated development commitment now that they are a subsidiary of **Optibase Inc.**, the spotlight at the Media 100 booth will be Media 100 HD.



The Mac-based system features a new software update yet to be named. Mixing uncompressed 10-bit SD and HD media in the same timeline along with 4:3 and 16:9 aspect ratios, Media 100 HD offers up to 99 video tracks and lets users view HD and SD outputs simultaneously, regardless of source material. Their Windows-based NLE, the 844/X, will be seen with Version 3.0 on the top-of-

the-line Hewlett-Packard xw8200 workstation with improved interoperability with other Media 100 systems including metadata-enhanced import of XML format bins.

New Version 6 software for the whole Liquid line of NLEs from **Pinnacle Systems** adds multistream native HD editing, multicam cutting capabilities and a whole new user interface. With Version 6, the all-format Liquid blue turnkey system also gets multispeed SDTI capture, even in the background, and has full DVCPRO50 support.

**Thomson Grass Valley** will premier its new Grass Valley Aurora suite for digital news, sports, and feature production, integrating ingest, playlist management and nonlinear editing. Although its name is still to be determined, Aurora's editing module is an outgrowth of Thomson NewsEdit NLE and the total suite scales to support everything from browse-quality files to SD and HD video.

**Quantel** will introduce "Eiger," its latest toolset release for eQ and iQ. Eiger (Effects, Imaging, Grading and Editing Release) features new process tree ergonomics, motion-sensitive blur, layer blend modes and a new mesh-based layer. Eiger also introduces the new UniKey multifunction, multi-colorspace precision keying toolset. Also getting its world launch at NAB2005 is Newsbox, a complete "news-to-go" newsroom system in a box, and we'll see the company's new graphics play-out server, Picturebox sQ, designed to pick up where the legendary Picturebox stillstore left off. ■



# Camera Support

CONTINUED FROM PAGE 58

prompter PC, using standard serial ports rather than having to use a separate piece of hardware.

Telescript will showcase enhancements to its line of Fold and Go teleprompters with the addition of 8-inch, 13-inch and 15-inch Value, and 12-inch and 15-inch broadcast/studio-

quality configurations. They are designed to move from the studio to the field and back again with ease, and feature precision-cut aluminum parts, solid construction, glass beam-splitters, high-quality LCD displays and the ability to mount to any ENG or DV camera.

## INTERCOMS

In the communication business, communication is key, and nowhere

more so than between TV production crewmembers executing complicated productions with split-second precision. Intercom makers answer that communication challenge with innovations ranging from freeing headset wearers from wires to devising ever more configurable intercom systems.

Clear-Com will introduce its new Digital Matrix E32, touted as a cost-efficient digital matrix intercom system including easy-to-use ECS software to

configure stations and the entire matrix system. The unit is a one-RU frame with 32 CAT5 station/audio ports and four extra ports for audio in and out.

The company also will debut a new Digital Matrix Eclipse 208, a compact 208 CAT5 port digital matrix intercom system that also includes the ECS matrix configuration software. The unit is a six-RU frame with redundant processors and power supplies with a total of 208 CAT5 station/audio ports. The frames can be intelligently linked over CAT5 or fiber for a large networked intercom system.

And Clear-Com will showcase new 600-series party-line beltpacks, with a host of features including TW compatibility, headset call tone, compatibility with lightweight electret microphones and backward and RTS-compatible.

Delec Audio und Videotechnik will take the wraps off a new voice-over-IP subscriber unit for Oratis Intercom. The unit allows a user to connect the Oratis digital intercom via a computer network or standard Internet link with the same functionality as with a traditionally connected unit. In combination with the Oratis PC subscriber unit and Oratis PC talk software, a standard PC can be used to connect to Oratis worldwide. A new AES board for Oratis allows for transparent forwarding of intercom audio and control data via a standard audio network, allowing existing audio networks to be used as the infrastructure for Oratis.

JK Audio will aid call-in talk shows with its new PBXport rackmount digital hybrid, capable of providing talk show quality caller audio from a PBX phone system. PBXport allows the sending of mic- or line-level signals into a PBX telephone system while maintaining excellent separation between the talent's voice and the caller. It also connects the PBX telephone set to the studio PA, allowing the audience to listen to live callers without echo or feedback.

KLZ Innovations will premier its PhoneBOX, a broadcast call handling system designed to manage telephone lines from listener call-ins, internal communications, and talk-show styled conference calls. Touch screen or mouse driven, this system conforms to any sized venue and can be run as a stand-alone or handle hundreds of lines.

Modulation Sciences will take on the problem of ENG live-shot IFB delay with its new PRO-3 Delay Corrected PRO Channel Receiver. It provides four unique solutions to correct delay caused by digital transmission, and can be configured to deliver up to six independent mix/minus feeds to the field.

NAB marks the debut of Riedel Communications' new C3 Digital Belt-pack/Headset-Station for its

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**broad'cast'** (brôd-kast') *v* -casting  
1. a complex and expensive process of creating video programming; 2. requiring multiple pieces of equipment, large spaces, and crowds of operators; 3. traditionally reserved for large organizations with lots of money to burn. *-n.* 1. a program that is over budget and took too long to create; 2. something the "little guy" (and some big guys) can not accomplish.

*syn:* complicated, rigid, lavish, time consuming



**globe'cast'** (glob-kast') *v* -casting

1. a smart and economical way to create professional video content; 2. the strongest value proposition in the market *-n.* **-caster** 1. a multifunctional digital video creation device that integrates a automated Switcher, real time Editor, CG, DVE, DDR, Still Store, Chroma Keyer, animator/paint box, and deck control in one unit; 2. multi-standards modular tool that grows with your needs and market demands.

*syn:* easy, versatile, inexpensive, fast

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World Radio History





by Susan Ashworth

It does little good to ingest high-quality or HD video and audio material, and then lose it amidst the thousands of videotapes in a facility's backroom. With that in mind, manufacturers will come to NAB with the latest tools in asset management technology, as well as dozens of other high-tech videotape media storage products.

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## MANAGING MEDIA

Anystream will showcase the Agility VOD, an enterprise-level video-on-demand production tool designed to help broadcasters create and deliver content to VOD outlets.

Artesia Technologies comes to NAB to show its Artesia for DAM system.

Ascent Media Group brings Vodera, a software- and Web-based tool for managing VOD content. Also, the company will demo Ascent Digital Media Solutions—a series of managed services for long-format studio content. The company will also discuss HUB, another managed service that gives users control over assets via the 'Net.

Asset management options from Autocue include QLog, which allows users to search archives for spoken words or phrases without prior transcription. Autocue will also show enhanced version called Qlog+.

Axel Technology will highlight Digi-Ware, its software tool for TV/radio program management and playlist creation.

The Barracuda-I from BayStor combines its BK-2500 content management technology with a high-speed optical DVD archiving robotic mechanism for standalone media asset archiving.

Managing traffic is the goal of BroadView Software, which will showcase its television traffic and sales software that includes program scheduling and rights management capabilities.

Asset management technologies by Blue Order include multichannel scheduling, a Web-based tool that schedules and monitors jobs from a connected workstation. The Media Archive Integration Package combines the Avid news production tools with the Blue Order MAM platform.

BroadView Software will showcase enhancements to BroadView Traffic & Programming system, including advanced secondary event management, library management and a sales data warehouse.

Building4Media will show the InfoChannel, with software for remote camera control and content management software for logging and handling video streams.

This year, Cinegy is bringing Media Suite 4.0, a product line that includes the Media Desktop production tool, which combines the search-and-browse capabilities of the Media Archive asset management system with a customizable logger and NLE.

ClearStory Systems will demo the Radiant Enterprise Media Server for digital asset management and other video-based initiatives. The system enables organizations to manage, create and deliver video content.

Controlware will unveil the Umbrella Network Management tool for DVD/SDI broadcasting networks, which includes scheduling, machine

and device control, traffic and billing, resource management and bandwidth management.

Crispin will debut its AssetBase with LoRez, a Web-enabled asset management solution that combines media management capabilities with a relational database. LoRez generates low-resolution proxy clips and "Slates" from video assets, including catch servers.



Omnibus Systems Opus suite for content management

Crispin also will unveil ArchiveManager with PDD, an advanced broadcast archive management and storage system, available as a standalone unit with dual internal Professional Disk for Data drives, or may be combined with external near-line RAIDs, robotic libraries or network attached storage systems.

Dalet Digital Media Systems will intro the new DaletPlus News Suite, a set of enterprise-wide software modules that includes asset management. Also on display: the DaletPlus Media Library, which allows broadcasters to manage digital media assets by combining video server management with file migration management.

## NEW TO THE SHOW

VertigoXmedia will debut the Producer Xmedia Suite Version 3.5, a suite of tools for creating, managing and airing real-time broadcast graphics. New features include the Xbuilder Plug-in for Avid NLEs that lets users browse a library of templates; and a new graphics work order management feature.

At its first NAB, DAX Solutions will unveil new features to Rough Cut Manager that allows viewing of rough cuts, trailers, promos and screeners. New features include watermark insertion, reel building capability and a metadata profile manager.

A new order management solution from DG Systems was built with advertisers in mind. The DGConnect operates via a Web portal and allows users to upload spots, choose or create new destination paths, attach traffic instructions, distribute media

electronically and confirm delivery at the station level through the DG Spot Box server.

Digital Transaction Group will showcase its content and delivery management software based on the eXtensible Device Server. Features include resource management for monitor drivers and devices, simplified rackmount installation, and an open, standards-based, transactional SQL database for data exchange and integration with other systems and databases.

The Opus suite of content management products will be unveiled by OmniBus. Based on the company's G3 architecture, Opus offers a modular design that allows broadcasters to integrate their systems under a single operational interface.

In addition to its automation systems, Florical will showcase TrafficAssist, which provides production details for on-air operations; Supervisory Monitor, a workstation that provides horizontal timeline status of multiple channels; and NewsGrabber, which allows for automatic assignment of equipment as well as media.



Screenshot of the VertigoXmedia Xstudio user interface.

This year, Front Porch Digital comes to NAB with DIVArchive 5.8, its digital archive management software. The company will also show the latest enhancements to the DIVArchive solution, which allows broadcasters to view and browse all their archived content assets.

Focus Enhancements will demonstrate the ProxSys media server, which manages low- and high-resolution video, audio, images and data from a Web browser interface.

Harris will be on hand with new automation tools—including those from the newly combined Harris and Encoda portfolios—including asset management, playout automation, traffic/scheduling/billing, advertising and integrated content management and distribution.



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## **HL-60W**

Some broadcasters really know a good thing when they see it. Take Ikegami's HL-60 for example. This remarkable fully digital camera incorporates newly developed 0.18 micron digital signal processing, containing 3.3 million gates and equal to 12 million transistors, all in a single IC. Providing compact size, low power consumption and attractive price, the HL-60W delivers Ikegami-quality in a switchable camera (16:9/4:3) that makes users stand and cheer.

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# Asset Management

CONTINUED FROM PAGE 62

Invidex will share the latest information about VideoLinx, which includes VideoLinx Inventory that allows users to manage operational databases; and VideoLinx Scheduling, which offers resource and asset scheduling and planning.

IPV will highlight SVStudio 2.0, which allows users to monitor and browse both legacy MPEG and new WM9 material.

Just Edit will showcase the vsnarchive digital asset management software that now features improved material browsing and retrieving procedures.

New asset management software by Maestrovision, the Maitre D Asset

Manager, is an integrated media access solution designed for community television stations. The Maitre D Asset Manager uses a search engine that permits the user to locate, retrieve, organize, search and store material.

New from mediaproxy this year is the Enigma 5.1, a complete rebuild of the logging platform that incorporates several new features and enhancements, including improved reliability

and fault-tolerance, as well as more intuitive setup and management.

At the Metaglobe booth, Diffuser will be on display, a reference and management tool for metadata dictionaries that enables the comparison and management of public and private dictionaries. Other media management solutions on display will include AAFixer and MXFixer.

mSoft will showcase its MusicCue 3.6 system, with its new automatic usage tracking feature that shows exactly how a piece of music was previously used.

With its eye on the screening market, Nextamp will showcase its NexMaster HD system, which offers invisible watermark embedding with the HD-SDI input/output, allowing users to trace HD master tapes; and the NexInvestigator, which helps facilitate the investigation of pirate samples by retrieving watermark data from video.

In addition to its newsroom computer system known as Octopus5, Octopus Newsroom will showcase Octopus Track, a resource tracking system for TV and radio that manages staff and resources. Another solution on tap for 2005: Octopus Lars, a Web content management system that integrates with the Octopus5 newsroom system.

For the sales industry, Optimal Solutions will showcase AdConnections, a browser-based sales software tool.

Pathfire will showcase Pathfire Direct, which allows broadcasters to monitor, gather and disseminate live and store-and-forward content, then move content over any network connection. Likewise, DMG Server Connect for News enables the transfer of digital content from a DMG server to editing systems and play-to-air servers.

Pro-Bel plans to show Procion, a next-generation software control platform that offers new features for the management of broadcast systems and media workflow. Procion now supports router control, modular product monitoring and control, media management, automation and master control. Also on display is the new Procion Web client that provides access to all core system functionality through a standard Web browser.

Media management tools from Proximity will include the newest version of artbox, a video asset management system for TV and post departments. New features include a newly designed GUI. The newest version of Xenotrack will also debut, which allows users to track order creation, queue management as well as review and approve graphics.

Things are getting scheduled at the ScheduALL Software booth where the company is showing ScheduALL

ASSET MANAGEMENT, PAGE 90



## ZETA 100

### A DIGITAL CONSOLE FOR LOCAL TV AND RADIO PRODUCTION

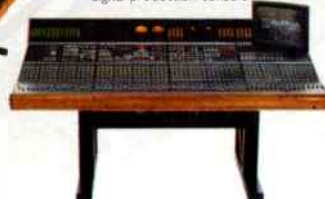
As a broadcaster you can't afford to compromise. With the Zeta 100, you don't have to. Based on Calrec's field-proven Alpha architecture, the Zeta 100 provides exactly the same broadcast-specific features as our larger Sigma and Alpha 100 consoles. Over 30 years of broadcast experience in a console designed for local TV and radio production. No compromise, no problem. Just sound broadcast sense.

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- 8 auxes, 16 Multitrack/IFB outputs
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- Powerful relay system
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The Sigma 100 medium format digital production console



The Alpha 100 large format digital production console



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The **msi-4400** 8vsb ANALYZER—a cost-effective tool for receiving and evaluating 8vsb signals without breaking your budget.

## Hardware

A single rack unit controller, the **msi-4400** Analyzer receives and processes the 8vsb signal using a Windows-based PC.

Front panel indicators show the status of alarms, and confirm RF level and signal strength. External connections for alarms, and transport stream in LVDS, SMPTE 310M and DVB-ASI formats are all accessible from the rear panel.

## Software

The **msi-4400** Analyzer's software runs on a Windows-based computer. The software provides a complete display that shows the critical 8vsb parameters in a clear, easy-to-understand format:

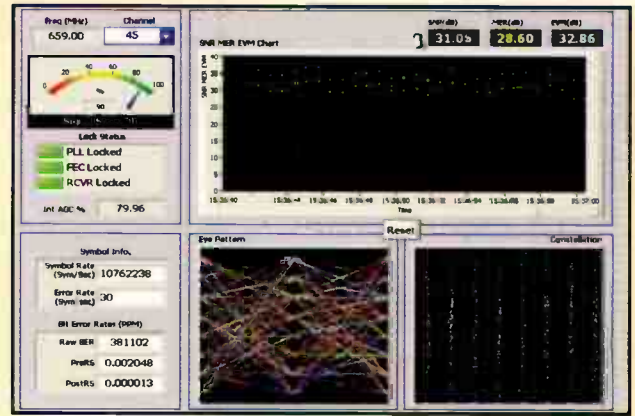
- ◆ Eye Pattern Diagram
- ◆ Constellation Display
- ◆ Signal Strength Metering
- ◆ Signal to Noise/MER/EVM Readout and Strip Chart
- ◆ Tap Weight Equalizer Graphs
- ◆ Data Logging
- ◆ Bit Error Rates
- ◆ User-configurable alarms with E-mail notification

You can configure the tap weight scale display, data logging, SNR/MER/EVM strip charting and full remote control to meet your specific requirements.

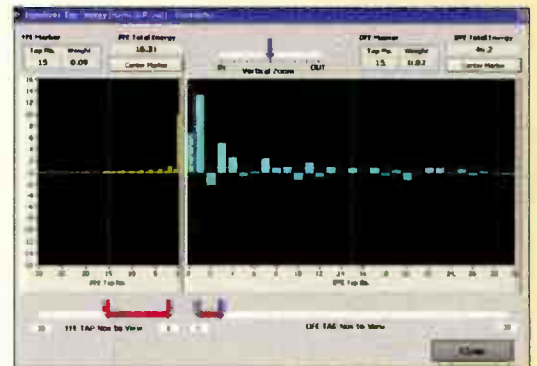
All reports and controls are available locally on a rack-mount PC or a laptop computer, or from a remote location through the Internet.

The **msi-4400** Analyzer is covered by MSI's three-year warranty.

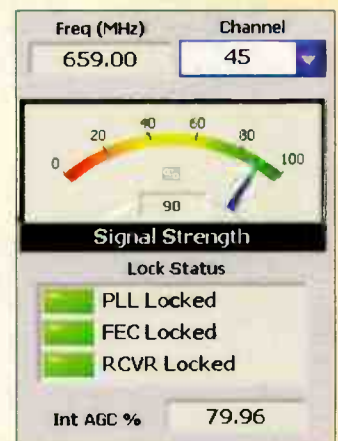
**Introductory price: \$9860**



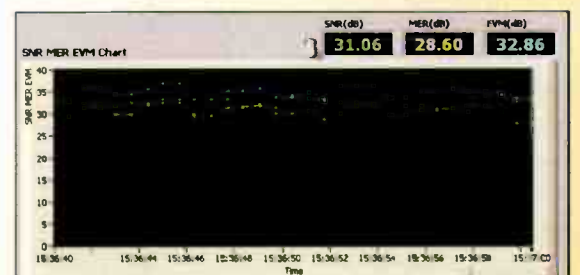
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# Lenses

CONTINUED FROM PAGE 57

maximum speed, focus, record start/stop, and camera on/off.

The company also will showcase its 0.7X wide-angle zoom-through converter for Sony HDR-FX1 and HVR-Z1U HDV camcorders.

Century Optics will add two products for the Panasonic AG-DVX100 and AG-DVX100A camcorders. The Century LCD Hood fits most camcorders that have a 3.5-inch diagonal LCD screen, and is a durable matte black hood that slides easily over the screen. The LCD Widescreen Magnifier provides optically corrected viewing when shooting with a 16:9 adapter, compensating for the compression that occurs when a 16:9 image is squeezed onto the 4:3 LCD screen.

The company also will showcase its professional zoom-through add-on lens for new higher resolution, wider angle HDV camcorder lenses. Also new—the Century Compact and Wide Angle DV Matte Box MK II Systems for DV camcorders to IF Pro lenses. It is compatible with Century lenses, and features two stages (one fully rotatable, one fixed), with two 4-by-4 filterholders.

Chrosziel, displayed by 16x9, will present the Chrosziel 4-by-4/4-by-

5.650 Mattebox systems for the new Sony HDR-FX1 and HVR-Z1U camcorders. It features a housing covering 16:9/4:3, French Flag, mask 16:9 (for built-in lens), filterstage for two filterholders (4-by-4 rotating and 4-by-4/4-by-5.650 fixed). Also available are



Thales Angenieux 70X HD OB/Sports lens.

optional side wings and bracket for lightweight support rods.

The company also will show its 4-by-4 DV Sunshade/Mattebox systems for Panasonic DVX-100A, Canon XL1/2, Sony PD150/170, and similar camcorders. Its features include housing covering 16:9 and 4:3, one step-down ring, a filterstage for one rotating and one fixed 4-by-4 filterholder, French Flag, optional side wings and a bracket for lightweight support rods.

Formatt, makers of glass lens filters and displaying in the Bogen Imaging booth, will introduce new photographic filters specifically designed for high-definition videography.

Innovision Optics will lift the wraps off a new option for its HD Probe lens, a 45-degree angle adapter. Innovision's probe lenses allow the lens to be extended, periscope-style, high or low, or around corners to offer a view from a location where the camera itself could not be easily placed. The new 45-degree angle adapter joins the straight and 90-degree adapters already in the line.

Microdolly Hollywood will premier its Universal Focus Motor kit, designed to remotely adjust focus on a wide variety of zoom lenses. It mounts on most lenses regardless of the manufacturer or the barrel size, and features a miniaturized motor and gear arrangement to allow the kit to be mounted even if the lens has a times-two lens multiplier attached. The motor is shielded for both weather and RF interference, and the system is self-powered, with the focus motor and cables, a weatherized battery case and a special ergonomic remote control handle included.

Petroff, displaying in the Ste-Man booth, will unveil a new 4-by-4 matte box designed specifically for the new Sony HDV camcorder. The company's matte boxes are modular and come in a variety of sizes.

ProSource/BMI will introduce the Vocas DV MK II matte box system for all DV cameras, including the new Sony HVR/HDR HDV cameras and the

Canon XL-2. The company will also showcase the Vocas DV MK II wide-angle matte box for use with rail adapter when using wide-angle attachments on any DV camera.

Also in the company's booth will be the DV Follow Focus system for use with DV MK II Matte Boxes with 15mm rail supports.

P+S Technik will introduce its Cmotion lens control system, which combines lens control, camera control and motion control in one modular remote system. It features a clearly arranged user-interface, and is a modular, expandable cost-effective basic system enabling integration of motor, hand units and other tools from other manufacturers.

Also new from the company will be the New Kit on the Block, a connecting kit for the new Sony HDR-FX1 camera. The Mini35 Image Converter allows the use of a wide range of 35mm film lenses or 35mm still photography lenses.

Schneider Optics will unveil its new Schneider ND Dual Grad Filter, designed to control exposure and/or depth of field for two different areas of frame. The filters provide two graduated ND attenuator sections, and are effective at diminishing distracting backgrounds and foregrounds. The filters are available in a 6.6-by-6.6-inch size. ■

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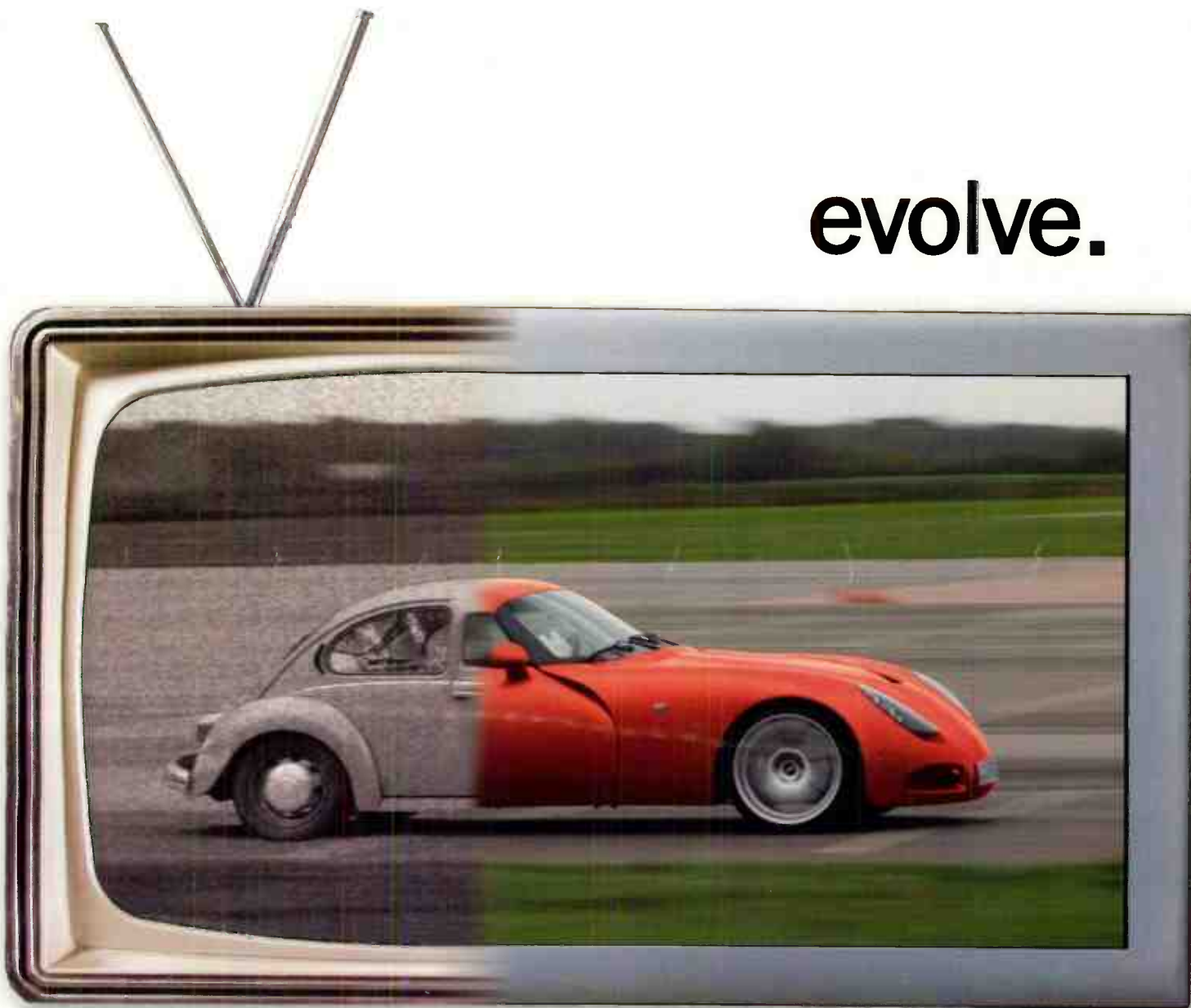
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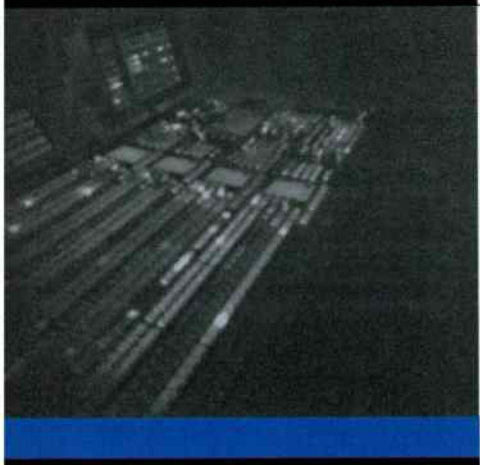
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by Bob Kovacs

Switchers cover a lot of ground in television, from selecting signals within a facility to adding effects to live broadcasts. In addition, master control switchers punch the final signal to air.

#### PRODUCTION SWITCHERS

Brick House Video will debut the VTB-2D eight-input, SDI video switcher/mixer with 10-bit internal processing.

Is it possible to stuff more capability into a switcher than Broadcast Pix has done? The company's digital Studio

2000 has 22 inputs and a small production switcher interface, but the unit also contains a CG, DDR, stillstore, logo generator and three DVEs. New this year is PixMaster, an integrated pre-production environment that simplifies the creation of multilayer live video.

Echolab will unveil Nova Identity4, an entire digital switcher on a single flatpack gate array (FPGA), making all functions customizable. The Nova 1700, a 16-input, 1.5-M/E SDI switcher with four keyers, four chromakeyers and two DVEs will be displayed.

Eyeheight will roll out irisHDi, a compact switcher with eight HD-SDI inputs, program and preset control, two auxiliary bus outputs, and manual or automatic transitions.

Focus Enhancements will debut its new MX-4 DV digital video mixer with 12 inputs, four-layer video capability and a built-in graphics store.

The Hanabi HVS-3300HS switcher from For-A will be unveiled. This 16-input, two-M/E multi-bitrate switcher supports formats including 1080i, 24p, 23.98sF and 720p.

Grass Valley will display its full line of production switchers and debut a two-M/E version of its Kayak HD

switcher that includes chromakey, RGB color correction and four DVEs per M/E, as well as networking capability and machine control. Also new is the XtenDD HD that fits a two-M/E switcher into a 7 RU mainframe.

Ikegami will show the HSS-3000, an HD/SD switcher that can have up to 96 inputs and four-M/E busses, each with a DVE and four keyers. A smaller version, the HSS-300, will also be displayed.

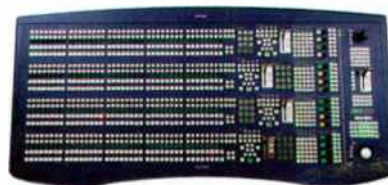
Now part of Leitch Technology, Videotek will show its Digital Prodigy, a 16-input SDI production switcher for small facilities. The Digital Prodigy has convenient input option boards for A/D conversion of analog sources.

Although we like to think television is all about pictures, audio plays a bigger role than we often realize. Panasonic came to the same conclusion when it introduced its AG-MX70 eight-input switcher, which also includes an audio mixer. At NAB2005, the company will demonstrate this two-M/E unit with an internal DVE, 4:2:2:4 digital component processing and 16:9/4:3 aspect ratio capability.

Ross Video demonstrated prototypes of its Synergy MD/X switcher last year's NAB. The MD/X is now shipping and the HD/SD switcher has been upgraded with an option to permit automatic selection of cross converters, making for seamless operation with multiformat HD/SD video.

The company will also introduce improvements to its Synergy SD line, including more capability when used with the Ross OverDrive production control system.

New from Snell & Wilcox is the Kahuna, a large production switcher



Snell & Wilcox Kahuna SD/HD switcher

that simultaneously handles SD and HD signals. Intended for big live-switching projects, the Kahuna requires no external conversion to work with SD and HD signals and it can be used for either—or both—without rebooting. The unit has options for four two-channel DVEs and eight channels of 3D DVE, and packs all the electronics into an 11 RU frame.

The big switcher announcement from Sony Broadcast will be the DVS-9000, an SD switcher/DVE system that integrates with the company's large MVS-8000, sharing the same control panels and systems. The DVS-9000 can have up to four M/E busses, 17 inputs and 24 outputs.

#### MASTER CONTROL

Offering a scalable approach to master control switching at NAB2005 will

be the Eyeheight Payout. Starting with a simple A/B switch with audio, the company will demonstrate how payout can be built up to multiple channels of switching with digital effects, keyers and logo inserters.

A new master control system from Grass Valley will be shown. The Maestro fits into one slot of the company's Concerto Series routers, placing routing and master control in a single frame that supports SD, HD, AES, embedded audio and Dolby-E.

The Opus line of SD and HD master control switchers will be spotlighted at the Leitch Technology booth. Opus is a 16-input switcher with optional DVE capability and an architecture that supports migration from SD (270 Mbps) to HD (1.485 Gbps) within the same frame.

Miranda Technologies will introduce a dual-DVE and multigroup audio mixer for its Imagestore HDTV master control switcher and channel-branding processor. The dual DVE option permits dual picture-in-picture effects and the audio section provides 16-channel audio mixing.



Ikegami HSS-3000

The nVision NV5128-MC combination router/master control switcher, which accepts up to 128 video and audio digital or analog inputs, supports up to four channels and provides the typical features of a master control switcher.

The big news for PESA Switching Systems was the company's recent acquisition by QuStream; the PESA name will continue for the company's switching products. At NAB2005, PESA will spotlight its MCLite master control switch that can control up to eight channels from a single control panel or from station automation.

Pro-Bel will display its modular approach to master control, starting with its TX500 mixer/keyer unit for basic transitions and logo insertion under GPI/automation control.

Quartz will launch the QMC-2, a new high-end master control product that can be switched between several HD and SD formats. The QMC-2 features 16 channels of audio with internal Dolby E decoding, two layers of internal logo storage/keying with animation capabilities and three external key layers.

Utah Scientific will show master control products, including the HD/SD-2020. Compatible with previous mod-

ROUTERS, PAGE 70



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## Routers

CONTINUED FROM PAGE 68

els, the HD/SD-2020 is a digital upgrade path for Utah MC-500 analog switchers.

### ROUTING SWITCHERS

Adrienne Electronics will present its AEC line of small analog A/V routers.

The Avenue line of network-controlled products from Ensemble

Designs includes the 5440 digital video router, which fits an 8x8 switch on a card in an Avenue frame.

Small- to mid-sized routers will be shown at the For-A both, with the largest router being the company's VSF-128128 128x128 analog router.

Grass Valley will feature the Venus switcher, which handles all signal types up to 1.485 Gbps, including SD and HD digital video, analog video, AES and analog audio as well as data.

Small digital routers will be fea-



Network Electronics VikinX router system with live video preview.

tured at the Hotronic booth, including the company's AS800 digital 8x8 system that will switch signals up to 540 Mbps.

Ikegami will show its HSM series of small- to mid-sized routers, which

can handle everything from analog SD to digital HD.

Laird Telemedia will show how the ER4DX2 digital edit router can simplify nonlinear editing with FireWire, SDI and AES/EBU signals.

Topping the bill at Leitch Technology will be its next-generation CCS control panel that can communicate in real time with the company's routers.

Logitek will display its Audio Engine digital audio router system with its new Mosaic digital control surface.

The VikinX router from Network Electronics has been upgraded to include the modular CP-MDP controller for previewing live video. Two new models, the 128x128 AES and the 64x64 analog audio router have also been added to the VikinX range.

nVision will debut the NV7512 expandable 512x512 digital audio router and the NV5256 expandable machine control router.

New from PESA will be the Premiere line of small analog switchers in matrix sizes of up to 16x16.

The news from Pro-Bel will be Sirius Gold, a format-independent router that features matrices up to 512x512 and the ability to mix-and-match different signals within the same frame. Sirius incorporates built-in analog and digital conversion modules.

Quartz will display the Topaz series of small, high-performance routers, including models for SDI as well as analog video and audio.

Sierra Video Systems is launching Sierra NLE, a compact multifunction routing switcher for nonlinear editing facilities that require flexible digital and analog signal routing with intuitive control features.

The Dagger series of routers will be unveiled in the Sigma Electronics booth. With HD and SD in matrices up to 16x16, Dagger routers allow multiple levels of audio and video to be combined in the same frame. Sigma has also redesigned its DVS-1616 switcher to include auto-equalization circuitry to compensate for up to 1,000 feet of Belden 8281 cable.

Sony will show the HDS-X5800, a 22 RU multiple bit-rate switcher that supports all digital formats.

Utah-Scientific will shine a spotlight on its Utah-400 router that can expand from 64x64 to 1,152x1,152. The Utah-400 is based on new architecture that reduces the complexity of large systems, placing them in a smaller package that draws less power. ■

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Ward-Beck will also present the rack-mounted AVM4 will audio/video monitor with an integrated speaker system. This unit accepts SD with embedded audio, analog video, up to four sources, digital audio and analog audio.

The VMS33 and VMS44 compact three-screen and four-screen video monitors with associated LED audio metering will also be on display.

Weighing less than one pound, the Nebtek five-inch 4:3 LCD monitor accepts NTSC/PAL signals. The 15- and 20-inch Nebtek Sharp LCD monitor brackets will also debut.

Ontario-based Image Video will showcase a rack- or wall-mount 17-inch LCD panel with a built-in quad-split processor that accepts SDI and analog video outputs with embedded audio metering and under-monitor display (UMD) tally capability.

The 8.4-inch monitor by ERG Ventures is designed for the Sony HVR-Z1U and HDR-FX1 HDV camcorders. The HDM-EV85 LCD monitor weighs 3.7 pounds.

DataCheck will demo its HD/SDI LCD displays with dual-link input (4:4:4), DVI input and less than 16 ms response time. The monitor accepts native 1080i input.

DataCheck also will introduce its new dual 8.4-inch LCD display that works as a form-fit-function replacement for the Sony PVM 8041Q monitor with modular plug-in for video and audio formats.

Boland Communications will present a variety of SD and HD analog monitors in analog and SDI, from its 8.4- to 37-inch models. These monitors feature standard and HiBright, wide angles and display all aspect ratios.

Ikegami will introduce its series of HD LCD monitors. The broadcast equipment manufacturer will also return with its HLM series of monitors.

Sony is introducing a new line of Luma professional LCD monitors. A key new feature is the addition of "color matching" technology, which can help duplicate chromaticity, color space conversion and white balance, among various sizes of LCD panels.

#### MULTIFORMAT, VERSATILE

Panasonic will debut a 32-inch LCD panel. The TH-32LHD7UY is a 1,366 x 768-pixel WXGA-resolution 16:9 LCD screen displaying 16.77 million colors. The panel offers a 170-degree horizontal and vertical viewing angle.

Panasonic is also unveiling a broadcast-quality 16:9 HD/SD LCD monitor for studio and field uses. The multi-format monitor offers 1,280x768 pixel resolution and displays 1080/24PsF, 1080i, 720p and 480i signals.

Transvideo International will introduce its 16:9/4:3 Rainbow II SuperBright monitors. The five- and 6.5-inch units are anamorphic

meters display all embedded audio channels on high-resolution bar graphs. The 1 RU VLM versions also offer a one-inch video display and 2 RU model that has a four-inch display. Optionally, 16 channels of de-embedded audio signals can be made available on balanced or unbalanced AES outputs.

Wohler will also demonstrate its LCD monitors, MON2-3, RM2440 and RM 3270W.

Kroma Telecom will demo its 10-inch broadcast monitor and its line of nine-, 15- and 18-inch thin-film transistor (TFT) monitors designed for studios, OB vans and other compact spaces. Kroma Telecom will also feature its five-inch TFT screen with three high-resolution screens (960x234 pixels). This monitor accepts two PAL/NTSC video inputs.

Marshall Electronics will debut its HD 23-inch LCD TFT monitor, which offers 1,920x1,080 resolution and accepts all analog and digital formats. Also, it connects to HD-SDI/SDI, Y/C and composite video with PAL/NTSC automation recognition.

The Marshall dual-TFT megapixel screen HD 8.4-inch monitor will also be introduced, and the V-R171P-HD 17-inch daylight bright HD LCD monitor will be featured.

The next generation of virtual monitor wall systems by Avitech International will be on display. The system features a new multi-image display with visual alarms and digital clocks. The monitor displays up to 120 inputs on a single display group—composite, SD-SDI and HD-SDI—and has high resolution DVI and VGA outputs.

Pro-Bel will demo its VX range of crystal display screens—created in partnership with Vutrix—that support composite, Y/C, analog component, SDI, DVI and extended VGA inputs while the HDTV versions also accept HD-SDI.

Additionally, Pro-Bel will also show its VX range of 17- and 23-inch widescreen monitors and a 40-inch widescreen TFT display. ■

by Lauren Evoy-Davis

**V**ideo monitors can take many forms, from multiple displays used in newsrooms to HD monitors used by those shooting in high-def. Versatility and portability are key features in video monitors and this year's product lines aim to please.

Astro Systems will present its WM3004 SD six- and WM3007 eight-inch LCD waveform/vectorscope monitors. Featuring simultaneous quad and dual display, these portable units accept all HD and SD formats.



Astro Systems WM3004/WM3007 LCD waveform vectorscope monitor

The monitors offer two SDI, one component and a loop out—picture-only—and support contrast, chroma, gamma and peaking adjustments. Astro Systems will also demo its HD/SD LCD display monitor line.

Ward-Beck will show the AVB1, VidBuddy, portable battery-powered audio/video monitor. This unit monitors analog video, SD video with embedded audio, digital audio and analog audio.



Marshall Electronics V-R171P-HD 17-inch daylight bright HD LCD monitor

(1:2.35). Images will display in full, under-scan or broadcast modes. The monitors offer a 140-degree viewing angle.

The company will also debut its Cinemonitor IIIA Super Bright. This professional LCD monitor is designed for operators and directors. Its backlight systems output 1,200 nits that neutralize sunlight for outdoor shoots. The monitor accepts 4:3, 16:9 and anamorphic aspect ratios.

JVC will debut its 10-inch HD CRT monitor and its 30-inch LCD HD display. Compatible with 720p, 1080i and other common formats, this slim-line monitor features twin picture and picture-in-picture functions.

Wohler is introducing a new line of multiformat SD/HD-SDI level meters with video display. The

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**Storage** by Sony





by Susan Ashworth

**S**torage and serving technologies come in all shapes and sizes: from a multichannel server, an HD/SD recorder, a storage system with dozens of TBs of capacity or even the all-important cassette or DVD itself, still vital components for capture and delivery of media and metadata.

## STORAGE

One of those tools is the new Image Server 7000 from 360 Systems, a two-input, six-output broadcast server. Other new systems will include a new stillstore that offers advanced playlisting and graphics capabilities, and new Terabyte drive arrays for the Image Server 2000 and Image Server 7000.

Accom will launch the MultiFlexMX SD/HD production server, which offers media management software, faster-than-real-time network media transfers and high-capacity RAID storage. Also marking its debut is the APR/ClipStoreMX multidefinition, universal-format DDR for SD and HD uncompressed video plus the APR/ClipStoreMXc, a compressed HD disk recorder.

Archion will showcase its Archion networked storage system. Features include hardware RAID protection, 2 GB infrastructure, high-bandwidth capability, and HD/SD compatibility.

Storage tools from Asaca/Shibasoku will include the TeraCart PD, which provides storage capacities ranging from 2 TB to more than 33 TB in a single library.

New storage options from Atto Technology include the iPBridge 2500C/R/D, which can transform SCSI storage devices into network-enabled addressable devices. Other storage tools include the iPBridge 2700C/R/D Gigabit Ethernet-to-Fibre Channel bridge, the 2 GB FibreBridge 2350C Fibre Channel-to-SCSI bridge, the Diamond Array virtual tape device, and the Celerity FC-42XS.

BUF Technology will showcase a new SDI option for Sport, its miniature instant replay system and server.

Chyron comes to NAB with the X-Clyps server, which offers hours of storage of HD clips, RAID 5 protection and redundant power supplies.

Ciprico will introduce the DiMeda 10G, a third-generation NAS solution that employs 10 GB Ethernet. Ciprico will also introduce a new desktop and

Systems, recently acquired by Ciprico.

New server enclosure options will be on display from CI Design, including the RS1204, a single rack unit, three-bay enclosure; the SR208, a two-unit, eight-bay rackmount server/storage chassis; the STS316 Ultra 320 SCSI to SATA RAID enclosure; the SR316, a three-unit, 16-bay rackmount server/storage chassis; and the SR524, a five-unit, 24-bay rackmount server/storage chassis.

Conax will show its Mobile server, Voucher server and the Virtual VOD/PVR system.

Dayang International will demo the VIPS video ingest playout server, which combines computer server technology with traditional A/V processing.

At the DG Systems booth the SpotBox, a broadcast content server that offers Internet and satellite delivery options will be on display. Enhancements in 2005 include increased satellite bandwidth.

Digital Broadcast will showcase the MediaFire broadcast server, which can instantaneously receive and play to air syndicated programming from the Pathfire DMG server.

Doremi Labs will feature the MCS-HD, a four-channel HD broadcast video server.

DVS Digital Video Systems will unveil its storage area network server, DVS-SAN, designed for digital intermediate work. The system allows multiple workstations to work on high-

resolution HD and film 2K data in real time.

Exanet will unveil ExaStore 2.0, a storage system that consolidates data into a single pool that can be directly accessed by workstation clients/servers.

New from Exavio is the ExaMax Network Platform for digital media access and distribution. Designed for collaborative post environments, the ExaMax platform provides 5 GBps of network storage.

The new TerraBlock 8xs Fibre Channel storage system will be on display in the Facilis Technology booth. This system offers up to 3.2 TB of storage.

Focus Enhancements will show the ProxSys media server, which manages low- and high-resolution content from a Web browser and the MoniSys 24/7 monitoring server.

Front Porch Digital will unveil Archive in a Box, a digital archive option that includes server, disk, tape and modem.

Designed for data-intensive storage needs, Globalstor Data will introduce ExtremeStor-HD, a 5 RU enclosure that incorporates 24 250 GB hot-swappable SATA hard drives for up to 6 TB

of local storage, or 24 400 GB hot-swappable SATA hard drives for up to 9.6 TB. Also, the ExtremeStor-VS, a fault-tolerant video storage server, and the FibreStor-DI, a Fibre-to-Fibre Channel RAID storage option will be on display.

IBIS will showcase ServerLoad-Sport, which captures highlights at ingest through up to six different feeds, providing the choice of viewing from multiple angles via dual screens and thumbnails.

Storage options from Just Edit include vsnlegalrec, a back-up storage system offering up to six months of storage in single workstation. The company's master control room server and playout system, known as vsmatic, will also be on display.

An HD version of its Nexio server will be highlighted in the Leitch booth. Features include two channels of HD output, or one channel of input and one HD output in either the 720p or 1080i format.

MikroM will showcase the MVP100 and 110 MPEG-2 HD players. Also, the MVS100, a next-generation caching HD streaming server will be displayed.

This year mSoft will display a new stock footage video library server system, searchable by keywords or genre.

Omneon will show off the latest versions of its Omneon Spectrum media servers, which can simultaneously play back HD and SD content on either the same channel or independent channels. This feature is possible via a new interface device for MPEG-2 decoding called



360 Systems Image Server 7000

rackmount 4 GB Fibre Channel RAID tool, the DiMeda 1724 storage option, and the MediaVault 4210, from Huge



Omneon Spectrum

the MultiPort 4100 series. Other HD interfaces for Omneon servers on display will include the MultiPort 4000 and MediaPort 4010.

Panasonic will showcase the AJ-PCS060 DVCPRO P2 hard disk drive. The 2.5-inch 60 GB hard disk drive can hold the contents of up to 15 4-GB P2 cards, and the entire contents of a 4-GB P2 card can be transferred to the internal hard disk drive in approximately four minutes.

Pinnacle Systems will bring its Thunder HD server to the show. Based on Pinnacle's Inflexion engine, Thunder HD offers real-time DVE transitions plus support for MXF, and easily integrates to share content with Pinnacle Deko and Liquid or other MXF-based broadcast devices.

Pixelmetrix will introduce DVStor 2 TB, which offers 100 GB to 2 TB of

STORAGE, PAGE 94

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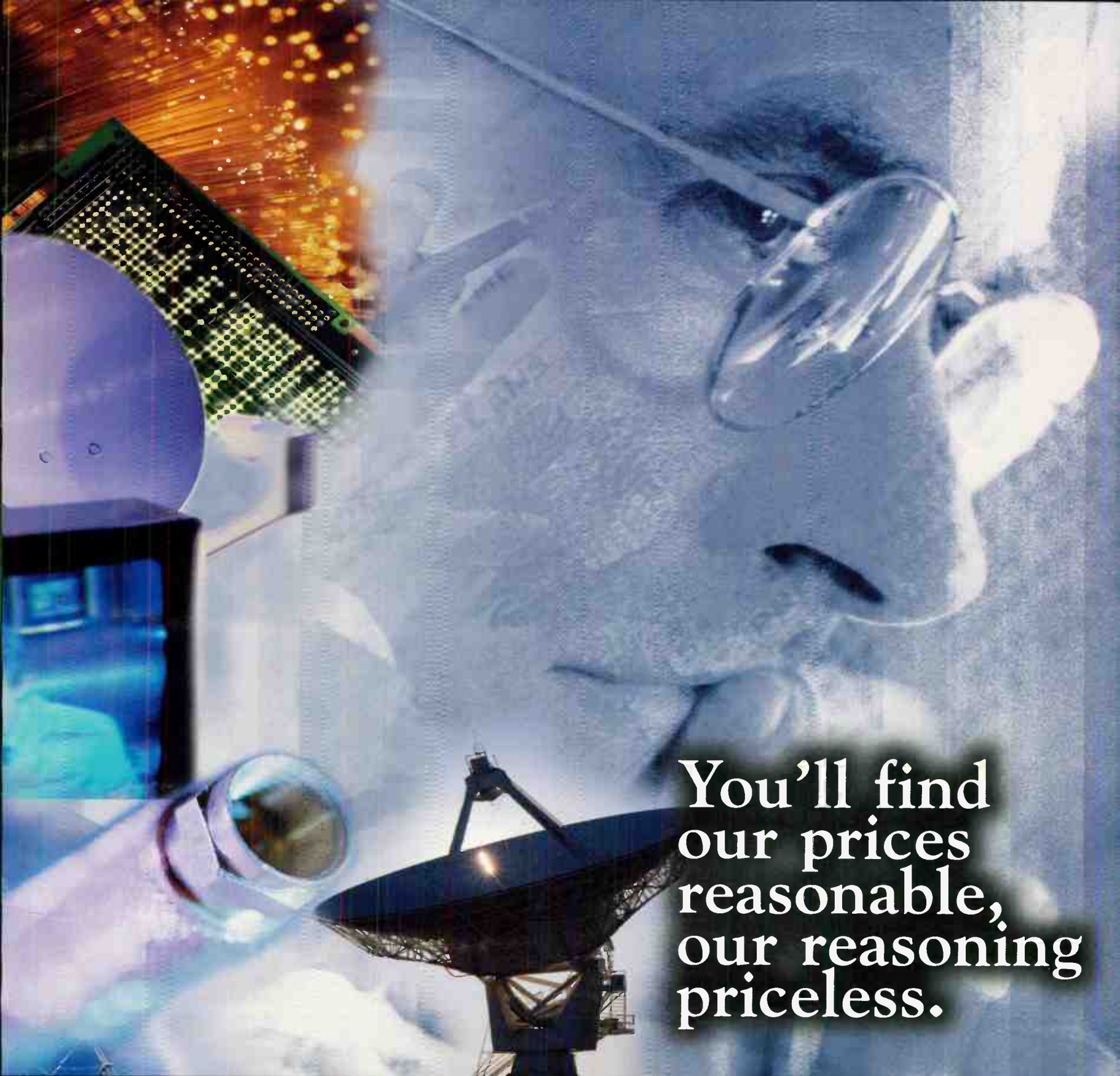
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# Lighting

CONTINUED FROM PAGE 52

Chimera Lighting will introduce the OctaPlus Lightbank Family, featuring the OctaPlus 3, a three-foot diameter fixed Lightbank, and the OctaPlus 57, a five-foot diameter Lightbank which is expandable to a seven-foot diameter Lightbank using a two-foot expansion kit.

The company will also unveil a Quick Release Speed Ring that allows users to release Lightbank pole tension with the flip of a lever, allowing the Lightbank to collapse without complete disassembly.

Cool-lux will show off its new SL 3000 On-Camera Softlight, featuring a specially developed light-source. The fixture, measuring 4x4x2-inch, delivers high quality illuminating power, and with the hood removed, can be used as a broad light.

Dedotec will take the wraps off several new Dedolight location lighting kits, which include a powerful yet controllable light source that occupies a minimum amount of space and draws low power.

Dove Lighting Systems will introduce the DM-412-WM, a wallmount dimmer pack compatible with fluorescent and incandescent fixtures. It features four channels of dimming at up to 1,200 W per channel and accepts DMX-512 and 0 to +10 VDC control signals. The company will also show its IQ512, a 12-channel control console, now available in a wallmount configuration, as well as the Sublime DMX memory lighting control console and the MPX-100 lighting controller.

Engstler Elektronik Entwicklung will show its DA series of displays utilizing the RGB-backlit, fully programmable LCD module for applications where a switch function is not

required. The company will also display its SA series of products featuring fully graphical LCDs in 32x16, 36x24 and 64x32 pixel resolutions integrated into a pushbutton key.

Flexibility is the buzzword at the FJ. Westcott booth, where the company will introduce its new Spider TD5, with the ability to use either halogen or fluorescent lamps to a maximum of 750 W. Three separate controls allow users to set up lighting ratios when using multiple heads on one set.

The company will also showcase a Spiderlite single-bulb version of the Spiderlite line, yielding 3200 Kelvin of continuous light with 500- or 1,000-W lamps.

Frezzi Energy Systems will lift the curtain off its high-output Mini-Fill LED Light for broadcast cameras. Using the brightest white LEDs available, the Frezzi Mini LED provides daylight balanced light for eye lighting and filling in unwanted shadows, while consuming only 12 W. The company will also present its Super Sun Gun 400 W HMI, which brings powerful daylight balanced light illumination in a compact form.

IDX System Technology will unveil its new X3-Lite, a professional quality, on-board camera light using high-powered LED technology. The X-3 light combined with IDX power drive circuitry yields a daylight illumination source equivalent to a 35 W lamp, while only requiring 11 W of power.

Kupo will showcase its Cool C Stand Master series, featuring a new and easy quick release system. The non-spring zinc casting-base allows the leg to swivel quick and free.

Infrared LED technology will be showcased at the LitePanels booth with the introduction of LitePanels Infrared. The compact rectangular head yields a maximum output of 960nm, is heat-free, and infinitely

dimnable from zero to 100-percent, and can take a snap-on battery pack.

The company will also unveil its LED-20 degree Spot, a portable, daylight balanced lighting system that employs efficient LED technology to produce soft, projected output designed for interviews, car interiors, or tight spots.

Lowel Light will display its wide array of lighting fixtures, light kits and dimmer control units, including its Fold-up Softlight, Tota-light system, Omni-light system, Lobo clamp, Pro and iLight systems and folding fluorescent Light-Array.

Matthews Studio Equipment will introduce the Max, an adjustable arm that will allow placement of almost any light in almost any spot on set or location.



Frezzi high-output mini-fill LED light.

Also new from the company will be the Vator II, a new family of stronger and more robust Vator Stands including the Super Crank O Vator, Crank O Vator and Low Boys.

Matthews will also showcase the Atta Pin, a new device to use when permanently lighting a studio set. Atta Pin keeps flags scrims and cutters from slipping over time.

Mole-Richardson will debut a 5 kW Tungsten Par with specifically

designed axial lamp as well as a 1.2 kW DayLite Par, the latest HMI in the DayLite HMI line.



LitePanels Infrared

Also new at their booth is the Molescent Biax, a complete line of compact 55 W Biax fluorescent fixtures with local and optional remote dimming and the DayLite Fresnel, a new 24-inch HMI Fresnel with vastly improved optics, ventilation & user-friendly features.

In the Ste-Man booth, PAG will showcase its Paglight C6 ultra-compact front-light, supplied as a complete kit including battery and charger.

Videsence will introduce a new Shooter Series Fixture, a miniature addition to the Videsence line that provides powerful lighting in a small package. This 57-W instrument features intense light output from a lightweight compact housing.

The company will also offer a Shooter Lighting KIT, featuring two small Shooter Series fixtures with one mini Shadowcaster. The kit provides powerful lighting in a small package, weighing only 30 pounds.

K5600 will showcase the Joker-Bug 200 and the Joker News-200, for operation on 30 V belts, Anton Bauer 14.4 batteries or 110/220 VAC. Also new—the Joker-Bug 800, comparable to a 3200/4000 quartz fixture with a draw of 12.4 amps; accessories for the Joker-Bug 800 include clear and frosted glass beakers. K5600 also brings the Beamer directional PAR accessory for the Bug-Lite. ■

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by Deborah McAdams

**M**oving audio, video or data requires a pathway. At NAB2005, an extensive selection of cables, fiber devices, connectors and network systems will be on display.

#### CABLES

Gepeco International is introducing VDM260, "ultra-miniature" HD coax cable; double-jacketed CT504HD heavy-duty tactical CAT-5e cable intended for use with Neutrik EtherCon connectors, but also available as pre-terminated cable assemblies.

Liberty Wire & Cable rolls out the EZlinx termination system, comprised of 26 AWG coaxes and 22 AWG twisted pairs. Liberty also brings 20 AWG/RG59 type serial digital siamese video cable; 25 AWG single, siamese or triamese mini precision video cable and the ConnecTec coax termination system.

Belden CDT Electronics Division will bring 9451P and 9451DP—plenum-rated single and dual versions of Belden 9451 analog line-level audio cable; Banana Peel-jacketed hi-res miniature and RG59 video cables; and Brilliance CatSnake, four-pair 24 AWG CAT-5 audio cables.

Clark Wire & Cable will introduce 26-pin multicore CCU/VTR camera cables.

New from Mohawk, three-circuit Stadium Cable containing Corning SMF-28e fiber.

Tec Nec Distributors has added Sony Equivalent CCZAD100 camera-to-CCU cables and Phatcat broadcast video-over-Cat5 to its inventory.

#### CONNECTORS

Fischer Connectors will introduce the 1053 Series, SMPTE-compliant HDTV connectors with field installable fiber-optic contacts.

From BTX, the new CD-HD15MEZ and the CD-HD15FEZ, which both accept standard D-sub hoods, provide the ability to field terminate a HD15 cable mount with a screwdriver. BTX also will unveil XLR, a 3-pin panel mount with screw terminal connections, manufactured by Neutrik. Neutrik also rolls out the NC\*\*XX series of 1/4-inch phone plugs, available in three to seven pole configurations.

Gefen will debut its Firewire Repeater 800, capable of IEEE-1394 transmissions up to 33 feet at sustained transfer rates up to 800 Mbps; additional repeaters can be daisy-chained for a 250-foot reach.

Pleora Technologies will showcase the PL1453A EtherCast Engine, which takes SD-SDI and/or DVB-ASI data and converts it to IP packets for Gigabit Ethernet or LAN 1 Gbps transfer.

Switchcraft has expanded its line of EH Series connectors to now include USB, FireWire, 3.5 mm stereo jacks, and S-Video, all in the same XLR panel cut-out. Also new—EZ Norm audio patchbays for digital audio workstations.

Canare Corp. of America will unveil the SMPTE 304-compliant FC Series HFO camera connector and the palm-sized HFO camera cable checker.

New from Kramer Electronics is the TP-300FW, a range extender for FireWire transmissions over unshielded CAT-5 cable.

Trompeter comes to NAB2005 with enhanced J314 Series dual patch-jacks for broadcast and production; M-BNC Series miniature BNC 75 ohm connectors.

#### FIBER

Along with its cable offerings, Gepeco International brings HDC120P—Kevlar-wrapped, 12 mm hybrid fiber-optic, SMPTE 311M-compliant camera cable for HD-to-CCU connections.

Telecast Fiber Systems has expanded its SHED hybrid elimination devices to include support for several Ikegami camera systems. The company

also will introduce bi-directional, cascadeable Adder II Matrix-enabled multiplexers; CopperHead T-444 fiber-optic link, a smaller version of the Telecast long-distance link for the Sony HDC-F950 T-Cam; Teleport Wavelength Management CWDM multiplexer for high-bandwidth optical signal multiplexing; Mamba ISS Series optical patchbay-based system, and the; Bureau Link mini-studio link for remote broadcasts with Ethernet stations.



Fischer Connectors 1053 Series HDTV connectors

Communications Specialties will display drop-and-repeat receivers and multi-output transmitters for hi-res RGB and audio fiber systems.

Crystal Vision will introduce the FRX204 and the FTX202, dual fiber-optic-to-SDI receivers and transmitters, respectively.

Vistek Electronics will unveil the V6757, a modular product for transmitting analog composite A/V within an SDI data space via fiber.

C-COR will introduce Multi-Service Packet Switch (MPS), an L2-based 10-GB packet ring system for IP transport over Ethernet; the PLEXiS BXE CPE device for long-reach optical local connections; and a single-channel SDI card for the company's DV6000 digital transport systems.

Multidyne Video brings to the show the RGB-5000 for long-haul transport of 1,600x1,200 resolution, RGB or VGA video via one fiber. The company will also introduce products for the fiber-optic transport of up to 110 VSB/AM CATV channels; the new DTM-2200 multiplexer for transmitting eight phone lines via fiber-optic cable and smaller matrix sizes to the FOS series of fiber-optic routing switchers.

Network Electronics will demonstrate a new CWDM system for multiplexing up to 16 channels onto a fiber strand, and the MR-TR-2.5G, a multi-rate optical O/E-E/O converter and O/O transponder in one unit.

Opticomm will debut the DVI-1000 extender for DVI transmission over multimode fiber up to 1,000 m.; the DVX-5400 four-SDI video mux and the DVX-6400, four-HD-SDI video mux for single-fiber transmissions, and other fiber-link products.

Radiant Communications will bring a streaming video MPEG-2-to-IP, fiber-optic baseband A/V-plus-DVG/ASI one-fiber transport system to the show. Also on the docket: fiber-optic L-band and 80-channel transmitters and receivers, and fiber-optic universal Ethernet transceivers.

Evertz will unveil the 7707ADVT and 7707ADVR—single-card, dual-analog or SDI-video with four-channel analog or AES audio fiber-optic transmitters/receivers.

Stratos Lightwave will display with a BNC-to-fiber video media converter.

Canare will introduce the Optic Links CWDM Optical 8-channel, bi-directional, IRU multiplexer.

Thomson Grass Valley will take the wraps off the new Grass Valley Digital Triax system and the DigiLink transmission system, both dockable with the LDK300, 400 and 500 cameras.

Connecting fiber optic cable to a LNB on a satellite dish will be featured at the DAWNco booth. The company's 95F12 transmit/receive FiberLink system use single-mode fiber to use the dish at great distances from the receive facility.

#### NETWORKING

Opvision Technology will roll out the OPV2300/2400 broadcast transport system for unidirectional or bi-directional transmission of two channels of analog video and four channels of audio; the OPV2500/2520/2600, with capacity for two additional datastreams, and the OPV 3100/3200, which does multiple channels of analog video, audio and data over one fiber pair.

From Exavio comes the ExaMax 9000 Network Platform with 36 2-GB fiber-channel ports provides 5-GBps access to networked storage.

Harris Networking and Government Solutions will release new HD capabilities for the NetVX integrated high-speed networking platform.

Telestream will showcase MAP Media Collaboration, which allows distributed workgroups to access media files across LANs and WANs.

Thomson Grass Valley will unveil NetCentral 4.1 software, which provides an umbrella layer of monitoring and diagnostics and augments and the XMS (eXtensible Management System) which is used to manage the contribute and distribution networks. ■

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**SES AMERICOM**  
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by Claudia Kienzle

One of the biggest challenges facing broadcasters today is the proliferation of formats. The scope of this challenge is underscored by the explosion of new encoders, decoders, standards converters, color correctors and "black boxes" for a world of digital signal processing tasks. As always, the NAB show floor will be awash in gear.

## ENCODERS &amp; DECODERS

Aastra Digital Video will roll out the ENC-H11 HD MPEG-2 encoder module for its VideoRunner networking system, which supports 1080i and 720p HD formats for distribution over IP, ATM, satellite and terrestrial networks. Also on display will be the new TMX-M22-TR bit-stream transrating module for the VideoRunner networking system.

Anystream's Agility 5.0 encoding system now includes aspect-ratio

control, smart stretching, letterboxing, integrated closed captioning, re-wrapping MPEG files and metadata support for MXF.

Broadcast Technology will introduce the 3200 Series HD MPEG-2 decoder for HD acquisition and monitoring, including analog and SDI outputs, with options for HD to SD downconvert and AC-3 pass-through.

Crystal Vision will highlight its EMDEC decoder combining multiple functions on one board. The unit converts composite video to SDI using a 12-bit decoder and can offer the option of embedding AES.

Doremi Labs is showcasing its HDG-10 portable HD and SD video test generator, which provides 15 still patterns and seven moving test patterns in SD and HD formats at broadcast quality.

DVEO will introduce the HD Maestro encoding workstation for the 1080i format, featuring HD-SDI input and DVB-ASI output.

The Enigma data transcoder will debut at the Eyeheight booth. The device transports metadata and machine control information through an SDI channel.

Harmonic will demonstrate a new storage encoding system designed to preserve video quality while highly compressing advertisements for digital program insertion and full-length programs for VOD. The company also will demonstrate its MPEG-4 encoding platform.

A new MPEG-2 encoder for Harris Broadcast's NetVX integrated high-speed networking platform supports multiple HD video formats, including 1080i/29.97, 720p/59.94, and 1080i/25, in 4:2:0 and 4:2:2 profiles.

The MediaRig Encoder SD making its debut at the Ligos booth is a low-cost, compact SD MPEG-2 encoding system for ATSC, DVB and broadband, and is capable of dual-channel processing.

Optibase will lift the curtain on its MovieMaker 200S MPEG-2 encoding system for content creation, broadcasting, archiving and VOD. MovieMaker 200S boards are bundled with the company's Composer encoding management application.

Radyne ComStream will show the HE4000 HD and SD encoder and SE4000 encoder with upgraded features.

Scopus Network Technologies will unveil the UE-9000 universal MPEG encoding platform, implementing real-time, dual-channel MPEG-2 encoding.

Thales Broadcast will roll out its SmartCast MPEG encoding/multiplex platform with integrated MPEG transport stream monitoring and redundancy management.

Wegener will introduce the Nielsen NAVE IIC Encoder, which encodes Nielsen Media Research proprietary NAVE identification information used for TV ratings purposes and operates entirely in the compressed video/audio domain.

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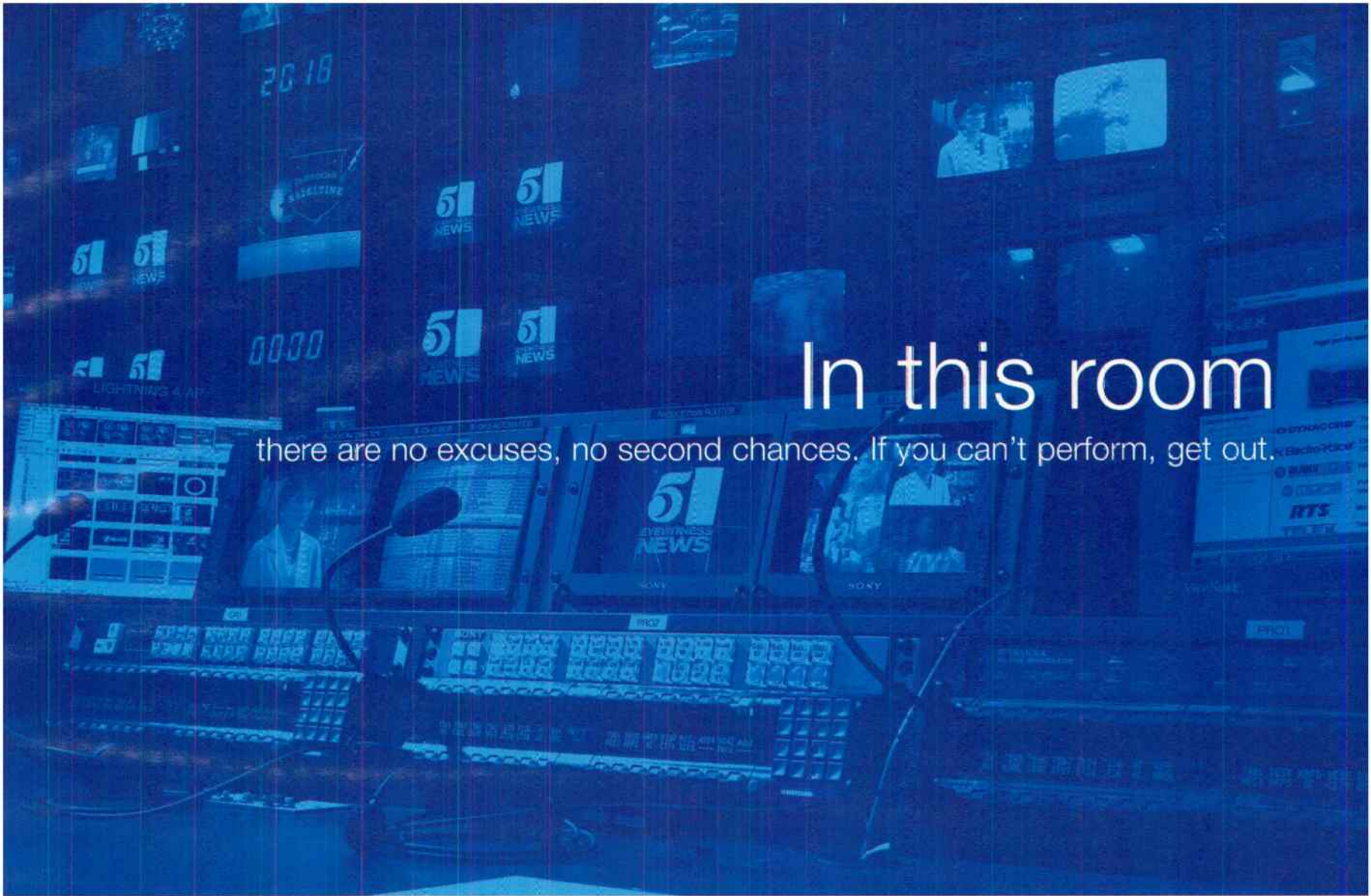
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# Signal Process

CONTINUED FROM PAGE 80

Envivio is among a number of companies introducing new encoding solutions for the emerging AVC and VC-1 formats this year. The company's Media Transport System includes the 4Caster broadcast series encoder, which provides real-time H.264 encoding.

Inlet Technologies will launch Fathom, a real-time encoding solution for VC-1/WMV (Windows Media HD) content creation.

Modulus Video, one of the first companies to concentrate on AVC encoding solutions, will introduce its ME6000 AVC HD AVC Video encoder, a real-time, full-resolution AVC encoder with support for digital video at Main Profile @ Level 4. The company will also show its ME10000/MD1000 AVC SD encoder.

Sorenson Media will introduce the Squeeze 4.1 compression suite for HD encoding for MPEG-1, MPEG-2, MPEG-4, QuickTime, RealMedia and Flash.

Streambox will launch its SBT3-9000 encoder/decoder system for HD video and audio, featuring a complete range of video resolution and bitrate choices from 2-10Mbps. Also being shown is the SBT3-1000 video transport system with advanced error correction technology for unicast (point-to-point) delivery over multiple network types.

Making its debut at the Tandberg Television booth will be the EN5980 HD real-time encoder for WMV9, producing pictures from 2.5 Mbps to 25 Mbps with multiple resolutions and frame-rates from 720p/24 up to 1080i/30, with IP/Ethernet and ASI outputs. The company also will introduce the E5780/E5782 HD encoder and the ES7110 multichannel encoder, which features four MPEG-2 encoders in a 1 RU chassis.

## DIGITAL PROCESSING

Accom will launch AirCleaner, an SD/HD audio/video delay unit for live broadcasts. AirCleaner accepts SD or HD SDI video signals and up to eight

channels of AES/EBU audio with 24-bit resolution at 48 kHz.

Asaca/Shibasoku will show the VC31, which uses dynamic vector technology to enable motion vectors to be calculated in realtime. The company also will demonstrate multiformat signal generators for HDTV and SDTV.

Broadcast Technology, which was recently acquired by Harmonic, plans to showcase its Showman 1000 multi-standard off-air receiver/demodulator for NTSC, PAL and SECAM for transmitter feeds, monitoring, OB reception and service acquisition. The company is also launching its DTMD1500 COFDM modulator, which provides broadcast-quality IF output for transmission applications.

Crystal Vision will show the Synad-E synchronizer that mixes Dolby E and AES in the same audio group. Also new from the company is the Synner144, a combined synchronizer, tracking audio delay and embedder/de-embedder.

FortelDTV will showcase its FS-516 all-in-one A/V synchronizer with SDI and AES outputs, 12-bit analog processing, etc., and its RCP-503 express remote control panel for controlling up to 297 processing modules.



Ensemble Designs Brighteye

New additions to the Ensemble Designs Avenue line include the Avenue 7600 HD embedder/disembedder along with the Avenue 5350 four-channel A/D video converter with TBC. New gear in the BrightEye product line include the BrightEye15 serial D/A video converter, the BrightEye 16 D/A video converter with audio demux and analog output, and the BrightEye 26 analog-to-SDI converter with TBC and frame sync.

ESE will introduce its ES-185U enhanced receiver including GPS master clock and timecode generator, and the ES-461U SMPTE timecode generator with jam sync.

Evertz will unveil its 5600MSC

Master Sync/Clock Generator, which provides all synchronizing signals needed while solving the problem of locking the in-house master clock system to the master video sync pulse generator.

For-A will unveil the FA-128 14-bit internal processing frame synchronizer, which comes as a standalone unit or modular card.

Horita will show its TCP-50 time-code processor among other signal processing tools.

Kramer Electronics will unveil the VM-100C 1:10 component HD video distribution amplifier, a high-bandwidth product with 450 MHz bandwidth. Kramer will also introduce the 840 DVI pattern generator, which uses 32 built-in patterns to test, evaluate, and calibrate DVI displays and accessories.

Laird Telemedia will roll out the Inertia all-format transcoder for signal conversion among SDI, component, Y/C, composite and DV video. The company will also show the Waveshot wireless video monitoring system.

Modulation Sciences will unveil the Model Pro-3 delay-corrected PRO channel receiver for its PCG-II generator. It provides four solutions for correcting delay caused by digital transmission.

The Mot Box 3RU lightweight mobile transport enclosure will see its launch at NAB2005 at the Network Electronics booth. The system houses all flash-link optical transport, signal processing and distribution cards.

PESA Switching Systems will show the new Cheetah V5 RGBHV encoder that uses a single coax cable to distribute high-resolution computer video and audio.

Prime Image will unveil a new HD synchronizer, with format conversion, genlock, video test generator and remote control.

Snell & Wilcox will introduce 25 new iQ modular infrastructure components, including converters, synchronizers, distribution amplifiers, routers and audio modules capable of operat-



For-A FA-128 14-bit internal processing frame synchronizer

ing in either SD or HD resolution.

Terayon will demonstrate new features for the BP 5100, including extensions that allow graphics insertion direction into the compressed MPEG video stream with no decoding and re-encoding.

Thomson Grass Valley has expanded its Gecko signal processing line with the new Gecko Flex frame, which consolidates multiple audio and video modules into one frame. Also new is Gecko Flex, a 2 RU system that lets users combine digital and analog video processing in a single frame.

TV One will introduce the SD-108M 1x8 SDI distribution amplifier with re-clocking and equalization for up to 300 meters of coax.

## STANDARDS CONVERTERS

Brick House Video is unleashing its Proteus portable standards converter, with 10-bit SDI, analog video and audio I/O.

New from Cobalt Digital is the 8024 compact downconverter, upconverter and cross-converter, with embedded delayed audio, de-interlacing and motion compensation. Also launching will be the 8022 downconverter, upconverter and cross-converter; the 5821 downconversion card for HD/SD; and the 8090 HD and SD analog to HD-SDI/SD-SDI dual-rate analog digital converter.

Gefen will roll out its new HD-SDI to DVI converter, which converts HD video from SDI sources to DVI displays and vice versa.

Leitch Technology will lift the curtain on its X75HD converter, which combines upconversion, downconversion and crossconversion with an HD framesync.

New additions to Miranda Technologies Imaging Series include the

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# SOLUTIONS

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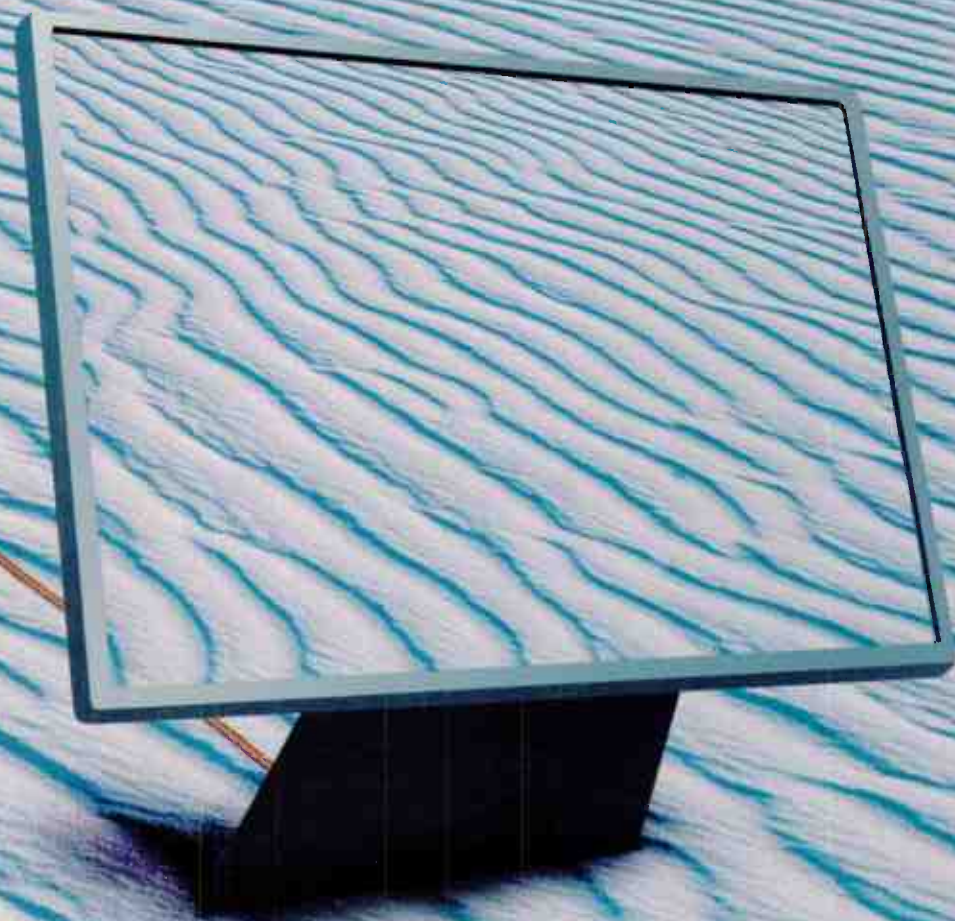
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# Signal

CONTINUED FROM PAGE 82

XVP HD interface modules with an HD downconverter, upconverter and cross-converter, and an HD frame synchronizer and downconverter as well as the QXC-801i HD crossconverter, which offers interfacing between 1080i and 720p.

nVision will display new signal

processing modules in its Synapse modular media system, including a variety of A/D converters.

PatchAmp will present the new PA-6000-802 HD downconverter card, featuring a HD input, two SDI outputs, two analog outputs and five HD outputs.

Prime Image will roll out its new HD standards converter, which offers downconversion, upconversion and crossconversion, as well as a new video

test generator with optional four-channel audio delay remote control.

TV One will launch new converter systems, including the C2-7200 dual-channel video processor, which is really 20 products-in-one, including an SD/HD converter, PC/HDTV scaler, analog-to-DVI converter, DVI-to-HD-SDI converter, aspect-ratio converter, HD-SDI framesync, luma/chroma-maker, dual picture-in-picture box

and 10-input seamless switcher.

Vistek Electronics will show the new V6406 modular HD upconverter, which upconverts SD to HD.

## CLOSED CAPTIONING, SUBTITLING & SIGNAGE

Sprinting into the Chyron booth will be DynaCrawl, which inserts up to four news elements for eye-catching tickers and crawls, plus time and temperature displays, dynamic data fields and 3D object animations. The company will also introduce ChyTV, a low-cost informational display video system, enabling broadcasters to display graphics and text overlaid or surrounding a live video region (see related story, p. 170).

DVEO will introduce PSIP table manipulation software with real-time commands.

Keywest Technology will unveil the MX5 Plus HD and MX5 Plus Key, both offering multimedia messaging control functionality, CG and seven independent element layers as well as enhancements to its MediaXtreme MX3 that transforms the unit into a full-featured digital signage player.

Screen Subtitling Systems will launch the Polistream G5000 Specialist subtitling transmission system, which allows production of graphics, animated and static logos, tickers and clocks, and transmits them all from a single box.

Newsroom Solutions will show the NewsTicker, which delivers automated or manual ticker content, such as school closings and weather alerts on analog and DTV channels.

Thales Broadcast will demonstrate its latest advances in compressed content regionalization including Digital Program Insertion (DPI) for ad/logo insertions with the company's Crystal Logo Insertter.

Triveni Digital will introduce the GuideBuilder PSIP and DVB-SI generation systems, which enhance market branding and protect channel identities in on-screen program guides.

TM Systems will debut new language localization software for its DubStation II that streamlines the workflow of dubbing or subtitling projects. The company will also show a bitmap generation module for RenderStation that takes subtitling scripts in Word documents, containing text, timecode and vertical positioning for each subtitle, and generates a navigation file and TIF file per subtitle for DVD authoring.

## CONTROL & COMPUTER PERIPHERALS

Several new additions to the KONA line will be launched in the AJA Video booth including the KONA LS, a D/A capture card that features true 10-bit uncompressed SDI I/O, component/composite/S analog video I/O, 12-bit video and A/D and D/A converters. New features for KONA 2 include TBC function-

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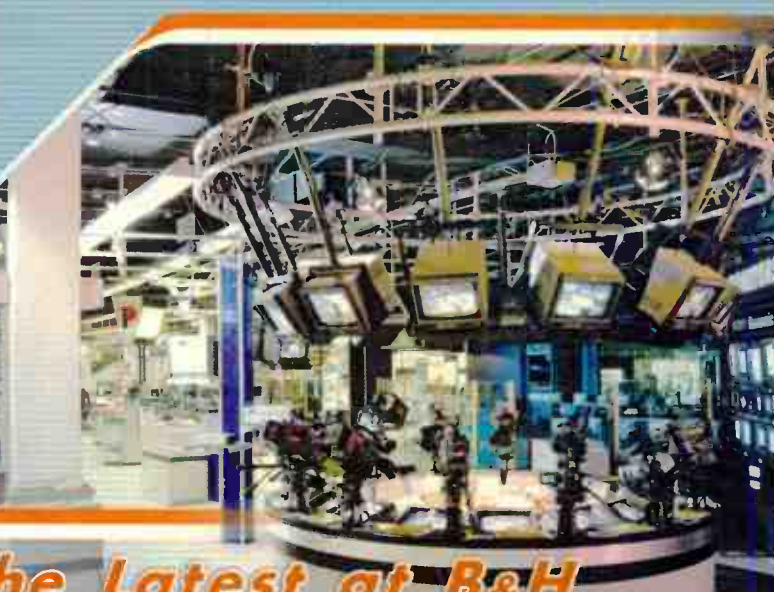
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by Susan Ashworth

**T**oday's automation tools are not only easing the myriad daily tasks of broadcast engineers but are doing so in before-unseen ways. Some are leveraging the flexibility of an IT infrastructure. Others are giving control back to broadcasters, allowing producers to tweak the level of automation on a show-by-show basis.

Automation has also evolved over the last few years, now encompassing both device control—such as automating the ingest of content to servers and controlling transmission—as well as to the newsroom, where journalists are getting a taste of how automation can be used to speed up the prep process.

#### NEWSROOM OFFERINGS

For example, at NAB this year, Autocue will show QLog, a newsroom automation tool that enables searching of archives for spoken words or phrases without prior transcription, enabling multiple users to review material as its being recorded and record channels output. Other offerings on tap include QLog+, an enhanced version of QLog; QScore, which allows sports results to be entered manually or collected automatically; QAudio, designed to address audio timings in TV/radio combination stations; and the company's Collaborative Prompting tool.

Building4Media will show the InfoChannel, which includes software for remote camera control and content management software for the logging and handling of video streams.

Another newsroom tool comes from Dalet Digital Media Systems. The company will show the new DaletPlus News Suite, a set of enterprise-wide software modules for newsroom computing, video browse and editing, automated ingest, playout, archive and asset management. News Suite components use one operating system and one cross-media database and offer a "log-on anywhere" feature for more flexible production.

This year, Florical Systems will introduce several new products and system enhancements, including NewsGrabber. With three selections on a touch screen, users can select source and destination and then execute a recording. Also new this year: a new "Join-In-Progress" feature in the

AirBoss presentation controller allows a station to automatically join a program in progress based on a remote signal from the network. Another new feature is "Breaking News," which allows a single operator to insert local or network breaking news with a variety of effects.

IBIS will be at NAB with PAC—short for process, automate and control—a new generation distributed control and automation architecture that allows broadcasters to implement a wide range of process, control and automation systems in a more cost effective process.

At the ILC booth, the company will show the NetLink Element Control Processor, which provides real-time management of legacy and state-of-the-art equipment without grappling with multiple management systems.

JLCooper Electronics will demo its ES-SloMo is a compact controller of VTRs, DDRs or servers for news, sports, scoreboard and other editing operations. Also on display: eBOX, a hardware interface designed for broadcast television, streaming media networks, multi-room editing facilities, news production or other studios where remote hosts need to control devices over long distances or via the Web.

MicroFirst will demo an enhanced version of its Digital Automation System, an expandable and extensible real-time automation and management system. The system provides metadata management and device control, as well as media management, logging functionality, graphical device control, distributed or centralized IP control, and monitoring and maintenance of wide-area networked television systems. The tool runs on a proprietary operating system.

NewsTicker by Newsroom Solutions allows broadcasters to show automated and manual ticker content, school closings, and severe weather on primary and digital channels without having to stop and start multiple programs.

Octopus Newsroom will showcase the Octopus5 MOS 2.8-compliant newsroom computer system. The system interfaces to prompters, NLEs, playout/news automation, CGs, still stores and graphic systems. Users can research different types of information, such as assignments, resource tracking and news program scheduling.

Newsroom technologies on display from Spencer Technologies include Newscaster, which allows one individual to run a newscast from a touch-screen GUI that displays the entire rundown, including lower thirds, news clips, on-air camera moves, and cue/play functions for VTR and servers.

Telestream rolls out a Mac-based version of MAPone, a personal IP media delivery software application designed for managing remote newsgathering operations for broadcasters, review-and-approvals and digital dailies for remote



Florical Breaking News

videographers. The system runs off Apple PowerBooks and G4/G5 systems and can transmit media across any standard or wireless IP networks.

This year, Video Technics will showcase Version 3 of the NewsFlow all-digital tapeless newsroom tool. Features include asset management control via enhanced security options including user profiles, user/group settings and storage quotas to allocate recording size and manage disk space as well as new offline and nearline archiving tools.

At the Crispin booth, the company will demo its next generation Supervisory View for Rapid-PlayX that allows users to see multiple play-to-air channel statuses with visual messages. In addition, broadcasters with existing news productions can add a 24-hour news channel with little investment with Crispin's new NewsWheel. The system offers complete control over on-air programming and provides support for live news, weather cut-ins and commercial breaks.

#### BACKROOM SOLUTIONS

Axel Technology will showcase DIGI TV, a modular automated digital television broadcasting system that allows for management of all steps, from playlist creation and commercial planning to playout. The tool comprises a compact cart machine and video servers in M-JPEG and MPEG-2 formats.

Broadcast Technology will show the Skyline DataMiner, an SNMP-compatible system allowing control of equipment via Ethernet. Features include alarm correlation, automation, notification, scheduling, automated reporting, trend analysis and an MS Visio-based topological display. The company also will Skyline DataMiner, a fully SNMP-compatible system allowing control of equipment from many vendors via Ethernet, including alarm correlation, automation, notification, scheduling, automated reporting, trend analysis and more.

Controlware will display its custom Umbrella Network Management tool for DVD/SDI broadcasting networks, which includes scheduling, machine

and device control, traffic and billing, resource management, bandwidth management, and status and statistics.

Cinegy's Media Suite 4.0 for end-to-end media workflow including archive, production and broadcast automation will be demonstrated.

Along with its Airo Automation tool, Digital Transaction Group will showcase an integrated content lifecycle, workflow management and automation system based on the Microsoft .NET enterprise grade development platform. Part of that solution includes the eXtensible Device Server, an automation system that runs on Microsoft Windows XP Pro and can support up to 64 devices per XDS, expandable to 1,024 devices in a single system. The XDS runs on a WAN/LAN and is capable of supporting hundreds of channels, according to the company.

DNF Controls will highlight new modules for its Flex Control Ethernet-based system, which controls VTRs, video servers, routers and other devices. Other tools include new software tools such as the Cue List Transfer Tool, and a new slow-motion con-



Leightronix Nexus playback automation controller

troller, the ST304-DSR1K-T.

Fission Software will introduce automation software for cable and television stations. Features include multiple traffic system compatibility, media management tools, support for native DV and DV50, and a customizable log export.

Harris will be on hand with automation tools from its new software unit that combines technology from its automation division and newly acquired Encoda portfolio. Expect asset management, playout automation, traffic/scheduling/billing, advertising, and integrated content management and distribution to be addressed.

Just Edit will showcase the newest version of its master control room automation playout system, known as vsnmatic, which features multiformat file playout in the same rundown. Also, the latest version of vsnnews, a newsroom system will demo, which offers high- and low-resolution editing, and HDV compatibility.

This year, Leightronix will introduce Nexus, a new playback automation controller that includes a multichannel digital video server, DVD/VCR machine control and an internal video/audio routing switcher. Nexus provides all-digital video/audio recording and playback featuring two

AUTOMATION, PAGE 92



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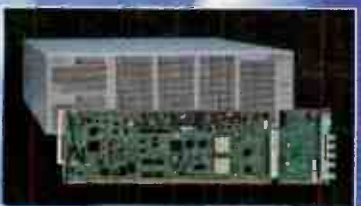
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# Signal

CONTINUED FROM PAGE 84

ality and Control Panel.

Blackmagic Design will launch the DeckLink HD Pro DL dual-link 12-bit, 4:4:4 capture and playback card. Also new is the DeckLink Multibridge, an all-in-one analog converter that handles conversion tasks in both HD and SD.

Dayang International will launch its Magic Wall 16-input screen controller with preset and user-configurable image sizes and information display modes, accommodating four, eight or 16 simultaneous displays in 4:3 and/or 16:9. Also new is the company's MagicBox series of interface cards using SNMP for system control and monitoring.

DNF Controls will introduce a

data logging option for its Analyst RS422/RS232 tester and the ST304-DSR1K-T slow-motion controller.

DVEO will debut a dual-input DVB ASI I/O card; a dual-input ATSC PCI I/O card; and a dual-channel HD SDI I/O card for Linux for real-time upconversion and downconversion.

New in the Evertz booth is the VIP, a multi-input display processor and signal monitoring system solution that

handles up to 12 video inputs with embedded and discrete digital or analog audio.

JLCooper Electronics will show its new ES-SloMo compact controller for VTRs, DDRs, and servers for news, sports, scoreboards and other editing operations. The company also will unveil the MCS-Spectrum colorist control station and the MCS-Clipshot tactile palette.

Miranda Technologies will introduce new features for its iControl Monitoring and Control-Over-IP system, which leverages SNMP protocols for monitoring and control of video and the surrounding transmission, networking and building infrastructure.

National Captioning Institute will show a new solution for captioning targeted at Webcasting.

Nvidia will unveil the Quadro FX 4000 SDI solution for compositing live video onto virtual backgrounds for broadcasts of virtual sets, sports and weather. Also new is Gelato rendering software that accelerates high-speed rendering for film, TV and design.

ViewCast will debut the Osprey-440 video capture card, which supports four channels of inputs to handle up to 16 cameras or other video sources. The company also will unveil Osprey Ease, which combines an Osprey-300 video capture card with Adobe Premiere.

## TELECINE & COLOR CORRECTION

Celco will showcase its new FilmOut Pro graphical user interface software, with a new 3D LUT (Look-Up Table) for color management for filming out digital intermediates with precise color matching.

da Vinci Systems will launch the 2K Elite Series image enhancement system, available in three configurations, including the 2K Emerald, with four power tiers, for a total of 10 independent image processing channels. Also new are the defocus, Colorist Toolbox and Vector Plus features.

Digital Vision will introduce the DVNR 4:4:4 RGB image processing platform for SDTV and HDTV, as well as the AGR4 ME RGB film-grain and camera-noise management system. In addition, the company will debut the ASC3 ME RGB random scratch and film dirt concealment system and the Valhall RGB color grade processor.

Discreet will unveil Lustre 2.5, a high-performance digital intermediate system for 2K and 4K color grading and image enhancement.

Edifis will introduce The Finaliser integrated tapeless HD color correction and formatting system with real-time storage and processing of uncompressed HD video.

Imagica will introduce an upgrade for its Imager XE-Advanced digital film scanner, which will scan a 2K

SIGNAL, PAGE 108

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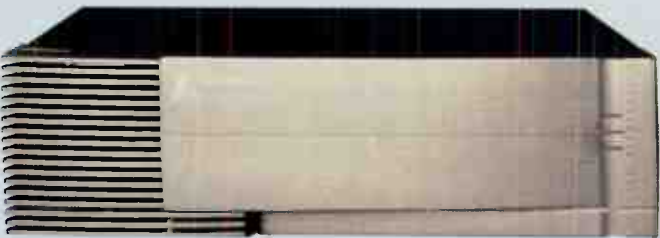
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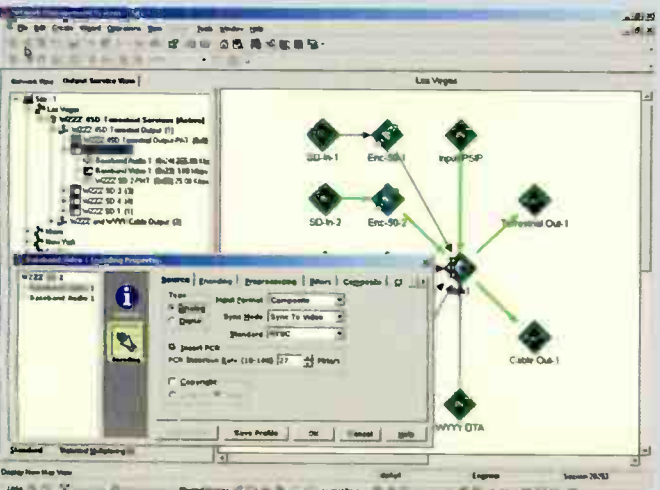
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## Asset Management

CONTINUED FROM PAGE 64

for .NET, which allows users to schedule production events, access asset libraries and share production schedules. Also on display will be ScheduLink, designed to manage broadcast satellite and terrestrial networks.

After its purchase of BBC Technology in October 2004, Siemens became a bigger player in the asset management market, and this year comes to NAB with the Colledia production workflow system.

SintecMedia plans to share the latest news about OnAir, an all-in-one broadcast management system for managing long-term planning, content acquisition and rights management, airtime sales, traffic, promotion and planning, and billing.

This year Snell & Wilcox will highlight Comet, a software-based, open-standards ingest system for broadcast servers and asset management systems.

Sundance Digital will debut Version 3.0 of "Seeker" at the show. General features of Seeker include the tracking and management of video, audio, graphic and document type files. Seeker currently integrates with

Avid Media Manager, Chyron Camio and Telestream FlipFactory.

Speaking of Telestream, the company will feature its MAP Media Collaboration system, which allows workgroups to access, contribute and comment on media products across LANs and WANs. The system integrates MAP media access products with the Microsoft SharePoint Web portal and collaboration tools.

Thomson Grass Valley will launch its new dMAX initiative, a series of software and middleware frameworks that include asset management, facility management and monitoring capabilities. The company will also announce the Grass Valley

Aurora suite that integrates ingest, nonlinear editing and playlist-management functions, (see related story, p. 40).

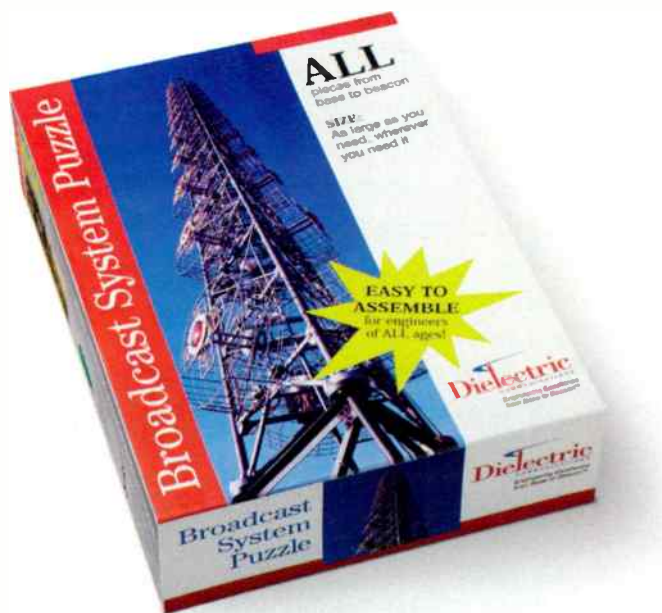
TM Systems will show the QC Station+Lightweight PC software, designed to improve and quicken the traditional workflow of a dubbing and subtitling a project.

Venaca comes to NAB with the S3 Broadcast platform, a media asset management system. The company will also show the S3 media asset management system; and the AirCom II, which allows sales professionals to search, review and send video.

Videokey will show the HD version of its AquariumSuite media and production management tools, as well as the AquariumEdit4Mac.

Video Technics will showcase NewsFlow 3.0. Features include asset management control via enhanced security options as well as offline and nearline archiving solutions.

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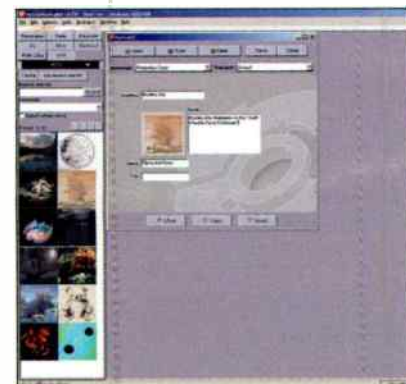
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Version 4.1 of vizrt VizContent Pilot.

Vizrt will display Version 4.1 of its VizContent Pilot. This management software supports Vizrt's Look Ahead transition feature, which is designed for more seamless and automatic transitions between multiple layers of graphics. The company will also show a new user interface to Vizrt's Object Store, which provides a shared database of video clips and still that can be accessed from Vizrt applications.

At the Wegener booth, the company's MediaPlan Content Management system will be shown, which gives users digital asset management control. Features include ingest of analog and digital assets, management of archived digital assets, remote tracking of individual assets, and remote updating or deleting of assets on Wegener iPump media servers.

Masstech will debut new features for its MassStore asset management system, including distributed redundant architecture, intelligent partial file extraction/restoration, and scalable data-mover technology. The MassStore system also gets a boost in the way of multiple tape library support that encompasses the latest LTO-3 tape drives and Smart Avid Interface. ■



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# Automation

CONTINUED FROM PAGE 86

internal MPEG-2 decoders and a one MPEG-2 real-time encoder. Device control is also included in Nexus, providing support for a range of VCRs and DVD players and recorders.

Pharos Communications will show off the Pilot Ria, which provides reactive control of broadcast routing equipment from any Web browser via local or secure-coupled intranet—eliminat-

ing the need for hardwired panels—and can be deployed throughout a single-site or multisite facility.

Pro-Bel will demo Procion, its next-generation software control platform that offers new features for the management of broadcast systems and media workflow. Procion now supports router control, modular product monitoring and control, media management, automation and master control. In addition, the new Procion Web client provides access to all the core system functionality through a standard web

browser. The company will also display Morpheus, its next-generation automation system.

RushWorks will show its Masterplay Broadcast system, a lower-cost automation system for broadcast and cable operations.

This year, Sundance Digital will be on hand with the newest edition of the FastBreak automation system, which includes an updated GUI, among other features. The company will demonstrate the remote control features of its



Crispin "Supervisory View" feature for RapidPlayX

large-scale Titan automation tool, which is capable of controlling hundreds of playout channels within a single facility. Sundance will also launch a new Digital Delivery Management System, which helps minimize the labor-intensive tasks involved in bringing program-length and commercial content into a broadcast facility.

## MULTITIERED SOLUTIONS

A multifaceted suite of products for both the newsroom and the backroom will be available from Comprompter News and Automation. The company will showcase the newest release of the NewsKing Newsroom automation system in a Windows environment. Along with the company's software for news and news-related operations, Comprompter also will showcase its tapeless newsroom tool, the NewsKing ClipTracker, a software-based program that runs between the newsroom and a video server. The company will also unveil its new generation of automation control called NewsKing Next!, which provides a sequential view of the newscast and highlights an upcoming event.

Pathfire also offers solutions for both station automation and newsroom automation, and will show how its DMG News Connect can be integrated into AP ENPS and Avid iNEWS newsroom computer systems for better monitoring and control.

OmniBus Systems is also addressing both sections of a broadcast facility, and will showcase a new suite of components known as HeadLine Ingest for its HeadLine newsroom system, designed to cover a range of news station ingest requirements, from simple recording of line feeds to recurring scheduled bookings. The company's HeadLine TX system offers a combination of both manual and semi-automatic playout.

OmniBus will also showcase G3 Control, a station management system that provides device access, operation and management over distributed networks. Also on the automation front is Colossus V3, which can control a large numbers of channels, items or devices via a customizable desktop-based user interface as well as TX>Play, OmniBus' scalable, modular automation system for facilities operating up to 12 channels. Designed as a cost-effective solution into the DTV market, the system features playlist editing, schedule importing, and content metadata and schedule management tools. ■



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# AUDIO



by Mary C. Gruszka

**N**AB2005 is shaping up to be quite the sonic event, with new audio consoles for small and large productions, enhancements to digital editing, innovations in disk recording/storage and advanced microphones to capture every aural nuance. Let's take a listen.

## AUDIO CONSOLES/MIXERS

AEQ S.A. will exhibit the BC-2000D mixing console. The backbone of the BC-2000 is its TDM bus, with the capacity to route, mix or distribute up to 2,048 channels simultaneously.

Calrec's new "System Plus" for its Alpha, Sigma and Zeta consoles expands monitoring options with full user configurability and a fully adaptable and flexible color TFT metering system. It also enables the introduction of Calrec's 5.1 source input handling.

Calrec also will demonstrate its Alpha, Sigma and Zeta consoles networked via the Hydra network, which boasts new dynamic system redundancy at all critical points in the network chain.

Euphonix will spotlight its System 5-B and System 5-BP digital audio mixing consoles. The System 5-B is designed for on-air and live-to-tape applications, and supports up to 96 channels. The System 5-BP includes dynamic automation and can support more than 300 channels for both live and audio post applications.

Also at the Euphonix booth will be Max Air, a 96-channel digital mixing system designed for on-air, live-to-tape and outside broadcast applications.

Euphonix also will show its MADI routers, which can be used as stand-alone or integrated with System 5, Max Air and the R-1.

New enhancements to the Graham-Patten D/ESAM Series Digital Audio Mixers will be demonstrated in the parent company ISIS Group booth. The D/ESAM 8000 uses the Klotz VADIS mixing engine and routing system. The four-output/16-channel D/ESAM 400 targets mid-sized edit suites, while the D/ESAM 230 integrates a control console and electronics chassis in a single tabletop unit.

Harrison Audio Consoles will debut the Trion mixing console featur-

ing a traditional surface architecture with controls and assignments accessible for each channel.

Junger Audio will roll out the MIX8 small digital desktop mixer with eight-fader remote panel, two mic inputs, digital and analog I/O, and optional SDI interface.

Lawo AG will introduce the mc<sup>2</sup>66 compact broadcast and production console suited for OB vans. This console has an internal matrix of up to 3,072 x 8,192, with up to 192 DSP channels and 144 summing buses.

Lawo AG also will show its z4 digital mini mixer for smaller and ENG productions.

Logitek Electronic Systems will demonstrate the Mosaic digital console for Logitek's Audio Engine, a modular, flexible control surface that incorporates drop-in modules.

Miranda Technologies will introduce a multigroup audio mixer for its Imagestore HDTV master control switching and channel-branding processor.



Harrison Trion console

Sierra Automated Systems will lift the curtain on the Rubicon SL broadcast console control surface, designed for smaller stations.

Australian-based Smart AV will introduce its Elite Series range of Smart Consoles, available in 48-, 72- and 96 channel variants, and featuring a physical arc that spans the console within easy reach of the operator.

Version 2 software for the SSL C100 Digital Broadcast Console includes TouchPan, which provides full 5.1 panning access from the central touchscreen, with color-coded displays and comprehensive control of all surround parameters. Version 2 also supports new I/O expansion for the Centauri core and increases the C100's range of applications by supporting 44.1kHz native sample frequency operation.

Studer will showcase its 8 digital live production console. The Vista 8 incorporates the Vistonics user interface and has expanded the concept to provide output metering, control and other new features.

Tascam will introduce the DM-3200 digital mixing console featuring 32 channels, 16 aux returns, built-in 24 channel TDIF, a built-in eight-channel ADAT, and two expansion card slots.

Also new from the company will be the DM-3200 digital console featuring 48-channel mixing, DSP and integration with DAW recording systems.

Wheatstone will show its D-9 and D-5.1 consoles designed for TV.

Five new proprietary add-on effects have been added to Yamaha's Version 2 digital mixing consoles. The effects packages—Surround Post, Virtual Stomp, Reverb, Channel Strip and Master Strip—are designed to be used separately or in combination, and the control software is compatible with both Mac OS X and Windows 2000/XP platforms.

## AUDIO WORKSTATIONS

Bias Peak 4.1 for the Mac sports a brushed metal interface, with user-customizable toolbar and icon sizes, as well as an expandable drawer on each audio document that holds a library of reference, region and loop markers.

SoundSoap 2, also from Bias, is a new version of the company's "one-click" noise reduction solution. Version 2 adds a click-and-crackle removal slider and an enhancement slider to boost frequencies lost in recordings of degraded media.

Euphonix will demonstrate its System 5-MC integrated DAW and mixing system. The System 5-MC integrates the System 5 control surface with EuCon-aware applications such as Steinberg's Nuendo and Merging's Pyramix.

## AUDIO RECORDERS

Edirol will present its new R-4 four-channel portable recorder and WAVE editor. The R-4 records directly to an internal 40 GB hard drive, providing storage capacity for 58 hours of 16-bit/44.1-kHz stereo recording or more than 17 hours at 24-bit/96 kHz.

Sonifex will exhibit its D:Scribe transcription software that has been enhanced to include a recording package and CD-ripper, making it a complete recording, playback and transcription package.

Sound Devices will show two new portable high-resolution digital audio recorders, the 722 and 744T. The latter is a four-channel recorder with timecode. Both recorders record to internal drive and/or CompactFlash, uncompressed audio up to 24-bit, 192 kHz, full analog and digital I/O, and linking capability for additional channels.

Tascam will roll out the DV-RA1000 HD stereo audio recorder that records up to 24-bit/192 kHz or DSD, and records to DVD+R/RW, CD-R/RW media.

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AUDIO, PAGE 95



# Storage

CONTINUED FROM PAGE 74

storage. With the ability to simultaneously record and playback MPEG-2 transport streams, users have online access to up to five days in a satellite environment or up to 10 days in a terrestrial environment.

**Qualstar** will show the TLS series of tape libraries and the RLS series of rackmountable tape libraries.

**SmartDisk** will unveil NetDisk, which combines Ethernet and USB for secure storage, FireLite, a family of portable external hard drives and CrossFire, a family of high-capacity external desktop drives.

**RushWorks** will unveil MasterPlay Multizone, an integrated video server with billboard/CG; and MasterPlay DTV, a five-channel server with four channels of SD and one HD channel.

The MediaClient will be demonstrated at the **SeaChange International** booth. The MediaClient family is a series of standards-based client/server products that leverage the company's MediaLibrary, which provides compression and file format independent storage.

The new Prism visualization system, by **Silicon Graphics** will be on display, designed for digital cinema mastering and digital intermediates. SGI

will also showcase the InfiniteStorage RM610 storage for broadcast, which is configurable as an ingest/playout server, a playout SAN or a central repository for NLEs. The company will also showcase the InfiniteStorage RM660 storage for production.

At the **Spencer Technologies** booth attendees can see Newstore-4, a new four-channel news production still/clip store server. Each channel includes a built-in linear keyer, transition effects generator and DVE. Users can control external devices inserted in the newscast rundown from the touchscreen GUI.

Storage options from **Studio Network Solutions** will include globalSAN, a multiplatform Ethernet-based storage area network that's built on the iSCSI protocol. Also on display: The globalSAN X-8 system, an eight-bay, four-user package with 2 TB of shared SATA storage; and globalSAN X-16, a 16-bay, six-user package with 4 TB of shared storage.

**VertigoXmedia** will demo the newest version of its Xmedia Server, a core component of the company's MOS-compliant centralized asset management system. The new release of the Xmedia Server includes a Graphics Work Order Management feature that streamlines the graphics automation workflow.

**Video Technics** will unveil its next-

generation media server, the Apella HDS, a scalable, multiformat, multi-channel and multiresolution high-definition video server. Features include four independent HD or SD SDI output ports, or two HD or SD SDI output ports with corresponding key signals.



Fast Forward Mini DVR Pro

This year, **Zaxel Systems** will showcase the zAXiO, a 2 RU video server/DDR that offers multiple concurrent SAN I/O; the Zaxtar-H, which offers 4.8 TB of internal storage in 4 RU; the ZanTar 2K and HD server; and the Zaxtar 4K, a 4K digital cinema and projection presentation server.

## RECORDING & MEDIA

For professionals transferring video to hard disk or DVD formats, **BayStor** will offer the BK-2500 digital video recorder/archiver. The company will also demo the Barracuda-1, which combines the its BK-2500 content management technology with an optical DVD archiving robotic mechanism for high-volume standalone media

asset archiving.

New tools from **Doremi Labs** include the Orca Capture Station, an HD MPEG-2 record and playback system, the Nugget, an HD MPEG-2 video player and the V1-HD video disk recorder.

**DVEO** will demo its DVB ASI disk recorder with a new GUI remote-management feature.

**Fast Forward Video**, those masters of miniaturization, will unveil FieldPro DVR, a mini DVR that features video capture and playback at 60 fps. Also, the Mini DVR Pro On-Body DVR, a pocket-sized DVR that features scalable M-JPEG compression and 720x486-pixel image resolution; the Outrider CF board-level DVR and the Outrider-IDE board-level DVR will all be at the show.

**Focus Enhancements** will show the FireStore FS-2 studio DTE recorder, FireStore FS-4 portable DTE recorder and the FireStore FS-M MPEG DDR.

**Hitachi** will roll out a new digital recording system for its line of Z-series cameras. The new recorders, designed for the news and field-production markets, can record up to six hours of DV25 on removable Hitachi 2.5-inch hard discs.

For broadcasters on the road, **Laird Telemedia** will showcase the CapDiV, STORAGE, PAGE 100

# MCS VIDEO SERVER

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# Audio

CONTINUED FROM PAGE 93

Zaxcom will demonstrate its new Deva IV eight-track and Deva V 10-track field production recorders for location recording.

## AUDIO PROCESSING

Dolby Laboratories will return to NAB with its DP564 multichannel audio decoder, DP569 multichannel Dolby Digital encoder, DP572 Dolby E decoder and DP571 Dolby E encoder.

Independent Audio will showcase the E.A.R. 660 Fairchild-type valve limiter-compressor, as well as the Phoenix Audio DRS-2 mic-pre/DI module.

JK Audio will introduce the PBXport rackmount digital hybrid that effectively turns a multi-line phone into a talk show controller. PBXport sends a mic- or line-level signal into a PBX telephone system, while maintaining separation between the talk host and the caller.

Junger Audio will debut the d06 two-channel and b46 four-channel audio level processors. Both feature the Level Magic algorithm for automated audio leveling, as well as analog and digital I/O.

Highlighting the Linear Acoustic booth at the show will be the new LA-5421 StreamStacker audio bitstream multiplexer and LA-5124 StreamStacker/demultiplexer/AC-3 Splicer. Model LA-5124 offers enhanced channel density by extracting up to four 5.1 channel AC-3 encoded programs from a single AES-format digital signal. Stacked AC-3 streams produced by the companion model LA-521 multiplexer are fully compatible with all Dolby-certified AC-3 decoders.

Neural Audio will demonstrate its NeuStar Powerlift DTV loudness management. By using neural networks, Powerlift is able to react at varied ballistics to instantaneously correct audio that falls outside of the desired loudness window.

Orban/CRL will introduce the digital Optimod-TV 8382 audio processor designed for television audio. The 8382 controls program dynamics and employs a built-in CBS loudness controller.

NAB2005 will bring new language localization software from TM Systems: QC Station, quality control PC software that improves the workflow for dubbing and/or subtitling projects. Features include a waveform display of both the original and the recorded soundtrack to visually detect missing dialogue and level inconsistencies, as well as a dragging tool to effect synchronization.

Yamaha has added 30 new features to its DME24N and DME64N programmable DSP processors with

Versions 1.1 that can be downloaded free from the Yamaha Web site. The new components include an SPX-type processor with up to 43 4-stereo SPX series effects similar to those found on the DM2000 digital mixing console.



Sound Devices 744T portable high resolution digital audio recorder

## MICROPHONES & HEADPHONES

ATS Communications will show its Ultrasonic headphones that feature up to 98-percent electromagnetic shielding and what the company calls natural three-dimensional sound without any processing.

For microphones, ATS will show its Lapel Pin microphone, a lavalier designed to be placed on turtle necks



beyerdynamic MCE 86II shotgun condenser microphone

and T-shirts, as it can be disguised as a lapel pin, brooch or tie tack. ATS will also display its microphone podium clamp, the Ultraclamp, and the Yeoman press conference mic holder that can hold up to 17 mics with flags.

Audio-Technica will introduce the AT892 MicroSet small-capsule diameter (2.5mm) microphone. This miniature omnidirectional condenser headworn mic has an ergonomic under-ear design and a flexible contoured loop that hooks behind either the right or left ear for a secure, comfortable fit.

Azden will feature the SGM-1000 phantom-powered (or battery operated) shotgun microphone that features a switchable low-cut filter and a shockmount mic holder and windscreen.

beyerdynamic will introduce the MCE 86 II shotgun condenser microphone, for mounting onto camcorders. Also new from beyerdynamic, the M 58 dynamic microphone, designed for ENG/EPF and featuring an internal shockmount to reduce handling noise, as well as the hypercardioid M99 dynamic microphone, featuring the company's TG-X technology and the compact MCE 72 stereo condenser mic.

DPA Microphones will unveil its WindPac, an ultra-lightweight weatherproof solution for location recording.

Also new for NAB2005 will be the 4006-TL omnidirectional microphone, an updated version of the 4006. The

new model is equipped with a transformerless preamplifier design, energized by 48-V phantom power.

Edirol will showcase the CS-50, a compact, lightweight stereo shotgun condenser microphone, featuring bass roll-off capability and selectable wide stereo or narrow (focused) polar patterns.

Sanken Microphone will display its lineup of microphones including the CS1, CMS-10, and HAD-48.

Sennheiser Electronics will be on-hand to present its comprehensive line of wired and wireless microphones and headsets.

## WIRELESS AUDIO

Azden will show the 100LT UHF wireless microphone system designed for small DV cameras. Features include 63 user-selectable frequencies, compact size, mini or XLR output cable, receiver shoe mount and system monitoring LEDs. Also from Azden is its APS 25 wireless powered speaker system, available with VHF, UHF and infrared wireless.

Lectrosonics will debut the small-sized SM wireless 100 mW microphone transmitter, featuring digital-hybrid wireless compandor-free audio transmission, 256 frequencies in each of nine groups and compatibility-emulation modes for operation with existing analog receivers.

Zaxcom will show its digital ENG wireless system featuring a two-channel lightweight low-power receiver.

## MONITOR LOUDSPEAKERS

Tascam will introduce the VL-X5 studio monitors featuring 5-1/4-inch woofers, silk-dome tweeters and 60+30-watt bi-amplified power amps.

TSL will roll out the Cameo for compact and self-powered close field audio monitoring.

## AUDIO MISCELLANEOUS

Acoustical Solutions will showcase its array of acoustical products. AlphaSorb fabric-wrapped wall panels include the company's AudioSeal sound barrier for an STC rating of 29-33.

Independent Audio will exhibit the Signex CPJ48D25 rear D-sub patchbay with standard contacts and Signex CPJ48D25G rear D-sub patchbay with gold contacts. ■

## SIGMA NAB 05

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by Mary Gruszka

**A**s products incorporating H.262 (MPEG-4 Part 10) technology are expected to hit the NAB2005 show floor, so too will the test equipment needed to measure these streams. Companies known for their MPEG analysis tools are adding H.262 capability to service this growing product category.

#### MPEG

Acterna will demonstrate the DTS-330 digital broadcast test platform that supports MPEG-2, DVB and ATSC testing in one box, with a wide range of application modules. Acterna also will launch a new satellite interface to its MPEG product line that will extend 8PSK (Turbo-code), QPSK (Turbo-code), QPSK (DVB), and QPSK (DCII) modulation support.

K-WILL will showcase the TSI-2000 transport stream inspector that evaluates HD and SD MPEG-2 transport streams in real time. The TSI-2000 is an available module for the TMax-2000. It extracts video quality from the elementary stream, checks for ETR290 errors, and reports results to a PC.

A new MPEG card for the LV5700A multi-SDI monitor will be demonstrated in the Leader Instruments booth. The card decodes selected streams and allows the LV5700A to show waveform, vector, picture and audio of the selected program.

Pixelmetrix will debut VISUALmpeg, a family of analysis tools for evaluating and testing MPEG-based advanced coding. All MPEG parame-

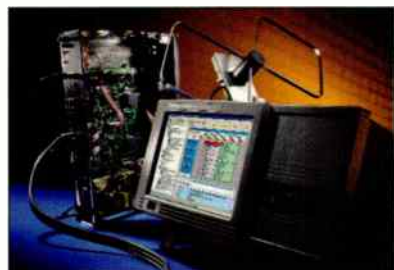
ters are extracted and displayed with the ability to drill down to all areas of MPEG stream and image analysis.

Pixelmetrix also will unveil the DVStation-IP Portable, a stand-alone version of DVStation, for monitoring transmissions of MPEG-2 data over IP networks, as well as DVStation DTA, a software package that allows the user to apply all DVStation MPEG analysis features offline to transport files captured by IneoQuest IQController software. Version 4.7 software for DVStation, supporting DVB-H will also be demonstrated in their booth. In addition, the company will unveil DVStor 2 TB, which extends the DVStor product line to a storage range from 100 GB to 2 TB.

Rohde & Schwarz will show new options for its DVM400 MPEG-2 analyzer that can monitor up to four stream inputs. The unit will now be available with an MPEG-2 generator/recorder/player, and an option that includes DVB-H functionality.

Sencore will introduce the VIP 1350, for MPEG over IP analysis and generation. The unit provides real time IP analysis, and can extract the MPEG transport stream data and direct it to a physical transport stream outputs.

For MPEG over IP, Sencore will offer new Video Bridge products that provide continuous monitoring of TV signals in any network where video is being carried over IP frames. Sencore will also show a new H.264 analyzer with offline analysis software.



Tektronix MTS400 with CaptureVu

Tektronix will introduce K15 Version 2.1 that tests video quality of service (VQoS) for 3G networks. Video files can be shared with the Tektronix MTS4EA Elementary Stream Analyzer.

The MTS400 MPEG transport stream debugger/analyzer includes a number of new features including

CaptureVu, which allows the user to set up a sophisticated trigger scenario, and when met, automatically buffers the signal, pauses, and launches an in-depth deferred time analysis.

The MTX100 will be shown with new version 5.1 firmware. With the new software, multiple triggers can be accepted. Combined with the MTM400, it provides transport stream monitoring that includes continuous recording and error logging.

Thales Broadcast & Multimedia will exhibit the Granite and Granite Sentinel MPEG transport stream monitors.

Triveni Digital will demonstrate its enhanced StreamScope transport stream monitor and analyzer. StreamScope can display HD and SD audio/video programs of all ATSC and SCTE formats.

Wohler Technologies will demonstrate the Tandberg Television/Wohler monitoring IRD, which accepts standard QPSK or DVB-ASI inputs and provides confidence monitoring of the audio and video signals, while decoding them for retransmission.

#### AUDIO & TIME CODE

Dorrough Electronics will demonstrate its new audio alignment generator that features a tone burst to confirm that a channel has sufficient headroom to pass the peak of the program material.

ESE will debut The ES-185U GPS master clock/time code generator as well as the ES-461U SMPTE time code generator with jam sync. Also new are the ES-462U ESE to SMPTE time code converter and the PC-471PCI time code interface card.

A new UPV compact audio test set with internal PC for analog, digital and combined will be shown in the Rohde & Schwarz booth. Features include true dual-channel signal processing and generation, recording and replaying of audio signals, sampling rate up to 192 kHz, FFT analysis, user-programmable filters for analyzers and generators and jitter analysis and interface tester.

Ward-Beck Systems will showcase its new AMS8-1 and AMS8-2 multi-channel audio monitors, featuring four selectable inputs that can be PCM,

Dolby E, Dolby AC-3. The Ward-Beck RLM-24 24-channel stereo loudness meter offers 24 stereo LED bargraph meters. Each pair has a silence sensor with audible alarm and GPI output.

Wohler Technologies will introduce a new line of level meters for HD and SD-SDI. With auto sensing SDI inputs, these meters will display all embedded audio channels on high resolution bargraphs. Wohler also will demonstrate the VAMP2-S8MDA for eight channel analog, AES/EBU, HD-SDI/ SD-SDI digital multi-channel audio monitoring and conversion with level metering. The VAMP2-S8MDA also comes with a gooseneck-mounted VPODTM LCD screen and two composite analog video sources and two HD-SDI/SD-SDI digital video sources.

#### VIDEO

Astro Systems will introduce two new waveform monitor/vectorscopes, the WM-3004 HD/SD and WM-3007 HD/SD. Both offer a simultaneous quad display (waveform, vectorscope, sound and picture display) and also a dual display (waveform and picture).

Doremi Labs will introduce the HDG-10 portable HD and SD video test generator. The HDG-10 provides 15 still patterns and seven moving test patterns in SD and HD formats at full broadcast quality.

Eyeheight will demonstrate legalEyesHDi, a compact HD-SDI video legalizer. Using full 10-bit processing, it allows users to ensure that a



Hamlet Flexiscope waveform, vector and audio picture monitor.

videotape master feed is within the levels set for the target delivery chain or transmitter.

Hamlet will exhibit the Flexiscope, a multi-format, multi-standard handheld waveform, vector, audio picture monitor that features plug-in input modules. Hamlet also will exhibit the LCD292WVA HD SDI, SD SDI, analog and audio signal monitor as well as demonstrate a new version of the Protean Axiom, an HD/SDI signal generator with embedded audio, and a PAL/NTSC/525/625 video and audio generator.

Horita will display its range of products including low cost SMPTE/EBU LTC and VITC generators/readers/translators/inserters and also

TEST & MEASURE, PAGE 98

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# Test & Measure

CONTINUED FROM PAGE 96

blackburst/color bars/test signal generators.

Image Video will exhibit a variety of quad split processors—the LVX-4, VxV-4-DVI (DVI output), VxV-4-SDI (SDI and composite analog outputs). All of these units accept SDI and analog video inputs, and feature embedded audio metering and UMD tally capability.

Kramer Electronics will introduce the 840 DVI pattern generator that provides 32 built-in patterns including some unique patterns containing movement to allow testing of display refresh rate performance.

K-WILL will demonstrate the VP21S (Video Probe) for double stimulus SDTV video quality evaluation. The unit now features up to eight seconds delay, and will automatically synchronize two inputs (source and copy) and perform pixel by pixel, field by field, real time measurement of video quality differences between the source and copy.

K-WILL also will introduce the QuMax-2000 (Quality Matrix) real-time video and audio quality evaluation.



Panoramadv, the video division of Wohler, will showcase the PENPAL-HD.

Features include automated and remote capabilities with logging feature, up to 12 channel monitoring for single stimulus and up to 4 pairs of double stimulus.

Leader Instruments will showcase new rasterizer products—the LV7700 multi-SDI rasterizer, which conforms to 17 SD and HD standards, and the LV7720 SD-SDI rasterizer that is upgradeable to HD.

Leitch Technology will show its Videotek VTM family of high definition, standard definition SDI and composite analog on screen test and measurement instruments including a new look and feel for the VTM-450E HD/SD, VTM440HD/SD, VTM-420HD/SD, VTM-330EG, VTM-310G, and VTM-300G multiformat on screen monitors. New for NAB2005 will be

the TVM-950HD multiformat, HD SDI monitor, with integral, high-resolution color LCD display.

Sigma Electronics will demonstrate the TSG490 signal pattern and test generator and CO490 SPG changeover. The TSG490 is a fully functioned NTSC/PAL composite or composite/component generator with a comprehensive selection of optional features.

Tektronix will debut the video and audio WVR7000 series to its rasterizer product family. Features include the ability to monitor HD and SD SDI, analog composite, and audio signals, and the ability to simultaneously provide four different and configurable views of the signal.

Wohler Technologies will introduce the RM 2440 SDI. Each of the four LCD video displays now features both an SDI input and a composite video input selectable on a front panel A/B switch.

Panoramadv, the video division of Wohler, will debut the PENPAL-hd, a high-definition version of its PENPAL handheld audio and video test signal generator. The PENPAL-hd features a range of 32 video test patterns in 18 HD standards, each of which can be combined with different audio tone settings.

Videoframe will demonstrate its VF200 Control and Monitoring System, featuring an HD transfer switch module, AES/EBU audio transfer switch module, built in audio signal monitoring and RS422 transfer switch module.

## RF

Leader Instruments will demonstrate the LG 3803 8VSB/QAM signal generator that integrates coding modulator, CN generator and upconverter in a single instrument. The unit also includes a built-in pseudo-random (PN) signal source and BER counter, and real time coding and modulation.

Modulation Sciences will debut the model MSI 4400 8 VSB analyzer that features tap weight equalizer graphs, eye pattern diagram, constellation display, SNR/MER/EVM strip charts, signal strength metering, bit error rates, data logging, user configurable alarms and the capability of zeroing the tap weights.

Potomac Instruments will exhibit its line of field strength meters including the FIM-71 (VHF) and FIM-72 (UHF).

A new line of handheld spectrum analyzers will be demonstrated in the Rohde & Schwarz booth. The FSH models go up to 6 GHz, provide analog and DTV measurements, and can do true power measurement with external power sensors. Rohde also has enhanced its SFU broadcast test system to operate with DVB-H, DVB-T, DVB-S, DVB-S2 (broadcast services), TDS-OFDM (DMB-T), DVB-C and DirecTV legacy (DSS) standards.

Sencore will introduce the Atlas

MRD 3187, a receiver/decoder comprised of a configurable hardware platform, and featuring remote access capabilities and multi-unit management software. Sencore also will show the DTU-234 RF probe, that in combination with the RF Expert software, allows RF measurements of 8-VSB and QAM64/256, analog measurements (level, MER, pre/post BER), and "go/no go" testing, directly from a laptop.

TFT will exhibit its line of modulation monitors.

Z Technology will unveil the R507DTV RF signal coverage measurement system for analog or digital television signals. Used on a PC, the R507DTV records field strength with GPS location information for mapping in Microsoft MapPoint. Z Technology also will demonstrate the new DTV1010, a full-featured DTV measurement receiver providing SMPTE310M, audio/video and VHF ATSC outputs. The new FSMeterMate software is a Windows application for the control and recording of analog television and radio signal data.

Z Technology also will exhibit the DM101, a compact ATSC demodulator for OEM applications providing a SMPTE310M transport stream output.

## MISCELLANEOUS

Canare will demonstrate its HFO camera cable checker that tests HFO camera assemblies, the optical and electrical signal at the same time.

Comlab will show the SECURE-IP multilanguage Davicom MAC2 site monitoring and control unit for accessing and controlling remote site equipment via the Internet.

DNF Controls will introduce a data logging option for the Analyst RS422/RS232 tester, which allows users to isolate, identify, and resolve RS422 and RS232 interface problems.

Esser Test Charts will bring new test charts to NAB2005. The Mini HD set kit includes three charts: back focus (TE 148), grey scale with super black (TE 232) and color circle test chart (TE 233) for selective color correction.

The Esser HD full field resolution test chart TE 237 is for resolution measurement of the complete picture area. The spherical illuminator LE 6-100 features adjustable light density up to 9000 Lux, better than 96 percent evenness of the illuminated area and a built-in luxmeter.

DSC Labs will introduce CamBelles skin tone charts which feature four models of different ethnic groups, in "Summer" and "Corporate" chart versions.

Tentel will bring many new products to NAB2005 including complete tooling packages for DVCPRO, accessories and work fixtures for DVCPRO maintenance, DVCAM tool kit, EDS-88A in-circuit capacitor checker, and other factory tools, parts, and components at discount prices. ■

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# Storage

CONTINUED FROM PAGE 94

a portable, open format DVR that plays and records digital video directly from a DV camera or camcorder onto its hard disk.

With its eye on the professional broadcast and production industries, Maxell will roll out the DVD-R Plus

16x Series, which offers 4.7 GB of capacity and currently supports 16x write speeds. Also new this year is the DVD-R BQ 16x Series and the MPEG-IMX videocassette.

Microboards Technology will demo the DX-2, an automated disc publisher that offers dual high-speed CD or DVD recorders and a FireWire 800 connection for 16x DVD recording.

Attendees at the Nebtek booth will

get a glimpse of the Raptor 50, a variable-speed digital recorder and playback machine.

Panasonic will show enhancements to its AJ-SPD850 P2 studio recorder, including an 850 GB DVD drive, all part of its DVCPRO P2 lineup of solid-state memory products. The company also will introduce a portable half-rack-size VTR called the AJ-SD255 DVCPRO/DV recorder



Panasonic AJ-SPD850 P2 studio recorder with DVD-RW drive

and a new professional DV tape series called Advanced Master Quality.

Research Technology will display its line of peripheral media tools, including TapeChek videotape evaluator/cleaners.

Smartdisk will demo FlashTrax, a palm-sized multimedia player/recorder that records video, transfers photos from flash cards, plays back on a color LCD and outputs to TV or projector.

Targeting the film, post and multimedia markets, Sennheiser Electronic comes to NAB with the Rosendahl bonsaiDrive, a standalone hard disk recorder that allows for uncompressed 4:2:2 PAL or NTSC video together with stereo analog audio and eight channels of ADAT at 24-bit/48 kHz.

Sony comes to NAB with HD on its mind, and will showcase a recently introduced HDV workflow system for video production professionals, including the HVR-M10U VTR. Sony will also display enhanced versions of its HD VTRs, including the HDW-S280 with new 24p capability, and the new SRW-5500 HD VTR, which is switchable between the HDCAM and HDCAM SR record formats. Sony is also showing an enhanced version of its DSR series of DVCAM Master Series studio videotape players/recorders, which includes an integrated iLink IEEE-1394 digital interface.

SpectSoft will roll out a new uncompressed frame-based SD, HD and dual-link capture and playback DDR with asset management capabilities.



Grass Valley Venom Flashpak

In addition to servers and recorders, Thomson Grass Valley will launch the Grass Valley Venom FlashPak, a solid-state recording system for the Grass Valley Viper FilmStream digital cinematography camera. The Venom FlashPak captures the uncompressed output of the Viper camera in a solid-state system. ■



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Photo courtesy of Sony Corporation

ERG HD Monitors



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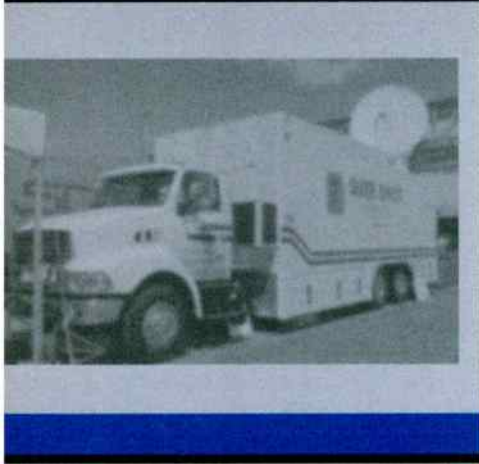
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by Claudia Kienzie

As broadcasters move video signals the biggest challenge is to maximize their most precious resource: bandwidth. At NAB2005, we will see many new products to help broadcasters send signals efficiently, while maintaining the highest quality. Also expect to see more gear targeting the newly approved 2 GHz BAS transition.

#### SATELLITE

Astra Digital Video will introduce its ENC-H11 HD MPEG-2 encoder module for its VideoRunner networking system to enable support for 1080i

and 720p. The company will also introduce the TMX-M22-TR bitstream transrating module for VideoRunner.

ABE Elettronica will roll out its DVM 1000/D, incorporating up to four MPEG-2 encoders and a multiplexer in a single 1 RU solution, with QPSK, 8PSK, 16QAM SNG digital modulator for satellite uplink.

Adtec Digital will debut the DTA-3050 digital turn-around media router with 10 DVB-ASI inputs. Designed for direct-to-home and enterprise IP television applications, the DTA-3050 has 10 ASI inputs, Gigabit Ethernet and optional conditional access.

Broadcast Microwave Services will introduce its Truck-Coder II ENG/OB COFDM transmitter for digital/analog transmission in 6 MHz bandwidth.

The new Showman 1000 receiver/demodulator will be featured at the Broadcast Technology booth. The unit will provide multistandard off-air monitoring for transmitter feeds, OB reception and service acquisition. The company will also show the DTMD1500 COFDM modulator for transmission applications.

Services form a big part of this industry and BT Broadcast will be at the show to tout its international and domestic satellite and terrestrial distri-

bution services.

Conax AS will debut the CAS7 conditional access system for DVB and the Virtual VOD PVR to automatically push video content to a large number of STB households during off-peak hours.

Clear Channel Satellite will show its new XtremeSat portable terminals, offering high-speed connectivity for transmitting and receiving audio, voice, video and data.

Crawford Communications will introduce its satellite transmission, television network origination and playback, and transportable uplink services.

New at NAB2005 from DAWNco will be a high-gain pipe-mounted 4.2-meter satellite dish that can be easily installed and adjusted.

#### GMPCS

Communications will demonstrate its new BGAN, which offers high-speed circuit-switched and packet data services, plus voice telephony, via a portfolio of small, lightweight user terminals.

Intelsat will demonstrate its approach to occasional and dedicated video solutions.

Iwedia Technologies will rollout Comedia Technology, a comprehensive software suite for DTV devices that targets various networks and devices, including broadcast, broadband and home-networking gateways.

Mackay Communications will show its Inmarsat, Iridium, Globalstar and VSAT satellite communications equipment and services.

NES Communications Services will introduce its video and data communications services, including live production, satellite transmission, videoconferencing and Web streaming.

Portable satellite products will be the focus at the Norsat booth. The company will display its portable and lightweight OmniLink terminals, which can be used anywhere and offer the same performance as much bigger systems.

Patriot Antenna will showcase a new 2.4-meter offset antenna, as well as an improved tripod for its 1.8-meter flyaway. Also on hand, a new satellite dish mount that uses a modified plane to enable a more practical azimuth fine tuning adjustment.

Quintech will be at the show to promote its line of commercial-grade rackmount microwave matrix routing systems, RF-sensing redundancy switches, LNB power supplies, RF splitters and combiners, and frequency-converter products.

Scopus Network Technologies will unveil the IRD-2900 IRD for digital turnaround applications. Scopus will also display the new E-1720 DSN encoder, modulator and L-band upconverter in 1 RU, as well as the UE-9000 universal MPEG encoding platform.

Glowing from its recent successful launches of the AMC-12 and AMC-16 satellites, SES Americom will be talking about its recent acquisition of

Verestar, as well as its SignalSAT service for broadcasters who want to maximize their market reach.

New from Nextamp is the NexMaster HD, which provides invisible watermark embedding with HD-SDI I/O, investigates pirate samples (including DivX files and black-market DVDs), as well as receiving watermark data from video.

Secuenzia Pixels will debut the new SafeView conditional access system, designed for satellite, terrestrial, and cable broadcast. Also in the company's NAB2005 booth will be security and smart-card solutions.

Skylite Visiosat will show a new multisatellite dish, satellite receiver and satellite switches.

Swe-Dish Satellite Systems will introduce the IPT Suitcase, a compact satellite system that allows live 4 Mbps broadband transmission of IP voice and data. The company will also rollout the FA150K flyaway system, an easy-to-transport satellite earth terminal.

New DSN encoders will be the hot topic at the Tandberg Television booth, including the E5784 (4:2:0) and



Patriot Antenna's new 2.4 offset antenna

E5788 (4:2:2) HD units, which provide either L-band or IF modulation in an upgradeable 2 RU chassis. Offering both SD and HD encoding, these units handle both ATSC and DVB.

Wegener will introduce AVC satellite receivers to support AVC and HD video applications.

#### MICROWAVE

The Coder II family of MPEG-2 COFDM systems will be a highlight at the Broadcast Microwave Services (BMS) booth.

Cable AML will show its digital headend module.

DB Elettronica will introduce its new MDTV digital microwave link series. It operates in the 1.3-to-24 GHz range and carries up to four high-quality digital video and 16 audio programs.

Harris Broadcast will release new HD capabilities for its NetVX inte-

SATELLITE, PAGE 113

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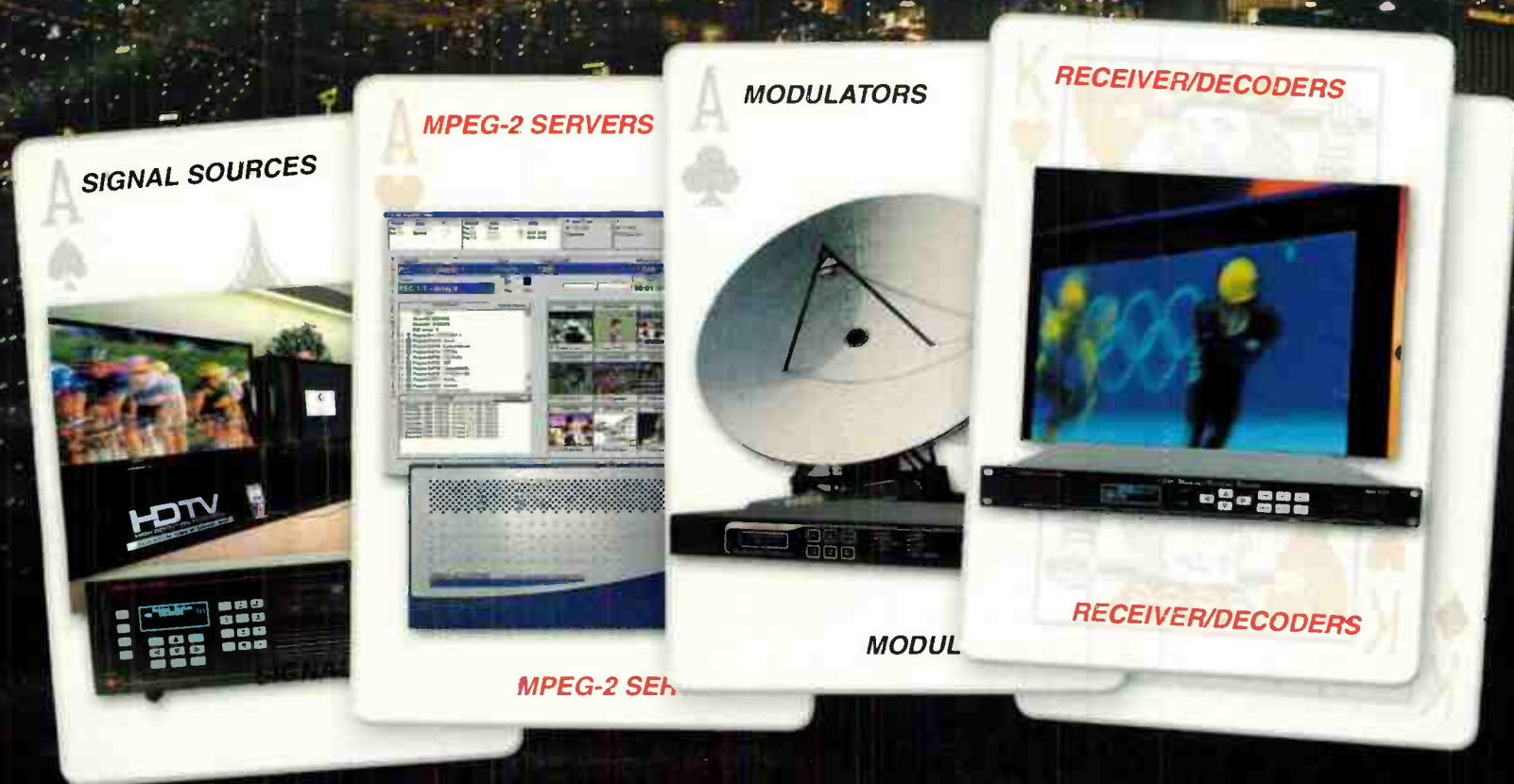
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# Camera Support

CONTINUED FROM PAGE 60

Artist Intercom Systems. The belt-pack/headset station is a fully integrated digital system for combined digital matrix and party-line style intercom. The platform can be used stand-alone or in conjunction with matrix systems such as Riedel's Artist platform. The system consists of the C3 Digital Belt-pack, the C44 System Interface Box and the C31 1x3 splitter.



Reidel C3 digital belt-pack

Also new from Reidel is the DHY-101 digital telephone hybrid/VoIP interface for Artist Intercom Systems. The interface is designed to be compatible with all Riedel Artist Series intercom systems as a plug-in card for the 19-inch/1RU DHY-401 main-frame. It provides bi-directional communication between the intercom matrix and a standard DTMF capable

analog telephone line.

Another new VoIP interface from the company will be the DHY-102, which offers all features of the DHY-101 in addition to providing voice over IP communication connectivity. The DHY-102 establishes an integrated solution for connecting Artist intercom matrix products over standard IP networks.

Telex will showcase the Radiocom BTR-1 series of UHF agile-encrypted intercoms with ClearScan and 32-bit linear feedback shift. Also being launched—the Telex PH-100 and PH-200 noise-reduction headsets with dynamic microphones.

## MONITORS

Boland Communication will showcase an array of SD and HD monitors in various sizes displaying analog and SDI signals, featuring standard and HiBright illumination, wide angles, all aspects and MegaPixel. They are designed for mountings in rackmount, rack twins, desk, VESA, yoke and wall use.

ERG Ventures will introduce the HDM-EV85 8.4-inch monitor, specifically designed for the Sony HVR-Z1U and HDR-FX1 camcorders. The 8.4-inch monitor's high resolution was developed to allow HDV users to frame, focus and compose images on a high quality HD monitor.

Transvideo International will introduce a range of new LCD monitors for field production. The 6.5-inch 16:9 Rainbow II SuperBright monitor is switchable to 4:3 and anamorphic (1:2.35), and offers a crisp image from which to focus. The backlight system outputs 900 NITS that neutralizes sunlight for outdoor shoots.

The company's 5-inch Rainbow II SuperBright monitor accepts NTSC, PAL BG, PALM, PALN, and is switchable 4:3, 16:9 and anamorphic with built-in format converter. It features a 140-degree viewing angle, and the backlight system outputs 700 NITS for optimized performance in full sun.

## STORAGE

CineBags will feature its CB-01, a large production bag with removable pouches, a total of 23 compartments, large padded shoulder strap and made from reflective material for safety. It is designed to keep tools organized on location.

The company will also showcase its CB-10 Cinematographer Bag, designed for the tools of the cinematographer and gaffer. It has six padded pouches for light meter, sport meter, cameras, laptop, script, gray scale and other tools of similar size.

IDX will present its new universal field production bag.

KATA, displaying in the Bogen



Cinebags B-01 Production Bag

Imaging booth, will present its new line of HD camera bags. Using KATA's military-specification design and materials common in the company's other products, the new HD camera bags are designed for the larger HD cameras now coming into use.

The HDV WingBag and WingRoll storage bags, along with a new rain-cover—all tailored for the new Sony HDV camcorders—will be introduced in the Petrol booth, along with the Petrol CAB Camera Accessory Bag, the Cocoon Pak and the PDCB Petrol digital camera bag.

SKB/Cases by Source will showcase its array of rugged foam-lined transit cases for video equipment, designed to be water and dust-tight.

Zero Manufacturing will display its line of aluminum and plastic protective cases designed for field instruments and sensitive electronics. ■



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The LV5750 Portable Multi-SDI Monitor, follows the design and menu structure of the LV5700A while reducing the size and weight of the instrument. Maintaining a similar operation and menu structure between the 2 instruments allows operations and engineering personnel to use virtually the same instrument in the studio and in the field.

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World Radio History





by Bob Kovacs

If the FCC and Congress are to be believed, this is it: Many TV stations in the top 100 markets must go to full DTV power by July 1 or run the risk of losing part of their coverage areas.

Many of these stations are already at or near full power, so it won't be quite the rush as the original requirement to begin DTV broadcasting. However, many stations jumped on the low-power bandwagon and some of these must pay the full-power ticket if they want to remain aboard. These stations must leap to full power by July 1, 2005.

The good news is that manufacturers knew this date was coming and had excellent recent experience with earlier DTV deadlines, so there should be few problems with deliveries, shipments and installation. However, if your station has yet to go to full power, NAB2005 may be your last time to shop for the technology that best meets your needs.

#### TRANSMITTERS

Ai, the company formerly known as Acrodyne, will spotlight its Quantum line of UHF transmitters, which are available with multistage depressed collector (MSDC) IOT technology to improve efficiency for both digital and analog operations. With a couple stations now operating Ai MSDC IOT analog transmitters and showing significant utility savings, it's

clear that MSDC is not just a digital-only technology.

Ai also has standard IOT transmitters in its high-power Quantum line, which are still substantially more efficient than the klystron and diacode models of 20 years ago. All Quantum models come standard with the company's Remote Parameter Monitoring (RPM) that lets you monitor and adjust the transmitter with a PC.

High power is also the theme at Harris, where the company's PowerCD line will lead its transmitter offerings. For NAB2005, the PowerCD is shipping with MSDC IOTs to provide the highest operating efficiency. Coupled with Harris' Apex exciter that features real-time adaptive correction, the PowerCD minimizes distortion and maximizes output power.

PowerCD also features the company's eCDi transmitter network monitoring and control system, which lets broadcasters keep track of operating parameters over the Internet. eCDi



Harris PowerCD transmitter

will be prominently featured in the Harris booth.

High power will anchor the Axcera booth, where the company's Visionary IOT transmitter will get the most attention. Fitted with either an oil- or water-cooled MSDC IOT, Visionary systems are available with up to 180 kW of power for digital broadcasting.

At the other end of the transmitter, Axcera will show off its DT2B digital exciter/modulator that features complete digital signal processing. The

company is also a leader in the concept of "distributed transmission," which may be the ideal way to save electrical utility costs while reaching your full audience. Axcera engineers will be on hand to explain how its DTxA2B distributed transmission adaptor can be used to target hard-to-reach locations.

Armstrong will be on hand to present its line of solid-state VHF and UHF transmitters, which are available in power ratings from 2 W to 16 kW. All the company's transmitters are air-cooled for simple installation and operation, and the transmitters' amplifiers have been linearized to work for both analog and digital operation.

The high-power DigitalPlus DTV transmitter will be in the spotlight at the Astre Systems booth. Featuring a digital control and monitoring system the DigitalPlus uses the L-3 CEA MSDC IOT for high efficiency.

Solid-state DTV transmitters will be featured at the Bext booth, where the company's DTV transmitter is available in custom power levels up to 10 kW. The unit features hot-swappable power-amp sections to simplify maintenance and testing.

DB Elettronica will unveil its MD20000/WKD water-cooled, LDMOS TV transmitter with a rating of 20 kW analog and 6 kW digital.

DMT USA will present its large family of transmitters, with output power that ranges 0.5 W to 9 kW for DTV broadcasting. The modular design of the company's products makes it easy to upgrade your equipment to higher output while using many of the existing components.

In case you're wondering what happened to Italian transmitter manufacturer Itelco, the company is now known as Electrosys. At NAB2005, the company will show its full transmitter line, including its IOT DTV transmitters that are rated up to 100 kW.

A spunky low-power DTV transmitter first made a name for KTech Telecom in the broadcast industry. At NAB2005, the company will show its

Xtreme-2000 series of 8-VSB translators that receive, demodulate and re-modulated DTV signals at power levels up to 50 W.

Larcan will be at the show to present its Eclipse solid-state DTV transmitter line. Based on the company's Magnum DTV transmitter, Eclipse offers a broad power range, hot-pluggable modules and a distributed con-



Larcan Eclipse solid-state DTV transmitter

trol architecture. Larcan will also unveil its Meridian line of medium-power solid-state transmitters at NAB2005.

The UTX transmitter series from Pineapple Technology will debut, with the company pointing out features such as its modular construction that makes most components field replaceable. The solid-state UTX series will have models in the low- to medium-power range.

New from Rohde & Schwarz will be the NX8200 transmitter platform that shares components through a broad line of radio and television transmitters. The company will also unveil its NetCCU 800 transmitter control system that has bilingual—English and Spanish—capabilities.

Superior Broadcast will roll out its Eagle line of high-power UHF transmitters, including a model that produces 60 kW for DTV transmission. The liquid-cooled Eagle transmitter uses the company's new ATSC exciter.

A range of transmitters will be featured at the Thales Broadcast booth,

TRANSMISSION, PAGE 112

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Get your ideas in motion!





by Geoff Poister

As software development marches forth, the NAB show will continue its expansion into all things graphic.

#### GRAPHICS & ANIMATION

Pinnacle Systems is extending HD across its entire Deko range of products, in line with its "PracticalHD" philosophy. Pinnacle 1000HD offers 2D motions and effects, clip playback with matte and a feature called "Unique SuperChannels" that allows one channel to do transitions from one graphic to another, with video clip and key.

Also new is Deko3000HD, Pinnacle's real-time HD character generator with 3D effects as well as Pinnacle Deko, Version 4, offering dual HD/SD compose.

Boris FX will introduce Boris Blue, a real-time 3D compositing and motion-graphics application combining multiple shapes including 3D models. Also premiering will be Volume II of Boris Continuum Complete for Discreet Sparks. We will also see Boris Continuum Complete AVX running on AVX 2.0, the latest version of the effects plug-in architecture from Avid.

GenArts will showcase its Sapphire Plug-ins, a collection of more than 175 state-of-the-art image processing and synthesis effects that integrate into almost any NLE on the market, including Adobe After Effects and Premiere, Apple Final Cut Pro and Avid.

Three new stock footage lines from Artbeats will be released: International

Lifestyles, International Establishments and City Aerials.

e-mediavision.com will launch Point-HD, an HD broadcast graphics presentation system for sports, news and weather. Point-HD works in HD and SD as well as allowing simultaneous dual-format programming graphics in 2D and 3D.

For-A digiStorm HD will debut at the show. With on-air graphics developed in collaboration with Brainstorm Multimedia eStudio virtual studio software program, digiStorm HD simplifies virtual studio and graphics creation by integrating the functions of a variety of devices, including chroma-keyer, switcher, camera calibration software and numerous plug-ins.

Post Holes will introduce three new libraries of royalty-free, pre-matted stock clips. All clips are full-motion video clips originated in HD.

Known for its "Jump Backs," Digital Juice will introduce VideoTraxx royalty-free stock footage; StackTraxx customizable production music; and Editor's Toolkits, complete graphics and effects post-production editing packages.

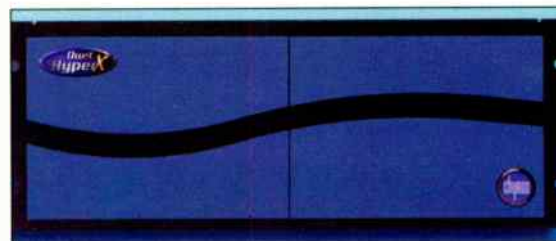
Capital Networks will exhibit Audience, a standalone or bundled

product for a range of content creation, distribution and display applications.

Eyeheight will introduce its SQ-2E 2D digital video effects system with integrated keying.

eyeon Software will show Version 5 of its Fusion compositing technology.

Expanding its training programs, Future Media Concepts will offer extensions into Avid, Apple, Adobe, Macromedia, Boris, Digidesign, Discreet, NewTek, Softimage, Maya and Quark.



Chyron Duet HyperX

More training options will be offered by lynda.com, including Learning Adobe Premiere Pro 1.5 and Learning Apple DVD Studio Pro 3.

VertigoXmedia has partnered with Matrox to supercharge the new VertigoXG family of real-time broadcast graphics systems. VertigoXG provides

single- or dual-channel graphics and video play-out capabilities for a range of advanced real-time broadcast applications. Producer Xmedia Suite includes new features that further streamline the graphics production workflow.

Crystal Vision will launch the Safire HD chroma keyer.

da Vinci Systems will unveil its new 2K Elite Series, which provides three distinct upgrades. Look for new features for the Resolve nonlinear color enhancement family and new upgrades to the revival restoration system.

Vista Systems will showcase Spyder, a small, flexible real-time compositing and windowing system.

Silicon Graphics (SGI) will introduce its Silicon Graphics Prism visualization system,

offering a more compact open architecture that can handle the 4K requirements of digital cinema mastering and digital intermediates.

New to the HDV line will be the Adobe Systems HDV Plug-in for Adobe Premiere Pro 1.5.

GRAPHICS, PAGE 110

## Signal

CONTINUED FROM PAGE 88

frame in two seconds and a 4K frame in four seconds.

Nextamp will spotlight NexMaster HD for invisible watermark embedding with HD SDI I/O to protect against movie piracy.

Nucoda, which was recently acquired by Digital Vision, will launch its Colour Timer resolution-independent color correction system that replicates the film lab process. The company also will announce Film Master, a resolution-independent film finishing solution with editing, effects, color grading and mastering toolsets.

Thomson Grass Valley has enhanced its Spirit 4K film scanner with a new six-vector color corrector option. The company also has added Bones Repair and Bones Stabilizer modules to its Bones platform. Also marking its debut at NAB is the Grass Valley Luther color space converter.

#### DATA BROADCASTING & WEBCASTING

Comlab will present its Secure-IP multilanguage Davicom MAC2 site monitoring and control unit providing 128-bit encryption for Internet communications.

GMPCS Personal Communications will unveil the new BGAN, offering high-speed, circuit-

switched and packet data services as well as voice telephony via a portfolio of small, lightweight user terminals.

Optibase will debut its MGW 1100 compact carrier grade TV streaming platform that enables TV-over-IP or -ATM services. The company will also demonstrate MPEG-4 part 10/AVC/H.264 streaming using the MGW 1100.

Triveni Digital will introduce the SkyScraper Application Constructor Toolkit for data broadcasting, which lowers the cost of deploying data broadcasting by minimizing development time for content packaging, distribution and playback for streaming media and interactive television. ■

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World Radio History



# Graphics

CONTINUED FROM PAGE 108

**Brainstorm Multimedia** will launch several products, including Brainstorm eStudio real-time 3D graphics single application for virtual reality, multiple-display presentations; and Brainstorm M3, an advanced, multiplatform, real-time 3D graphics presentation tool.

**SilhouetteFX** will debut Silhouette Roto, a standalone or After Effects plug-in rotoscoping solution.

The **Foundry** will introduce Furnace plug-ins, including motion-vector retiming and texture tools; Tinder plug-ins; Keylight keyer for tackling reflections, semi-transparent areas and hair; and the Anvil collection of color correction and color manipulation tools for Discreet Advanced Systems.

Particle effects specialist **wonder-touch** will bring out wondertouch Emitters for Apple Motion, which deliver a range of particle content. Also new will be particleIllusion 2.0 SE for Mac OS X, a standalone, introductory version of the company's sprite-based particle effects application.

## 3D ANIMATION AND CG

**Discreet** will roll out combustion 4 for Windows and Mac, featuring tools for visual-effects creation. For 3D modeling and animation, 3ds max 7 includes Cloth Extension for advanced clothes modeling. Discreet will also offer lustre 2.5, a high-performance digital intermediate system for 2K and 4K color grading and look creation; inferno 6, for fast, interactive creative design; and flint 9, an advanced motion graphics and broadcast design system.

**Compix Media** will launch Cynerg, a newly enhanced multichannel CG system for 3D animations.

New from Vizrt is VizTrio 2.2, an

HD/SD real-time 3D CG and graphics system, which supports all HD formats and includes a new internal compositing tool.

**Chyron** has a host of new offerings for its signature Duet line. Duet HyperX includes advanced 3D graphics. Duet LEX will boast improvements, as will Duet LX and Duet MicroX. The company will also introduce X-Clyps, supplying hours of HD clips in compressed storage. Also new is CodiStrator and ChyTV (see p. 170).

**Keywest Technology** will roll out the upgrade MX5 Plus, available in two versions: the MX5 Plus HD and the MX5 Plus Key. Both offer the multimedia messaging control functionality, powerful character generator and seven independent element layers of the original MX5. The company will also unveil an enhanced MX3 with new a new graphical user interface.

**Leitch Technology** will host its latest acquisition, **Inscriber**, in its booth and show IncaStation, an on-air system combining logo, multiple real-time data crawls and DVE capability. Also out will be InfoCaster, which creates a multi-zone on-air look for digital signage; IncaRTX HD, a real-time 2D/3D graphics, video and clips platform; and Inca Studio HD, with HD capabilities.

**Just Edit** will show vsnlg for logo insertion; vsnclg advanced automated character generator; and vsnclg plus, a ticker system with video resizing and external data interface.

**Orad Hi-Tec Systems** will highlight Maestro, a unique HD/SD switchable 3D character generator and on-air graphics solution.

**Pixel Power** is announcing its new HD Clarity platform, the Clarity5000,

which offers HD functionality equivalent to the Clarity500 range of character generators. Other new products include the Clarity300 single-channel expandable CG.

## GRAPHICS WORKSTATIONS

**Dayang International** will debut its D3-Edit 5000 multiformat post-production station and D3-CD-HD, a 1080-line HD version of the D3-CG dual-channel CG.

**Cinegy** will introduce eXtreme 7, a post-production solution for creating effects or multilayer compositions.

The latest version of **Quantel's** Paintbox is getting its first public showing in the U.S. at NAB2005. Paintbox is available in three versions: Paintbox, Paintbox gQ, featuring additional Quantel hardware for HD, and the software-only Qpaintbox.

## VIRTUAL SETS/TRACKING

**Nvidia** will debut Quadro FX 4000 SDI, for use in virtual sets, sports and weather news systems to composite live video footage onto virtual backgrounds.

For those seeking a complete turnkey multicamera system, **Hi-Tech Enterprises** will introduce a package including a trio of Sony BRC-300 fully robotic three-chip cameras with full installation and training.



WeatherData Storm Hawk

## WEATHER and TRAFFIC

**WeatherData** will unveil SelectWarn and Storm Hawk.

**AccuWeather** will show its improved Galileo, which adds special animations. The company will also show Wireless Weather, a brandable cell phone application, and StormTeam Live, which enables inte-

gration of national weather experts into local coverage.

**Curious Software**, which is being acquired by Vizrt, will unveil CuriousTraffic Producer for creating maps for illustrating traffic reports using pre-defined design templates; Curious Map Presenter and Curious News Producer allow direct creation of maps.

The **Newsroom Solutions** NewsTicker shows automated and manual ticker content, school closings, and severe weather on primary and digital channels without requiring stop-and-start multiple programs.

**Triangle Software** will debut video workstation for real-time traffic reports with customizable, traffic animations; BeatTheTraffic3D can produce compelling 3D traffic animations overlaid on 3D terrain, and TrafficOnDemand offers traffic data service on demand.

For innovations in the newsroom and studio, **Spencer Technologies** will show Newscaster, which allows one person to run a newscast from a GUI displaying the entire rundown. Also on display will be the SPT 3500 broadcast quality pan/tilt head that stores 100 camera shots.

In the studio graphics arena, **Vizrt** will bring out VizTrio 2.2, an HD/SD real-time 3D CG and graphics system that supports all HD formats. Also on display, VizWeather Version 1.6, 3D real-time weather software for the creation and play-out of weather-related graphics. VizContent Pilot, Version 4.1 features full support of Vizrt Look Ahead transition logic for seamless and automatic transitions between multiple layers of graphics.

**Weather Central** will return with its Genesis, MetroVision and MicroCast weather graphics applications as well as announce a significant new product launch at the show. ■

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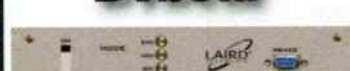
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World Radio History



# Transmission

CONTINUED FROM PAGE 106

including the DCX Paragon that uses efficient MSDC tubes for the lowest cost of ownership. Also in the company's transmitter display lineup will be its Ultimate and Optimum solid-state transmitters that feature a wide choice of analog, digital, air-cooled or liquid cooled versions.

## TUBES

When it comes to high-power UHF applications, nothing delivers like an inductive output tube (IOT). High-efficiency versions of the IOT using depressed-collector technology first attracted attention four years ago but the news for NAB2005 is that depressed-collector IOTs are now in the mainstream.



L-3 Communications Plug-In IOT 70

CPI-Eimac will feature its oil-cooled multi-stage depressed collector (MSDC) IOT, the K3. The K3 has a three-stage design that has shown an efficiency of 58 percent.

The MSDC IOT will be featured at the e2v technologies booth, too. The company's Energy Saving Collector Inductive Output Tube (ESCIOT) is finding homes in many working transmitters and is delivering impressive efficiencies. The

ESCIOT is a water-cooled device.

L-3 Communications will debut its Plug-In IOT 70, an easy-to-replace device that can be used in new or existing transmitters. For MSDC products, the company will highlight its line of Constant Efficiency Amplifier (CEA) IOTs that is targeted at high-power UHF DTV transmission.

The latest depressed-collector IOT from Thales Components is the TH 770 E CD, an enhanced version of its water-cooled TH 770 IOT. Recent changes in the TH 770 E CD include an ion pump that improves internal vacuum and increases tube longevity. Thales will also show its TH 730 air-cooled IOTs for medium-power applications.

## ANTENNAS

New from Altronic Research is the 6700D Series high-power forced-air dummy loads for UHF DTV. The company uses advanced tuning techniques to offer dummy load that works from DC to beyond 1 GHz, with power ratings up to 15 kW.

Dielectric will have several new products for its NAB2005 booth, including the TFU-UT bow-tie slot turnstile antenna that features an omnidirectional pattern and a simple feed system. The company also will roll out a new antenna in its TU series suitable for medium-power applications and will unveil new slotted coaxial antennas for the 700 MHz spectrum.

There's more to the output side of RF than antennas and Electronics Research (ERI) will display samples from its broad line of RF products. These will include the company's Guideliner UHF antennas, UHF



Dielectric TFU-UT bow-tie slot turnstile antenna

diplexers and its WL series of waveguide UHF dummy loads.

Products for UHF and VHF DTV will be on display at the Jampro booth, including the JAT Batwing antenna for VHF applications. For high-power UHF broadcasting, the company will be on-hand to discuss its JTW traveling-wave slot antenna.

Noted for meeting unusual RF requirements, Kathrein-Scala will use NAB2005 to promote its pattern library that contains pattern propagation files. Accessing the pattern library is free and you can register to use it at the company's Web site.

Propagation Sciences (PSI) will join the high-power theme with a dis-

play of its USH Series of waveguide slot UHF antennas that support input power up to 240 kW. The radome-enclosed system has a variety of patterns and can be made to custom beam-tilt and null-fill specifications. PSI will also show a variety of its medium- and low-power antennas.

A variety of products for DTV broadcasting will be featured at the Radio Frequency Systems (RFS) booth, including the company's Super Turnstile UHF antenna, UHF panel antennas and a waveguide combiner for multichannel systems. The Super Turnstile antenna has a circular azimuth pattern and supports up to 20 kW of input power.

SWR will be at the show with a variety of antennas, including the high-power Clarion UHF antenna that offers a traveling-wave design to eliminate power dividers and branch feeds. The SWR Clarion is available in power ratings up to 240 kW. The company will also present a variety of other antennas from low- to high-power.

## TOWERS

Of course, an antenna won't do much good without a tall structure such as a tower. There will be several tower vendors at the show that can erect towers to support anything from a single antenna to a complex array of systems.

With more than 175 broadcast towers either built or in the pipeline in the United States, American Tower has experience in broadcasting. At NAB2005, the company will present its combined approach to RF engineering, construction and operation to ensure that a site is designed and implemented successfully.

After acquiring tower manufacturer Rohn, Radian Communication put all the pieces into place. At the show, Radian will promote its skills at design, manufacturing, construction, repair and project management for the construction of tall towers.

Sometimes, buying a tower is not the right choice and Richland Towers will be at NAB2005 to explain its services as an owner, operator and manager of multitenant tower facilities. Leasing tower space can preserve capital and may be cost-effective way to improve a station's signal without a massive cash outlay.

Stainless will be at the show to discuss its design, manufacturing and construction capabilities. Now combined with tower erector Doty Moore, Stainless is a one-stop shop for antenna support requirements.

There's nothing that says "broadcasting" like transmission products, which for the core of broadcast technology. NAB2005 looks like it will be a good shopping ground for the latest technology and techniques in the science of broadcasting. ■

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# Satellite

CONTINUED FROM PAGE 102

grated high-speed networking platform. NetVX also enables statistical multiplexing and supports constant- and variable-bitrate conversions of MPEG transport streams. This upgradeable system also features the Transrating Transport Stream Multiplexer (TMX) module that optimizes bandwidth while maintaining video quality.

An HD wireless camera system will be introduced at the **Link Research** booth. Link HD is the latest addition to the company's wireless camera product family, which includes the Link XP, Link XPR, Link XPRV, and Link XPE.

CodeRunner2 and Reporter will be two of the highlights at the **Microwave Radio Communications (MRC)** booth. Both feature COFDM for dropout-free operation.



Shook Mobile Technology ENG vehicles

**Modular Components National** will be on hand to discuss its ability to manufacture, assemble and test high-frequency interconnect designs, as well as its machining capability for multilayered and bonded circuits.

**Moseley Associates** will unveil HD Link 6500, which transmits DVB-ASI at 40 Mbps for helicopter-to-ground links.

Several new products will be at the **N Systems (NSI)** booth, including updates to the NuPod smart antenna system and the company's MC5 control software. New upgrade kits for transitioning the company's Superquad and Silhouette central receive antennas to the 2 GHz BAS transition also will be shown.

**Nucomm** will feature the Newscaster VT2, a digital/analog ENG/OB van transmitter consisting of a rackmount control unit and a mast-mounted RF module. Available in single- and dual-bands, the Newscaster VT2 features an internal 4:2:2 MPEG-2 encoder, COFDM modulator, ASI, SDI and composite inputs.

**Radyne ComStream** will introduce the HE4000 HD and SD encoder; the SE4000 encoder; and the HD4000 HD/SD integrated receiver decoder, which offers motion estimation and lower bitrates.

**RF Central** will lift the curtain on the RF Extreme Digital Microwave,

Live-Eye mobile camera system and Live-Eye high-power mobile transmitter packages. The company will also show a new traffic/beauty camera and receive-site packages.

An extensive line of encoders will be the highlight at the **Tandberg Television** NAB2005 booth, including the EN5990 HD encoder for MPEG-4 part 10 (H.264/AVC). The EN5990 reduces bandwidth costs to achieve real-time delivery of HD at substantially lower bitrates than MPEG-2.

**Will-Burt** will debut D-TEC II, an

AC current and object detector with enhanced features.

## ENG AND TRUCKS

**Coastal Satellite** will show two new satellite trucks, both featuring HD transmission. The company will also show its line of Ku- and C-band production and satellite trucks.

**E-N-G Mobile Systems** will showcase its EasyLink vans for ENG as well as its OmniLink trucks equipped for satellite or hybrid use.

**Frontline Communications** will

introduce ENG-350 LT, a rack-ready, turnkey broadcast vehicle.

**Shook Mobile Technology** will introduce the A-14HD EFP truck, a low-cost four-camera HD field-production vehicle. Shook will also feature a COFDM live microwave Hummer that provides real-time coverage of fast-breaking stories.

**Television Engineering Corp.** will highlight its ENG Express, a turnkey ENG truck. The company has shortened its build cycle, resulting in a delivery time of four to six weeks. ■

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NAB, Booth C1924



# NAB 2005 EXHIBITORS

Exhibit listings are based on information available at press time. Bolded highlights are a paid service. Refer to the official NAB convention directory for final details. For more information, attendees can consult the NAB Web site at [www.nab.org](http://www.nab.org).

## 1 Beyond Inc. SL3967

## 12 Inch Design SL5422

## 16x9 Inc. SU6365

**Intro:** 0.7X zoom-through wide-angle converter made for Sony HDR-FX1 and HVR-Z1U HDV camcorders; Zoe-DVL remote zoom control for Sony HDR-FX1 and HVR-Z1U, Canon XL2, etc.; Chrosziel Twister DV camera stabilizer system; Chrosziel 4x4/4x5.650 Mattebox systems for Sony HDV; Chrosziel 4x4 DV Sunshade/Mattebox systems for Panasonic DVX-100A, Canon XL1/2 and Sony PD150/170. **Also:** ZFinder HD/SD extension viewfinder, Chrosziel Mattebox/Sunshades, Noga Hold-It articulating arms, Easy Rig camera support.

## 25-Seven Systems N2432

## 35Digital Alliance C7034

**Intro:** New Kit on the Block connecting kit for the new Sony HDR-FX1 camera is now available for the P+S Technik Mini35 Image Converter; Film Scanner by Kinton; the Cinevator digital film printer by Cinevation, the first and only real-time digital film recorder and film printer integrated in one durable machine; CGP35TM digital color grading projector by Cinevation colors that match 35mm film; CMS35TM color matching system by Cinevation will make color grading projectors stay calibrated to reference colors (e.g. 35mm film) over time. **Also:** PRO35 and Mini35 image converters; FP 30 EC II/FP 38 EC II studio film projectors

## 360 Systems SU11011

**Intro:** Image Server, a 2-input, 6-output broadcast server for satellite ingest, production and play-to-air; servers can now operate as mirrored pairs with no additional third-party software; network time delay corrects for time-zone differences, at transmission or broadcast facility; new advanced playlisting and graphics capabilities let 360 Systems new stillstore execute rundowns of video and Targa graphics with a simultaneous key; new Image Server features include advanced playlisting software, TB drive arrays with up to 170 hours of storage for the Image Server 2000 and 400 hours for the new Image Server 7000; Other additions include embedded audio, remote GUI operation, and built-in frame sync for non-genlocked sources. **Also:** Image Server 2000

## 3D4Medical.com SL4352

## 5 Alarm Music C3163

## 615 Music Companies C3256

**Intro:** Kingsize Music Library

## A.F. Associates (Ascent Media Systems & Technology) C5434A

**Intro:** Design and integration of turnkey systems and technology solutions for broadcast, cable, satellite, and telecom clients. Full service operations on both U.S. coasts provide comprehensive services from consultation to implementation and beyond and on an international basis.

**Chris Summey, Senior VP, Sales**  
100 Stonehurst Court  
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408-656-4225  
Fax: 201-784-8637  
E-mail: [sales@afassoc.com](mailto:sales@afassoc.com)  
Web Site: [www.afassoc.com](http://www.afassoc.com)

## A.N.T. Antenna Nord Telecomunicazioni N4027

**Intro:** RDF remote control and telemetry unit for broadcast facilities delivers data via phone, GSM, TCP/IP, VHF/UHF radio, satellite etc; ANT Supervisor control software, client server, Internet-capable, call, sms or e-mail in case of alarms to one or more shift-compatible technicians; DVB-T channel transmission-quality controller can scan through eight DVB-T UHF/VHF channels and measure BER, MER, PER, C/N; RF power probe, capable of analog and digital transmission power readings. **Also:** Remote control & telemetry for broadcast equipment

## Aastra Digital Video C2120

**Intro:** ENC-H11 HD MPEG-2 encoder module for the VideoRunner networking system supports 1080i & 720p formats for contribution and distribution applications; TMX-M22-TR bitstream trans-rating module for VideoRunner reduces the bit-rate of already-encoded MPEG-2 streams to increase use of terrestrial broadcast and cable channel bandwidth.

**Also:** VideoRunner  
**Brendan Smith, Sales Dir.**  
1160 Route 22 East  
Bridgewater, NJ 08807  
770-518-1199  
Fax: 908-927-1233  
E-mail: [bsmith@aastra.com](mailto:bsmith@aastra.com)  
Web Site: [www.aastra.com/digitalvideo](http://www.aastra.com/digitalvideo)

## AATON C2939

## ABC Products/Movie Tech C7614

**Intro:** ABC Minicrane, ultra lightweight crane (ABC Products) for cameras from 5-30 lb; New stabilizing system (ABC Products) for digi-cameras, with low mode option, can be used with different spring arm and vest systems (EasyFlex, DV); Dollies for film & video soft lighting; MT 400 (Movie Tech) film crane with interchangeable, lightweight segments, 10.7-meter reach, new leveling remote-headmount, strengthened base dolly; Magnum Dolly (Movie Tech), precision electromechanical programmable dolly; HandyMan/Clip & Go (ABC Products), a foldable aluminium stabilizing system for lightweight cameras. **Also:** Willy Go, Speedy crane

## ABE Elettronica S.p.A. C1830

**Intro:** The new DTX series of digital TV transmitters from 1 W to 5 kW (ATSC & DVB-T standards) offer double operation mode (analog/digital) with local or remote switch control a standard option to make easy the transition period from analog to digital TV broadcasting; New series of PM "links" (fixed, portable, ENG) from 2 to 23 GHz can be supplied with QPSK, 16QAM or OFDM digital modulation schemes to satisfy different application requirements; broadcast-quality MPEG-2 encoder and multiplexer (up to 4 analog or digital A/V inputs & transport stream output); DVM 1000/D-DME 1000/D solution can incorporate up to four MPEG-2 encoders and multiplexers in a single compact 1RU rack chassis, options available include L-band synthesized IF output.

## AbelCine Tech C3643

## ACARD Technology Corp. SL2866

## Accom Inc. SU7834

**Intro:** AirCleaner SD/HD audio/video delay unit for today's live-to-air broadcasts, is housed in a 1RU chassis with a front panel LCD screen for easy operation & setup, accepts either SD or HD SDI video signals and up to 8 channels of AES/EBU audio with 24-bit resolution at 48 kHz; MultiFlexMX SD/HD production server & EasyClip server-based clip compositing software features media management software, faster than real-time network media transfers and scaleable high capacity RAID storage; APR/ClipStoreMX universal format multidefinition DDR provides SD & HD uncompressed video+key+audio (VKA) record and playback in a single disk recorder; APR/ClipStoreMXc offers an almost identical feature set to the uncompressed APR/ClipStoreMX, but in addition offers JPEG-2000 compressed HD 10-bit digital video & key recording, as well as uncompressed SD 10-bit digital video and key recording; Axial/MX edit controller now supports SD/HD live video. **Also:** Dveous/MX with Quad Twin

## Accordent Technologies SL4936

## AccuDev Solutions Inc. SL3662

**AccuWeather Inc. C5111**  
**Intro:** Local AccuWeather Channel gives your station unlimited local avails for added advertising revenue and a way to cross-promote your programming and extend your brand. **Also:** WeatherTeam, FirstWarn 5000, FirstWarn Neighborhood NEXRAD, ULTRA LocalCast, WeatherHost

## Ace Forum C2955, SL4449

## Acoustic Systems N4311

## Acoustical Solutions Inc. SU10714

**Intro:** AlphaSorb barrier fabric wrapped wall panels offer the sound absorption value of standard wall panels combined with the sound blocking capabilities of our AudioSeal Sound Barrier; SoundSuede fabric wrapped wall panels feature strong sound-absorbing performance, durability & elegant appearance; Alpha Resilient Isolation Clips & AudioSeal Sound Barrier offer a high sound transmission rating with new or existing, wall, ceiling or floor construction; New Alpha Resilient Isolation Clips (ARSIC-1) in combination with our AudioSeal Sound Barrier (AB10NR) will greatly improve standard rating; Seal Caulk, our non non-hardening acoustical caulk seals all potential air leads. **Also:** Audio Seal Sound Barrier, AlphaSorb, SoundSuede, SONEX

## Acoustilock by Noren Products Inc. SL3618

**Intro:** rCAB noise reduction cabinet for storage RAID devices reduces noise by 99% and removes waste heat; vCAB noise reduction cabinet is for the video editor and will hold the deep servers. **Also:** gCAB, xCAB, ACL 24 TD, oCAB

## Acterna SU10043

**Intro:** DTS-330 digital broadcast test platform supports MPEG-2, DVB and ATSC testing in one box. Users can troubleshoot their digital video networks via the platform's application modules which include an analyzer for continuous, detailed, real-time analysis of all transport stream content and statistics including: PIDs, PCR/PTS timing, programs/channels, conditional access, and

PSI/SI/PSIP tables and descriptors; multiplexer for continuous real-time transport stream creation and generator for real-time transport stream recording and payout; New satellite interface to Acterna's MPEG product line extends 8PSK (Turbo-code), QPSK (Turbo-code), QPSK (DVB), and QPSK (DCII) modulation support.

## Active Power C2659

**Intro:** CleanSource XR, the first minute-for-minute alternative to batteries for UPS and telecom applications, stores energy in the form of heat and compressed air. **Also:** CleanSource UPS, CleanSource DC, GenSTART

## AD Telecom C11712

## ADC C4515

## ADIC SL3710

## Adobe Systems SL313

**Intro:** HDV Plug-in for Adobe Premiere Pro 1.5 will allow video professionals to quickly and easily capture, edit in real-time, and output broadcast-quality HD video. **Also:** Adobe Premiere Pro 1.5, Adobe After Effects 6.5, Adobe Encore DVD 1.5

## Adrienne Electronics Corp. SL1965

## ADS Technologies SL3925

## Adtec Digital C2620

**Intro:** DTA-3050 Digital Turn Around Media Router with 10 DVB-ASI inputs is specifically for the direct-to-home and enterprise IP television applications and features 10 ASI inputs, Gigabit Ethernet and optional conditional access; DTA-3150 Digital Turn Around Media Router with integrated DVB-S & DVB-T tuners & DTA-3250 Digital Turn Around Media Router with integrated DVB-S & ATSC tuners are multiplexers for DTV & IP backhaul applications.

## Advanced Broadcast Systems-ATSI C11104

## Advanced Designs Corp. C8534

## Advanced Industrial Computer Inc. SL5816

## Advanced Microwave Components C11142

## Advanced Switch Technology C9449

## Advantech C9644

## Advent Communications Ltd. C3007A

## Advertising Edge Inc. C2446

## AEQ S.A. N1418

**Intro:** The backbone of the new BC-2000D digital audio routing system is the TDM bus, housed in the BC 2000D router frame, with the capacity to route, mix or distribute up to 2,048 channels simultaneously; BC 2000 D10 expansion module control surface with 10 faders offers simultaneous control of up to nine pages of 10 mono or stereo faders/channels, either inputs, outputs or sub-groups. **Also:** Eagle and Course audio codecs; Swing, TLE-02D & MPAC-02 portable audio codecs; TH-02EX MkII digital telephone hybrids, SYSTEL-6000 multi-conferencing & talk show system; Impact digital audio routers; Caddy AD/DA converters; AM-03 audio monitors



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**AFC Industries** SL3700  
**Agiosat Global Communications** C11048  
 Agiosat Global Communications offers full service satellite-based communications for media and IP. Hub operations in Atlanta, Los Angeles and Honolulu can access transponders worldwide for C- and Ku-band transmission. All hubs have direct fiber interconnections to the Internet and to major media-capable networks. Our staff has hundreds of years of satellite communications experience and is on duty 24/7.

Agiosat maintains its own networks or can access any transponder a customer desires. Agiosat also has add-on services such as VoIP and broadband fiber networks.  
 At NAB2005, Agiosat is launching Broadband Global Area Network (BGAN), which provides data rates of up to 420 Mbps using a combined satellite modem and antenna the size of a laptop computer that weighs less than 10 lbs. To operate, open the lid, which is the antenna, and point it to the equator. Then plug a computer or network

Ethernet, USB or Bluetooth connectivity. Once connected, visual and/or audio cues direct the user to the optimum satellite alignment. BGAN works globally, and billing is based on the amount of data transferred.  
 Rick Swiers, VP, Marketing  
 P.O. Box 7460  
 Burbank, CA 91510  
 818-526-1700  
 Fax: 925-249-1775  
 E-mail: rswiers@agiosat.com  
 Web Site: www.agiosat.com

**AheadTek**

**SU6362**

**AI - Acrodyne Industries Inc.** C6212  
 Intro: Quantum Series water-cooled ESCIOT MSDC equipped state of the art, Linux based, transmission technology available in analog and digital. The field proven plug-in style e2v tube along with the AI system integration and LINUX based control system has delivered outstanding results in power savings and reliability in Quantum transmitters since their introduction in 2000.  
 Also: Quantum Series of IOT equipped television transmitters and Rohde & Schwarz solid-state air & liquid cooled television transmitters.  
 Mark Polovich, National Sales Mgr.  
 10706 Beaver Dam Road  
 Cockeysville, MD 21030  
 410-568-2105  
 888-311-0859  
 Fax: 410-568-1546  
 E-mail: mark.polovich@acrodyne.com  
 Web Site: www.acrodyne.com

**AI-Pixel BV**

**SL4453**

**AJA Video Systems** SL2514, SU8948  
 Intro: KONA LS is a competitively priced digital/analog capture card with true 10-bit uncompressed SDI in/out, component/composite/S analog video I/O, 12-bit video A/D and D/A converters, and much more; New features of KONA 2 include upconvert, 24-frame SD editing, and Dual Link HD functionality; New I/O features include TBC functionality and Control Panel; Several new professional video up/down converter products for broadcast and film/TV production also will be introduced.  
 Also: KONA 2, Jo LD, Jo LA

**Albiral - Avialec S.L.**

**SL1364**

**Alcorn McBride Inc.** SL366  
 Intro: Compact Binloop digital audio/video system features 16/24-bit 96-kHz audio, 12 video & 24 audio tracks, thousands of A/V clips, instant playback, solid-state reliability, SMPTE and video synchronization, MIDI, RS-232, contact control, Ethernet and CobraNet; Digital Video Machine features MPEG-2 player up to 15 Mbps, serial and contact/voltage input control, plus SMPTE-292M SDI, Ethernet and sync modules as options; PDP-HDSOI (HD-SDI input card for Pioneer PDP displays) features SMPTE-292M HD-SDI in, component or RGB analog in, re-clocked SMPTE-292M out.  
 Also: DVM/HD

**Algolith Inc.**

**SL3658**

**Allen Avionics Inc.**

**SU10715**

**Allen Osborne Associates**

**C5845**

**Allied Tower Co.**

**N615**

**Altera Corp.**

**C11212**

**Altronic Research Inc.**

**N3908**

**American Grip**

**C7933**

**American Recordable Media** C11812

**American Tower Corp.** N2837  
 Intro: More than 14,000 tower sites for the broadcast industry. If company needs to build out its full-power DTV or is a recent successful bidder in the FM auction, a cursory engineering review can be conducted to see if an existing American Tower site will work. If speed to market is a priority and cost to build is a concern, American Tower may have an existing tower site that will meet needs.

**Ametek Hunter Spring**

**C4644**

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**Amita Technologies** C7833  
**Ampex Data Systems** SU9336  
**Amphenol RF** C11448  
**AnaCom Inc.** C7844  
**Analog Way** SL1365  
**Anchor Audio** N3200  
**Anixter** C6643  
**Anthro Corp.** SL3631  
*Intro:* Elevate electric lift table—with the touch of a keypad, the Elevate surface raises and lowers to provide an ergonomic height for multiple users.

**Antics Technologies Ltd.** SL3952  
*Intro:* The shipping version of Antics Pre-Viz, available for demonstration on The Foundry stand, features a user interface where all commands are menu driven, asset library & set construction kit.

**Anton/Bauer Inc.** C7319C  
**On Display:** Dionic 160 and 90 W-h lithium-ion batteries; HyTRON 120 and HyTRON 50 Ni-MH batteries; InterActive 2000 Powerchargers; Titan series chargers; Ultralight and the Stasis power support system.  
**Paul Dudeck, Mgr., Product Specialist Group**  
 14 Progress Drive  
 Shelton, CT 06484  
 203-929-1100  
 Fax: 203-929-9935  
 E-mail: [websales@antonbauer.com](mailto:websales@antonbauer.com)  
 Web Site: [www.antonbauer.com](http://www.antonbauer.com)

**Anystream** SL3316  
*Intro:* Anystream VOD can automate the many steps required to repurpose media for VOD distribution outlets; Agility 5.0 features new broadcast-centric enhancements including support for HD broadcast servers & workflows with enhanced aspect ratio control, smart stretching, letterboxing and more, workflow features such as integrated closed-captioning, re-wrapping for source MPEG files, and improved metadata support for MXF, and integration with a growing range of content distribution networks and technologies.

**Aphex Systems** N1815

**Apogee Electronics Corp.** SL404

**Apple** SL1914

**APT- Audio Processing Technology** N811

**APW Enclosure Products** SL1567

**Archion** SL402  
*Intro:* Networked storage solutions featuring hardware RAID protection, 2 GB infrastructure, high bandwidth, HD & SD compatibility, networked file sharing, heterogeneous file sharing, compatible with all prevalent NLE systems; Archion's "Tech-Refresh" upgrade eliminates technological obsolescence while maximizing the client's investment and ROI.  
*Also:* IdeA

**Armstrong Transmitter** N1415

**Arrakis Systems** N1122

**ARRI Inc.** C7326

**Artbeats** SL1219  
*Intro:* International Lifestyles: Bustling marketplaces, colorful parades, traditional ceremonies, various rituals as well as day-to-day

happenings the world over; International Establishments: Travel through many countries and six continents in our ever-growing library of international footage; City Aerials: Visit Belgium, San Francisco, Los Angeles, New York, Seattle and more all in one day.  
*Also:* Lifestyles, Effects, Nature, Aerials, Backgrounds, Establishments

**Artel, A Division of Newfound Tech** SU11828

**Artesia Technologies** SL4259E  
*On Display:* Artesia for DAM

**Asaca/Shibasoku Corp. of America** SL1426

*Intro:* Based on the Sony Electronics Professional Disc for DATA blue-laser technology, the TeraCart PD uses cartridge-free media to provide capacities ranging from 2 TB to more than 33 TB in a single library requiring no more than four square feet; The Dynamic Vector technology incorporated into the VC31 enables motion vectors to be calculated in real time by finely dividing the image into blocks of 8 pixels by 8 lines. By comparing two consecutive image blocks, intermediate images can be generated by

motion adaptive line and field interpolation, resulting in a smooth visual transfer between fields; TG77AX is the next generation of multi-format signal generators for HD & SD.

**Ascent Media Group** C5434  
*Intro:* Ascent Media Digital Media Solutions are managed services specifically for the storage, management and distribution of long-format studio content; HUB is a managed service that provides visibility and control over assets through a simple Internet connection; Prixview is a secure and managed Web-based service for host-



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**NAB 2005 Booth #C3647**



ing, previewing and distributing pre-release entertainment; Lingo is a simple, secure managed service for packaging & distributing digital master reference files for alternate language dubbing and subtitling for foreign releases and regional DVD authoring; Voder software-based tool for tracking & managing VOD content offers cable operators, content providers and advertisers system-wide visibility into content status and performance through a centralized Web-based service that requires no hardware at the headend.

**Asia Pacific Broadcasting** C10633

**ASPA Vimensa Internacional S.L.** N4031

**Aspera Inc.** SL3900

**Intro:** Aspera Scp, based on the company's core FASP transport technology, eliminates the throughput bottleneck of FTP & other conventional file transfer software; Aspera Web, a Web-based deployment of FASP; FASP is now available in a licensable SDK for embedded use in third-party applications to enable high-speed, predictable and secure data transfers over any IP network; Aspera Sync provides automated replication of files and directories using a convenient "hot folder" model.

**Associated Press/ENPS** RT722

**Astro Systems Inc.** C9334

**Intro:** SC-2055 scan converter/scaler can drive an array of up to 8 I/O interface options supporting a resolution up to 2048x1556 pixels; WM-3004 HD/SD 6" and WM-3007 HD/SD 8" LCD waveform/vector scope monitors now feature simultaneous quad display (waveform, vector scope, sound and picture display) and dual display (wave-

form & picture); DM-3005 (6"), DM-3008 (8") & DM-3015 (15") HD/SD LCD display monitors accept all 16 HD formats as well as SD (525 & 625) signals.

**Also:** HD monitor, waveform monitor, scan converters, scaler, video signal generator, sync generator

**AT&T** SL826

**ATA Audio Inc.** N4524

**ATCI/Antenna Technology** C9941

**Ateme** SL3922

**Athan Corp.** SL2065

**ATI- Audio Technologies Inc.** N2523

**ATS Communications** C10041

**Intro:** Cool Cam lightweight, portable, body worn/tripod 18" camera boom has a new motorized tilt-and-pan head for better range; R12 all-terrain multicart with the new shelf kit features large 8" front casters that roll easily over rough and soft ground; Ultrasonic headphones feature natural 3D sound without any processing, and up to 98% electromagnetic shielding; Lapel Pin Mic allows freedom of placement on any clothing and can be disguised as a lapel pin, brooch or tie tack; Ultraclamp mic podium clamp replaces the discontinued Rowi 76 clamp; Yeoman 17 Press Conference Mic Holder securely holds up to 17 mics with flags; Zaxcom digital ENG wireless system features a lightweight, low-power receiver with two audio channels. For mono or stereo wireless microphones, the Zaxcom Digital offers superior audio quality, noise floor, RF stability & immunity from analog interference; Deva IV (8-track), and the Deva V (10-track) field production recorders.

**Atto Technology Inc.** SL2265

**Intro:** iPBridge 2500C/R/D triple-channel iSCSI-to-SCSI bridge offers scalable solutions for iSCSI and NDMP networks; iPBridge 2700C/R/D Gigabit Ethernet-to-Fibre Channel bridge with connectivity to iSCSI applications offers organizations an affordable opportunity to transform Fibre Channel storage devices into network-enabled addressable devices; 2 GB Atto FibreBridge 2350C Fibre Channel-to-SCSI bridge, for mid-range libraries and backup applications; Diamond Array Virtual Tape (VT) device is seen by system applications as a conventional tape library with high-performance backup and restore, and instant file access capability and seamless scalability; leveraging 4-GB Fibre Channel, the dual-channel Celerity FC-42XS storage adapter provides the highest available throughput for Fibre Channel applications while protecting technology investments via backward compatibility with existing infrastructure.

**Audemat-Aztec** N2235

**Intro:** In a 19" rack form, the IP2 Choice is a modular system for transmitter remote control & facilities management. It can be configured to connect to all the equipment and provide with up to 4 serial ports, 128 digital inputs, 40 analog inputs and 64 relay outputs. The IP2 Choice has an embedded Web server and supports HTTP, TCP, FTP, SNMP protocols. Complex scripts & macro can be graphically configured using the innovative ScriptEasy software. PDA, DTMF and voice interfaces are available as an option.

**Also:** GoldenEagle TV  
Christophe Poulain, VP, Business Dev't.  
1021 Ives Dairy Rd  
Miami FL 33179305-249-3110  
Fax: 305-249-3113

**E-mail:** [ussales@audemat-aztec.com](mailto:ussales@audemat-aztec.com)  
**Web Site:** [www.audemat-aztec.com](http://www.audemat-aztec.com)

**Audio Accessories Inc.** C3651

**Audio LTD./MacArthur Group** N4026

**Audio Precision** N1913

**Audio Video Design Inc.** C1226

**Intro:** AV15HB 15"/38cm LCD HighBright teleprompter, 1,800 cd/m2 and 13 lbs., accepts 15-pin RGB in and includes EasyReader Windows dual-screen software that independently mirrors output to the prompter while keeping operator monitor unmirrored and heads-up; EasyReader dual-screen Windows teleprompter software mirrors the computer's output to the prompters while keeping the operator monitor unmirrored and heads up, now in LITE, PRO, NR NewsRoom & ShowPro versions; AV12HB 12"/30cm LCD HighBright teleprompter, 1,000 cd/m2 and only 11 lbs., accepts 15-pin RGB, composite/S-Video and includes EasyReader Windows software. **Also:** CV Line Prompters in 13"/33cm, 15"/38cm & 20"/50cm sizes

**AudioScience** N503

**Audio-Technica U.S. Inc.** N3322

**Intro:** With a capsule diameter of just 2.5 mm, Audio-Technica's new AT892 MicroSet microminiature omnidirectional condenser headworn mic offers an ergonomic under-ear design. **Also:** 4000 & 5000 Series wireless systems, AT899/AT898 subminiature lav mics, AT895 adaptive-array mic systems, U100 Series camera-mount wireless systems, AT4071a/AT4073a/AT815b/AT835b/AT815ST/AT835ST/AT897 shotgun mics, AT822/AT825/AT849 stereo mics, AT804 omni



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**Frezzi HMI Mini-Sun Guns  
18W, 24W, & 50W**



**Frezzi 200W HMI Super-Sun Gun**



**Frezzi's Micro-Fills Dimmer / on-off / HMI's**



**Frezzi Dimmer Mini-Fill & Camera powered by BP-14MHEG 130Wh Battery**



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**Autocue SU7865**

**Intro:** Based on IPV's analog package and available in two versions, QSeries QLog is a low-resolution, disk-based MPEG output recorder that enables fast searching of archives for spoken words or phrases without prior transcription, enabling multiple users to review material as it's being recorded and record channels output; QLog+, a more sophisticated version of QLog, includes capture of closed-caption information, audio indexing and searching, the ability to "print to tape," and, as an additional option, uses SDI inputs instead of analog and uses the more efficient WM9 compression format; QScore allows sports results to be entered manually or collected automatically from several sources and then automatically displayed on screen—often as full-screen scoreboards; Collaborative Prompting, available in QNews & QNet, will have the ability for multiple prompters, from numerous worldwide locations, to work together in the same running order via a WAN network; QAudio, which presently provides QSeries functionality that provides audio timings in TV/radio combination stations, will increase its capabilities with the addition of audio clip functionality for QNews operation in the radio environment.

**Also:** QNews, QTX, QScript, QMedia, QNet, QVote, QClose

**Automatic Duck SL1019, SL760B**

**AutoPatch SL743**

**Autoscript Inc. C8926**

**Intro:** 12" TFT high-bright on-camera prompter, folding hood, 12" high-bright TFT monitor (with extrusion 10/12), MT/Red field & studio mounting for ENG/EPF cameras, folding hood clears 4.8mm ENG lenses; 17" TFT high-bright on camera prompter, extra wide-angle hood, studio 17" high-bright TFT monitor (extrusion 15/20), 12" telescopic rods to mount to studio pan/tilt heads for use with studio/box lenses, extra wide-angle hood, lightweight robust ABS, clears 4.8 studio/box lenses; 15" TFT entry-level professional on-camera prompter, folding hood, 15" entry-level professional TFT monitor (extrusion 15/20), MT/Red field & studio mounting for ENG/EPF cameras, folding hood clears 4.8mm ENG lenses, DC power supply; Winplus-NX newsroom interface & HC/1 potless OPTO 5-button desktop control provides two NTSC/PAL video outputs, genlock option, connects via USB port, etc.; For field production, the Shoot 'N Scoot Laptop features VGA prompting software, laptop compatible drag & drop rundown, live on-screen editing, MS Word file import, etc.

**Also:** TFT12HB, TFT17HB, ELP15, WinPlus-NX, WinPlus-VGA

**AVC Alliance SL4101**

**AVECO Americas Inc. SL3801**

**AV Internacional S.L. N4031**

**Intro:** X-Frame software for radio and TV automation; DHD RM4200D the ultimate digital console; Prodys Pronto Net audio/IP solutions

**Also:** Microwave links, TV transmitter, antennas, intercoms, audio consoles, microphones, software for automation

**Avid Technology Inc. SL600**

**Avitech International Corp. SU9329**

**Intro:** New features of the MCC-8000 Series virtual monitor wall system include HD embedded audio, on-screen display of audio meters, visual alarms & digital clocks, Cosmos V4 touch panel controller;

AviNET & AviCentral SNMP alarm management & reporting systems.

**Also:** Media Command Center, Virtual Command Center, 4-CAST, Galaxy Control System, Audio Command Center

**AVL Technologies C8146**

**Avocent Corp. SL4565**

**AVP Mfg & Supply Inc. C1857**

**AVT Audio Video Technologies N606**

**Intro:** Magic TH2 ISDN & POTS digital telephone hybrid; Magic DC7 dual 7-kHz ISDN audio codec; Magic AC1 ISO/MPEG ISDN audio codec.

**Also:** Magic ISDN Telephone Hybrid System

**Axcera C8014**

**Intro:** Based on the Innovator HX VHF transmitter, the Innovator HX high-power UHF digital and analog transmitter features broadband amplifiers and combiners, high-gain power modules and hot swappable amplifiers. It offers the choice of linear or switching power supplies and uses identical amplifiers for internally diplexed, externally diplexed and DTV operation; Innovator LX DVB-H transmitter is available in frequency bands from 470 MHz to 2.7 GHz to fit each operator's specific requirements and offers serial remote control and monitoring, along with the reliability of parallel amplifiers and power supplies; Axciter Intelligent 8-VSB modulator uses Axcera's exclusive Intelligent Modulation and Adaptive Digital Equalization for fast and accurate equalization. The result is an extremely stable output signal with unrivalled SNR performance.

**Also:** Visionary Series, Innovator HX, Innovator LX, Distributed Transmission, 5720 MMDS transmitter

Mike Rosso, VP, Sales

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**Axel Technology SRL N3138**

**Intro:** Digi-Ware TV and radio program management and multichannel playlist creation provides powerful statistics calculation and printout of log files; Digi-TV full modular system for automated DTV broadcasting.

**Also:** Viper, DML, DVL, Falcon 50, Merlin

**Axia N3616**

**Axiom Tech. SL3909**

**Axis Graphics-Fast Maps SL1021**

**Axon Digital Design BV SU11231**

**AZCAR SU9326**

**Azden Corp. N4222**

**Intro:** SGM-1000 phantom-powered shotgun microphone offers wide frequency response and low noise; 100LT UHF wireless microphone system targets small DV cameras and features 63 user-selectable frequencies, compact size, mini or XLR output cable, receiver shoe mount and system monitoring LEDs; APS 25 wireless powered speaker system is available with VHF, UHF and infrared wireless.

**Also:** 1000 and 500 Series UHF wireless microphone systems and the SGM series shotgun microphones.

**B&H Photo-Video-Pro Audio SU6430**

**Backbone Networks Corp. SL920**

**Baird Satellite C5943**  
**Supporting Systems**

**Balcar SA C9526**

**Band Pro Film & Digital Inc. SU6365**

**Intro:** Carl Zeiss DigiWide 3.9mm T1.9, the widest prime lens available for HD cinematography joins the popular Zeiss DigiPrime family; Sony HVR-Z1U 3-CCD 1080i HDV, a small, lightweight, professional camcorder, outfitted in Band Pro digital cinematography style with a full range of cine-type accessories and tools; AccuScene Color HD eyepiece system that provides an advanced viewfinder with the added facility of integral exposure monitoring and focus assist systems for precise adjustment of camera focus and exposure; Cine SpeedCam; Evertz ECAS-HD-1394A fiber-enabled camera adapter system provides uncompromised 2-way HD or SD & Firewire video, audio, timecode, communications and full camera RC over a 2-way fiber connection up to 2 miles.

**Also:** Carl Zeiss DigiPrime lenses, Carl Zeiss DigiZoom 6-24mm T1.9, Zeiss Sharp Max, Sony HDW-F900/3 & HDC-F950 cameras supporting 1920x1080 resolution at 24p/25p/30p & 50/60i, and 4:4:4 imaging with F950, Sony PDW-510/530 XDCAM; Noga HoldIt Variable Arm

**Barbizon Lighting Company C12016**

**Barco SI1937**

**Intro:** OLED 10 mm LED board for outdoor & indoor use; Solaris LD 140, 150 & 160-inch diagonal LED plug & play LED board; I3 high-resolution tiles are 3 mm high for broadcast applications.

**Also:** Solaris LD, OLED, I3mm tile

**Baron Services C8907**

**Bavarian Pavilion C7614**

**BayStor/Karden Group SL4552**

**Intro:** BK-2500 video archiving system; BK-3500 Barracuda-I combines BK-2500's content management technology with a high-speed optical DVD archiving robotic mechanism.

**BBN SU10037**

**Beck Associates SU8348**

**Beijing Phyllon Battery Co. C8232**

**Belar Electronics Lab Inc. N2414**

**Belden CDT Electronics Div. C2257**

**Intro:** Belden's 9451P & 9451DP are plenum rated single & dual version of Belden's popular 9451 analog line level audio cable; Belden's high-resolution component video cables features our patented Banana Peel design which eliminates the outer jacket making termination and installation easier; Belden's Brilliance CatSnake 4 pair 24 awg Category 5e audio cables offer exceptional performance, plus they are extremely rugged and flexible for use out of doors, in broadcast trucks, in

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**Bell Helicopter, A Textron Co.** C7926  
Intro: Bell 407

**Bella Corp.** SL2865

**Bexel's Broadcast Video Gear (BVG)** C7319E

**Bext Inc.** N2111

**beyerdynamic** C10421  
Intro: MCE 86 II shotgun condenser microphone with switch for battery or phantom power supply.

**Bias Inc.** SL3345  
Intro: Peak 4.1 digital audio editing application for Mac sports customizable toolbar and icon sizes, expandable drawers, and region and loop markers; Deck 3.5 allows users to spot effects, edit dialogue, process soundtracks, record ADR voice-overs, and craft complex mixes to stereo or complete 5.1 surround, all while in sync to a QuickTime movie or DV clip; SoundSoap 2, a new version of the Bias "one-click" noise reduction solution, adds a click & crackle removal slider, and an enhancement slider for lost frequencies; SoundSoap Pro 1.0 combines four noise reduction and audio restoration tools in one streamlined plug-in interface: Broadband Noise reduction, Click & Crackle removal, Hum & Rumble removal—plus a Noise Gate for that final polish; SuperFreq 1.1 is a real-time 10-band paragraphic EQ that works within any carbonized VST host application.

**Bird Electronic Corp.** N1116

**BitCentral** SL1967

**Bitmicro Networks Inc.** SL3660

**Bittree Inc.** C6944  
Intro: Bittree is introducing an RS422 patchbay in a 2x32 configuration that uses standard bantam patchcords. The 2x32 matches common router installations, and the single bantam patchcord eliminates orientation issues with dual bantam patchcords.

**Blackmagic Design** SL4916  
Intro: DeckLink HD Pro DL, an HDTV dual-link 12-bit 4:4:4 capture and playback card; DeckLink Multibridge, an all-in-one analog converter that handles any conversion task in HD & SD video; Workgroup Videohub eliminates manual cable patching by with a routing switcher; DeckLink HD Plus features low-cost 10-bit HD-SDI 4:2:2 capture and playback.

**Blue Order Inc.** SL4255B  
Intro: Multichannel Scheduling (MCS), a Web-based solution that allows users to schedule and monitor jobs from any workstation connected to media; Media Archive Integration Package combines Avid's news production tools with Blue Order's enterprise-scale media asset management platform, providing access to content stored and produced on Unity to hundreds or even thousands of users. Also: Media Archive enterprise, Media Archive professional

**Blue Pony Digital Inc.** SL3450

**Bluetop Technology Co.** C12425

**Boeckeler Instruments Inc.** SL4631

**Bogen Imaging** C6726  
Intro: New Kata bags specially for HD cameras; Reflecmia Chroma Key systems bundled With Ultimatte DV Keyer; Fig Rig from Manfrotto; Manfrotto Magfiber Series and 352 carbon fiber tripods; Formatt filters for HD.

Also: Avenger

**Boland Communications Inc.** C10435  
Intro: Monitors for SD & HD in analog & SDI, standard & HiBright, wide angles, all aspects, megapixel, mountings in rack, rack twins, desk, VESA, yoke & wall, in 8.4, 17, 23, 32 and 37 inch screen sizes.  
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**Bomar Interconnect** SL3406

**Boris FX Inc.** SL4045, SL1210A  
Intro: Boris Blue, a real-time 3D compositing and motion graphics system based on the Boris Red plug-in; Volume II of Boris Continuum Complete for Discreet Sparks, a suite of native filters that extends the capabilities of Discreet inferno, flame, flint, fire and smoke systems; A version of Continuum for the Linux operating system adds support for burn, Discreet's Linux-based network processing that can render images in the background using low-cost PC workstations; Boris Continuum Complete AVX (BCC AVX) running on AVX 2.0, the latest version of the effects plug-in architecture developed by Avid Technology.

Also: Boris Red, Boris Continuum Complete

**BOXX Technologies Inc.** SL4427

**Brainstorm Multimedia** C9332  
Intro: Brainstorm eStudio is a real-time 3D

graphics application; Brainstorm M3 multiplatform real-time 3D graphics presentation tool for PCs allows users to build presentations incorporating 3D objects, 3D text, on-screen editing, video I/O, multimedia, etc.; Brainstorm Sports Plug-in integrates in a newsroom automation system for generating graphic templates and is compatible with automation standard protocols like MOS; Brainstorm Maps Plug-in allows terrain files downloaded from the Internet to be used to visualize and zoom to any part of the earth either as 2D pictures or 3D model terrains.

Also: Brainstorm eStudio, Brainstorm M3 and plug-ins: Sports, News, 3D Studio Max and Maya, Excel and Power Point, Maps, RCG.

**Brick House Video Ltd.** SU9807  
Intro: Proteus, a new, low-cost, field-portable standards converter features 10-bit SDI, analog video and audio I/O, an advanced standards conversion algorithm for PAL-to-NTSC and NTSC-to-PAL, comprehensive audio synchronization facilities and a full set of signal processing controls. Housed in a highly compact and rugged field portable/desk top box, Proteus is ideally suited for the wide variety of situations where standards conversion is required in today's global broadcast and professional video industry; VTB-2DS portable switcher is a standalone battery-powered 6-input version of the popular SDI rack-mounted switcher and offers an on-board downstream keyer and separate composite and Y/C inputs, thus allowing for simultaneous analog and digital operations; Series 2 switchers include frame-store synchronizers for asynchronous working and digital audio processing including slave mixes. Together with standard wipes and mixes, the units offer soft edge and variable width/color border and auto fade to black, and have full editor capability. The switchers can operate in stand-alone mode or from station reference, and an adjustable genlock output is provided. They have full GPI capability, with high-current GPI output drivers and assignable GPI input functions. The Series 2 switchers carry all the necessary facilities for fast effective vision mixing, and are 525/625 compatible.

Also: Neptune Dual SDI Frame Synchronizer, VTB-2A portable composite vision switcher, V-log universal logging system and VHS controller

Brian Isaacson  
330 West 38th Street, Suite 1006  
New York, NY 10018  
212-967-1774  
Fax: 212-967-1812

E-mail: sales@brickhousevideo.com  
Web site: www.brickhousevideo.com

**brightline** SU8667  
Intro: Compact brightline motor controller for automated T-Series newsroom and VTC lighting systems; Infrared remote-control dimming with automated light-level sensor for studio, newsroom & VTC lighting systems; Digital wall stations with automated light-level sensor control for studio, newsroom & VTC lighting systems; Pole-operated yokes for SeriesONE studio lights. Also: SeriesONE studio lighting, cycSeries RGB color-changing, T-Series VTC lighting, SeriesTWO RGB color-changing

**Broaddata Communications/Physical Optics** C4148

**Broadcast Asia** SL2066

**Broadcast Electronics Inc.** N1802

**Broadcast Microwave Services Inc.** C1421

Intro: Truck-Coder II ENG/OB COFDM transmitter offers digital/analog transmission, 6 MHz occupied bandwidth, simple set-up & operation, unlimited presets, Ethernet port for upgrades, field-proven design, innovative operator controls, DVB-T compliance, optional dual band capability. Also: Carry-Coder II, DeCoder II, Carry-DeCoder II, BPA-10CC, GCA-11

**Broadcast Pix** SL5706

Intro: Broadcast Pix Studio2000 Version 3 includes an integrated control room, with digital switcher, Inscribe CG, DDR, stillstores, three Pinnacle DVEs, logo generator & 22 inputs in SDI and all analog formats; Audio option for built-in DDR breaks out audio from the system's built in DDRs, one input for recording and two outputs for playing two clips at once, all use XLR connectors in analog stereo and digital AES/EBU, used for clips, animations, and even enables the switcher's wipes to have sound effects; PixMaster Version 3 software streamlines pre-production by merging the switcher, CG & DDR, synchronizes on-air cuing and starting of clips & graphics with the switcher's wipes, memory recalls and DVE moves; Broadcast Pix Soft-Studio free downloadable stand-alone software replicates most of a Broadcast Pix Studio system in software, including a soft-panel that opens in a Web browser, and new PixMaster software; Distant Control over IP option allows a user to point a switcher control panel to an Internet address. Also: Broadcast Pix Studio1000

**Broadcast Software International** N2114

## MegaPixel Resolution

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## Broadcast Store SU6358

### Broadcast Technology SU9317

**Intro:** Showman 1000 multistandard off-air receiver/demodulator; DTMD1500 COFDM modulator for transmission applications; 3200 Series HD MPEG-2 decoder; Skyline DataMiner that allows control of equipment from many vendors via Ethernet; 3000 Series Modules, including DTAR3000 hot-swappable 8-VSB-to-ASI demodulator; DTAD3000 provides simultaneous decoding of up to 4 stereo sound channels from MPEG-1 & -2.

### Broadcast Tools N1400

### Broadcast Warehouse N322

**Intro:** The Translancech Digital Ariane RMS leveler features TCP/IP and serial control, dayparting, remote triggers and presets.

### Broadcasters General Store N3304

### Broadview Software Inc. C11424

### BroadView Software C6217

**Intro:** Television traffic and sales software that includes program scheduling and rights management capabilities.  
*Also:* BroadView

### Bron Kobold USA C9641

### Brother International Corp. SU11819

**Intro:** Brother QL-500 PC labeling system prints pre-sized labels and durable white paper or film tape at up to 50 labels per minute; Brother PT-1650 portable handheld industrial labeler uses new Flexible ID

Tape and rotated print for cable wrapping and flagging, industrial strength laminated tapes for patch panel labeling and standard laminated tapes for faceplate labeling; Brother PT-9500PC computer connectible industrial labeler allows users to identify and track assets and inventory; Brother PT-9600 electronic labeling system prints bar-coded, serialized, and patch-panel labels; Brother PT-1400 handheld labeler uses tape cassettes to print labels up to 1" wide; PT-1600 portable handheld industrial labeler uses new Flexible ID Tape and rotated print for cable wrapping and flagging, industrial strength laminated tapes for patch panel labeling and standard laminated tapes for faceplate labeling.  
*Also:* Brother QL-500/550; PT-1400/1600/1650; PT-9500PC; PT-9600

### BT Broadcast Services C1453

### BTX C2657

**Intro:** CD-HD15MEZ and CD-HD15FEZ accept standard D-sub hoods, giving integrators and installers the ability to field-terminate a cable mount HD15 with just a screwdriver; NC3FD-S-1-B (female) and NC3MD-S-1-B (male) screw-terminal panel mount XLR connectors.  
*Also:* ADC, Belden, Brady, EDAC, Hirose, Kings, Kramer, LG, Middle Atlantic, Mogami, Neutrik, Paladin, Switchcraft and West Penn products

### BUF Technology C4546

**Intro:** Sport with SDI option, SDI serial digital video I/O  
*Also:* Sport instant replay system, router control system, VTR/DDR control system

### Building4Media SU8968

**Intro:** FORK Payout Xpress Professional playout software in combination with Apple hardware (Xserve, Power Mac G5) results in a professional video server for small TV stations; FORK Production software cross platform (Windows & MacOS) production software for the production side of TV stations, includes file-level integration with high end edit sets, drop-folder based wrapper file translation, ingest, client/server news editing, edit server, transcoding manager, MOS (2.8) gateway, archive gateway and Live Record in news production automation featuring unprecedented ease in producing news wheels from live newscasts for continual re-purposing, graphic server for automated graphics handling, teletext server, redundancy switch software for redundancy in systems. (Some modules are optional); FORK playout software cross platform (Windows & MacOS) playout software for the playout side of television stations, includes database, playlist, ingest & control windows, commercial blocks planning, master control and device control. (Some modules are optional); Software/modules include InfoChannel for news tickers filled by external data sources and dynamic graphics sequences, software for remote camera control for the Big Brother houses around the world (with Endemol and Sony), content management software for the logging and handling of the video streams from the Big Brother houses.  
*Also:* FORK Production automation software, FORK Payout automation software

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### Burk Technology N3602

### Burle Industries Inc. C3521

### Burli Software Inc. N2433

### Burst Electronics Inc. C8915

### Cable AML Inc. C6641

*On Display:* Digital headend module

### Cablecam International C8944

### Calibre UK SL3613

### Calrad Electronics C11442

### Calrec Audio Ltd. N802

### Cam Systems, LLC/Media DVX SU9859

### Cammate Systems C10219

### Camplex Corp. SU-10266

**Intro:** Camplex PSA-61 and PSA-31 power surge absorber option for CP-601 and CP-301B product lines, allows full power for high current demand camcorders during power up; New for Camplex PRO-X1 (the mini-DV camcorder live camera production system) powered monitor adapter option PRO-X-VFP allows the Nebtek or Marshall larger viewfinder to be used with a mini-DV camcorder.  
*Also:* CP-601, CP-301B, PRO-X1

### Canare Corp. of America C5134

**Intro:** HFO camera connector, FC series, features detachable alignment sleeve & insulator, SMPTE 304 compliant; HFO

camera cable checker allows easy test of HFO camera assemblies, quick verification of optical and electrical signal at the same time; Optic Links CWDM optical multiplexer (8 channels), 1RU, bi-directional; Electrical-to-Electrical Repeater is multiformat (HD/SD-SDI), DVB-ASI, equalizes digital signals.

### Canon USA Inc. SU7814

### Canopus Corp. SL325

**Intro:** Canopus Workflow is a networked, shared-asset system for real-time editing and transcoding with LAN-based video distribution technology; Canopus Edius HD/SD/HDV/DV real-time editing solutions; ProCoder Station, a network-based encoder; MediaEdge, a video distribution system that delivers professional-level video over LAN-based networks.  
*Also:* Edius Pro 3, Edius HD, Edius NX for HDV, Edius SP for HDV, MediaEdge, ProCoder, Imagine

### Capital Networks Ltd. SL4125

**Intro:** Formerly bundled as Matrox InfonetTV, Audience software is now available as a standalone or bundled product for a range of content creation, distribution & display applications such as digital signage, retail, outdoor LED, cable and broadcast; Audience.web has numerous new add-on features to enhance Web-based deliver of digital signage and kiosk applications, and is now available as ultra-low-cost 25-sign licenses as well as enterprise models.  
*Also:* Hospitality, Military, PEG, Education, Gaming, Sports & Fitness  
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CANADA  
905-946-1122, Ext: 231  
Fax: 905-946-1144  
E-mail: btralnor@capitalnetworks.com  
Web Site: www.capitalnetworks.com

### Caption Colorado LLC SU10812

**Intro:** Bison Captioning suite of software is a Windows-based suite that simplifies and streamlines the captioning process & Customer Control Console (CCC) is the component for the broadcast captioning customer; Internet Text Streaming & Voice Relay Captioning uses the same high-quality stenocaptioners that produce closed-captioning for live television, news, sports and weather to provide live, real-time text streamed to any Internet-connected computer anywhere in the world; Offline captioning, premiere, value, and real-time, plus HDTV-compatible captioning services to cover everything from movies and high quality entertainment to sitcoms and documentaries.

### CaptionMax SU8978

### Carl Zeiss SU6365

**Intro:** DigiWide 3.9 mm T1.9 joins the popular Zeiss DigiPrime family; DigiZoom 6-24mm T1.9 precision zoom lens developed to enhance the potential of cutting-edge high definition cinematography cameras.  
*Also:* DigiPrime lenses in focal lengths of 5 mm (T1.9), 7 mm (T1.6), 10 mm (T1.6), 14 mm (T1.6), 20 mm (T1.6), 28 mm (T1.6), 40 mm (T1.6), & 70 mmCF (T1.6); SharpMax; DigiZoom 6-24 mm T1.9

### Cartoni USA C9719

**Intro:** Cartoni Focus DV head for cameras weighs 2.2-22 lbs. and features an infinite counterbalance and fluid drag system; E-Sensor features the latest technology in




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AL86

Composite Video/Audio delay

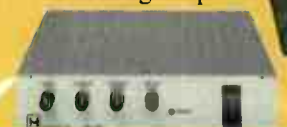


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encoded support as needed for virtual reality shooting and is compatible with most 3D packages for real time camera/scene movement in virtual set and previzualization.

**Case Supplier C1863**

**Cavena Image Products AB SU9809**

**Cavision Enterprises Ltd. SU8975**

**C-COR SU11531**

**Intro:** Multi-Service Packet Switch (MPS) is the industry's first L2-based 10 Gig Resilient Packet Ring (RPR) system using flow networking technology to provide Quality of Service (QoS) for transport of IP over Ethernet; PLEXiS complements the MPS as a next-generation transport platform, and combines Gigabit Ethernet transport modules with DWDM and CWDM hardware to provide network operators with a true network core-to-customer premise transport solution for services such as VOD, HDTV, broadcast video, high-speed Internet & cable telephony; PLEXiS BXE CPE device for long-reach optical local connection supports business services and video; Single Channel SDI (Serial Digital Interface) card for C-COR's DV6000 family of digital transport systems. Also: DV6000

**CDR Software C11507**

**Ceico C1450**

**Intro:** FilmOut Pro graphical user interface software includes the new 3D Lookup Table (LUT), giving users a powerful color management tool for filming out Digital Intermediates (DI); New hardware and software for FURY and Firestorm high-performance digital motion picture film recorder models.

**Century Optics SU10329**

**Intro:** Century 0.7X Wide-angle converter & Sunshade/Filterholder for Sony HDV is a professional zoom-through add-on lens to complement the new higher resolution, wider-angle HDV camcorder lens; Century Compact and Wide Angle DV Matte Box MK II Systems for DV camcorders to IF Pro lenses are compatible with Century lenses and feature two stages and two 4x4 filter-

holders; Century LCD Hood for Panasonic DVX-100/A and other camcorders, ideal for most camcorders that feature a 3.5" diagonal LCD screen; Century LCD Widescreen Magnifier for Panasonic DVX-100/A 3.5" flip-out screen slips over the screen to provide optically corrected viewing when shooting with 16:9 widescreen adapters so the image appears normal (unsqueezed).

Also: Professional wide-angle adapters, converters, fisheyes, telephotos, achromatic diopters for broadcast, DV & HD. See Schneider Optics.

**Chapman/Leonard Studio Equipment SU880**

**Chief Manufacturing SL3625**  
**Intro:** RPA-U universal projector mount is for those unplanned installations where the projector type is not known.

**Chimera Lighting C7611**

**Intro:** Chimera OctaPlus 3, a 3' diameter (.9m) "fixed" Lightbank; Chimera OctaPlus 5, a 5' diameter (1.5m) Lightbank which is expandable to a 7' diameter (2.1m); Lightbank using a 2' (.65m) expansion kit (no tools required). Customers may also purchase the OctaPlus 5, by itself and then add the 7' expansion kit at a later time; Quick Release Speed Ring allows users to release Lightbank pole tension with the flip of a lever, allowing the Lightbank to collapse without complete disassembly.

**Christie Digital Systems SL360**

**Chyron SU7158**

**Intro:** DynaCrawl, a 2RU system allows users to insert up to four news elements fast, using a simple-to-use GUI that enables quick creation of eye-catching tickers and crawls plus time and temperature display, complete with dynamic data fields and 3D object animations; Hours of HD clips are available in compressed storage with the X-Clyps server that includes Raid 5 protection, redundant power supplies, VDCP interface, and networked control architecture; Duet Micro-X package runs Lyric with full animation capability & a software upgrade path, all housed in a

compact, rugged 2RU chassis; Integrating Proximity's media management system, Chyron MOS is an elegant, easy-to-use integrated workflow solution that automatically adds graphics to the news rundown; ChyTV, a low-cost informational display video system.

Also: DynaCrawl, X-Clyps, Chyron MOS, Duet Micro-X, ChyTV

**CI Design SL4649**

**Intro:** RS1204 for P4, dual Intel Xeon or dual AMD Opteron server boards, 1RU form factor; SR208 for P4, dual Intel Xeon or dual AMD Opteron server boards supports up to eight hot-swappable SCSI or SATA hard drives; STS316 Ultra 320 SCSI to SATA RAID enclosure; FTS316 Fibre Channel to SATA RAID enclosure; SR316 3RU 16-bay server/storage chassis; SR524 SRU 24-bay server/storage chassis.

**Cine Power International Ltd. C11446**

**CineBags C11037**

**Intro:** CB-01 production bag features removable pouches, 23 compartments, large padded shoulder strap & reflective material; CB-10 cinematographer bag for cinematographers and gaffers; CB-03 AC tool pouch; CB-04 bottle pouch for water bottles and canned air; CB-5 tool pouch.

**Cinegy SL4362**

**Intro:** Media Suite 4.0 includes archive, production and broadcast automation; Ingest HD features real-time HD ingest with multi-format HD encoding using Cinegy's own software encoders providing highest quality at 720p or 1080i resolution; Media Desktop production tool combines search & browse of the Media Archive asset management system with a highly customizable logger, a powerful, real-time NLE that can work with long GOP MPEG-2 in SD as well as HD, as well as import/export capabilities to other NLEs and automation systems; eXtreme 7 for creating effects or multi-layer compositions; Payout HD, for real-time news payout or normal scheduled payout.

**Cinemills C7931**

**Cintel Inc. C9226**

**Ciprico SL3628**

**Intro:** DiMeda 10G high-performance networked attached storage (NAS) solution uses 10 Gbps Ethernet; 4 Gbps Fibre Channel RAID solution; DiMeda 1724 provides four 1 Gbps Ethernet server connections, allowing customers to connect to existing Ethernet networks.

**Clarity Visual Systems SL3328**

**Clark Wire & Cable C3331**

**Intro:** Multicore CCU/VTR camera cables compatible with other cable brands using a 26-pin multicore assembly. Also: Digital and plenum video cables, ADC patchbays

**Clear Channel Satellite C10049**

**Intro:** XtremeSat.

**Clear-Com C7319A**

**Intro:** 1RU E32 digital matrix includes easy-to-use ECS software to configure stations and the entire matrix system and can link two frames for a total of 64 ports; Eclipse 208 Digital Matrix is a 6RU frame with a total of 208 CAT5 station/audio ports; 4224R pushbutton display panel and the LCD key panels 4222R and 4212R are now available on the Eclipse systems; Options for XLR-4 or 5-pin headsets are available; Clear-Com 600-series beltpacks. Also: Eclipse, Matrix+3, 4000 Series, FreeSpeak, Party-Line

**ClearStory Systems SL4259C**

**Intro:** Radiant Enterprise Media Server (EMS) for digital asset management and other video-based initiatives.

**CNN Newsource S100**

**Intro:** CNN Pop Life entertainment news includes raw interviews with celebrities, up-to-the-minute entertainment and pop-culture news, and elements that affiliates can tailor to an individual newscast. Also: CNN Newsource

**Coast to Coast C1211, C11914**  
**Tower Service Inc.**

**Coastal Satellite Inc. C4643**

**Intro:** HD Satellite Transmission 2 is a new satellite truck featuring HD transmission; New C-band truck. Also: Ku/C-band production and satellite trucks

**Coaxial Dynamics N2526**

**On Display:** Digital Wattchman

**Cobalt Digital Inc. SU8965**

**Intro:** 8024 up/down and cross-format converter; B022 up/down and cross-converter with 10-bit processing and digital/analog HD/SD outputs; 5821 down-conversion card; 8090 HD and SD analog-to-digital HD- and SD-SDI dual-rate converter; remote control software for HD format conversion products. Also: HD8021, 8020, 6540, 6590, 6546, 6081, 6040, 5591, 5590, 5540, 5018, 5016, 5015, 4010, 4020, 4030, 4040, 4012

**CodecSys/Broadcast SL3928**

**International**  
**On Display:** CodecSys multicodec compression system

**Coffey Sound N4313, N4517**


**Colem Communications C10348**

**Comet North America N607**

**Comlab Inc. N1100**

**Intro:** Secure-IP multilanguage Davicom MAC2 site monitoring and control unit.

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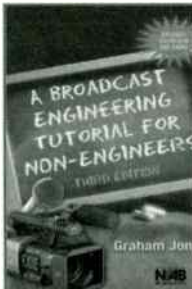
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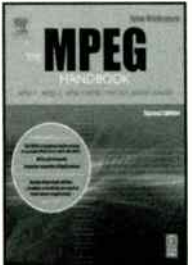


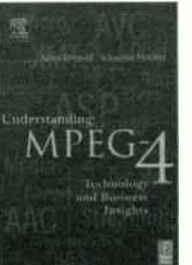


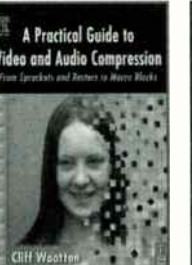






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**Communications Specialties SL2268**

**Intro:** Drop-And-Repeat receivers for high-resolution RGB and audio support resolutions up to WXGA and 480p, 720p and 1080i HDTV; Multiple output transmitters for high-resolution RGB and audio over fiber provide up to 12 outputs for point-to-multipoint distribution.

**Also:** Pure Digital Fiberlink transmission systems, Scan Do scan converters, Deuce video scalars

**Compix Media Inc. SL2565**

**Intro:** Cynerg enhanced multichannel CGR system series features more power and speed for 3D animations; GenCG 3.0 free software upgrade for existing Compix CG users includes embedding, multilayer settings, print functions, master pagelist view, pre-made templates, added image formats (gif, png, tif) and word wrap.

**Also:** LCG Series, VideoCG ToGo, NewsScroll software

**Comprehensive Video Group SL919****Computer Modules/DVEO SU11119****Computer Prompting & Captioning Co.-CPC C10233****Comrex N2118****Comsearch C4645****Comtech EF Data C6941****COM-TECH Srl RF Filters N1834****Conax AS & Conax USA SU9646**

**Intro:** Conax CAS7 Conditional Access System (CAS) consists of SAS server, EMM injector, ECM generator, hardware security module, user smart-cards and optional features modules, and features a fully open, fair and non-discriminatory licensing policy for set-top boxes (STBs). Cable, satellite and IPTV operators start with a basic system to support pay TV and add additional components for more complex functionality. CAS7 lets system operators offer a richer selection of content that is easier to order for VOD, near-VOD, Virtual VOD, Event Pay-Per-View, etc. Based on the DVB & CableCard transmission formats and DVB SimulCrypt compliant, CAS7 can be supplied with conditional access modules (CAMs) and OpenCable CableCards; Conax Mobile Server enables television system operators to increase ARPU and reduce churn by offering richer content to consumers with a greater number of purchase options. Conax Mobile Server allows for easy ordering of television content, movies and events using SMS text messages sent via mobile phone; Conax Voucher Server allows television system operators to sell pre-paid access to special content. It assists operators in increasing ARPU from existing subscribers and regain non-creditworthy customers while minimizing risk; Conax Virtual VOD/PVR automatically pushes content such as movies and events to a large number of STB households during off-peak hours. Generate revenue from PVR STBs by offering end-users on-demand access to interactive content pre-stored on the customer's PVR STB; Conax CStream is a complete end-to-end conditional access system for IP TV operators. CStream handles security aspects associated with authorizations and access conditions for IP TV streams.

**Also:** CAS5

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**Continental Lensa S.A. N1935****Control Concepts/Liebert C1524****Controlware Inc. SU9944**

**Intro:** ATM Falcon redundant video (DVB) access device multiplexes up to eight DVB/ASI as well as Ethernet/IP and multiple T1's ports to an ATM connection; ATM Vision is a video-over-ATM access device with up to 16 DVB/ASI ports; Ax100/Cx1000 is a video-over-IP access device; Video Jet is a low-cost MPEG-2/4 encoder and decoder for IP.

**Also:** Umbrella NMS for DVB-T/S

**Controlware Inc. SU9944****Coptervision LLC C9729****Countryman Associates Inc. N1118****CPI C2616**

**Intro:** Crawford Communications Inc. MM133 offers clients a full spectrum of post production and satellite services. Crawford delivers the best in film transfer; color correction, HD editorial, sound design and mixing, 5.1 surround sound, compression/DVD authoring, standards conversion, streaming media/Webcasting, online

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That's what KTLA's Director of Broadcast Ops & Engineering, Chris Neuman, said about the Gyron's aerial downlink image during our live HI DEF coverage of the 2005 Tournament of Roses Parade. "Very sweet pictures. It cut so well with our other cameras you would of thought we were flying a SMPTE fiber. 40 Mbs of MPEG2. The best anyone else has been able to achieve is about 25Mbs. The quality difference at 40Mbs is incredible."



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Creative Cow

SL457

Crispin Corp.

**SU9717**  
**Intro:** RapidPlayX with Supervisory View, a configurable, editing & on-air playback application with high-level monitoring feature. Enables operators to see, from a single screen, multiple play-to-air channel status complete with visual notification of messages, warnings and operator intervention requests; NewsWheel allows broadcasters with existing news productions to add a 24-hour news channel with little investment. The system offers complete control over on-air programming and

provides support for live news, weather cut-ins and commercial breaks. NewsWheel interfaces to newsroom computer systems through MOS, serial and FTP methods; AssetBase with LoRez, a unique Web-enabled asset management solution that combines extensive media management capabilities with a powerful relational database. LoRez generates low-resolution proxy clips and "Slates" from video assets including catch servers. This additional verification tool provides operators with another opportunity to verify

video assets in the timeline; Archive-Manager, an advanced broadcast archive management & storage solution. Available as a stand-alone unit with dual internal Professional Disk for Data (PDD) drives, or may be combined with external near-line redundant arrays of inexpensive disks (RAID), robotic libraries, or network attached storage (NAS) systems; Automated real-time DTV PSIP interface solution.

**Also:** RapidPlayX, AssetBase, Archive-Manager, Dubber, DeviceServer, Event-Server, NewsPlayX, NewsWheel, LoRez, Mapper, ClipCopX, TurboBrowser, DubberAssist, AutoDubber  
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Crown Broadcast

N722

CRT, Custom Products Inc.

SL4653

Cryptography Research Inc.

SL5822

Crystal Vision Ltd.

SU6361

**Intro:** Safire HD high-definition chroma keying works with all common HD formats; EMDEC broadcast-quality 12-bit decoder; FRX204 and FTX202 dual fiber optic-to-SDI receiver (FRX204) and a dual SDI-to-fiber optic transmitter (FTX202); Synad-E synchronizer allows a mixture of Dolby E and AES in the same audio group; Synner144 is a combined synchronizer, tracking audio delay and embedder/de-embedder.

**Also:** Safire chroma keyer, ADC104F component-to-SDI converter, DEC105S decoder and SDI synchronizer, DDAA132 monitoring encoder, VDA110M analog video distribution amplifier, DDA108 SDI distribution amplifier

CTE International srl

N2834

**Intro:** DVB 10 digital modulator converts an MPEG-2 transport stream into a COFDM signal at settable I.F. frequency; Gap Fillers.

CTM/ Debie

C2760

Cummins Power Generation

C11343

Curious Software Co.

C9407

**Intro:** Traffic Producer for broadcast quality traffic report maps; Map Presenter is an interactive playback system directly linked to Traffic Producer; News Producer imports design templates created in World Maps.

**Also:** gFx

D&C Electronics

N2424

Daktronics Inc.

SL4922

**On Display:** ProStar LED video; ProTour LED video

Daktronics

SL4922

Dalet Digital Media Systems

SL1953

**Intro:** DaletPlus News Suite is a set of enterprisewide software modules for newsroom computing, video browse & editing, automated ingest, play-out, archive, and asset management; DaletPlus Media Library combines video server & file migration management.

Da-Lite Screen Company Inc.

SL465

Dallas Avionics

C11512

Dan Dugan Sound Design/  
Cooper Sound Systems

N2532

Darim Vision

SL5425

## SHARPEST Detail

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**Data Check SL1246**  
Intro: Model 21245 HD/SDI LCD display with dual-link input; model 22085A dual 8.4" LCD display.  
Also: Models 20000, 26010/5, 23010/5, 24010/5, 22080/5, 22060/5, 22020, 22010, 21170/5, 21190/5, 21150/5, 21245, 21300/5

**DataDirect Networks SL4212**

**Datavideo Corp. SL3319**

**Dataworld N2422**

**DAVICOM/Comlab N1100**

**daVinci Systems C6207**  
Intro: 2K Elite image enhancement system series, which includes 2K Ruby, 2K Sapphire and 2K Emerald, features 10 independent image-processing channels; New features for the Resolve nonlinear color enhancement family; Color Registration tool automatically registers or matches the individual RGB channels in a previously combined image; Digital Intermediate tools.  
Also: revival, revival for Discreet, 2K Plus

**DAWNco C8141**

**Dax Solutions SL4259A**

**Dayang International Ltd. SU9352**  
Intro: D3-Edit 5000 multiformat post-production station offers editing, effects, compositing, titling, transcoding, DVD authoring and Web creation in a single system, featuring infinite layering, real-time compositing, professional audio tools, animation, titling, more than 1,000 preset real-time effects; Dayang D3-CD-HD, a 1080-line HD version of the D3-CG dual-channel CG; VIPS (Video Ingest Play-out Server) combines computer server technology with traditional A/V processing and performs external signal ingest, upload/download and play-to-air in 2RU of space; Magic Wall is a 16-input screen 19.2 kbps RS-232/422 controller with a range of image sizes, optimized to feed plasma and TFT screens and expandable for large centrally managed networks; MagicBox interface cards use SNMP for

system control and monitoring and allows integration with Dayang D3 equipment and third-party products.

**DayPort Inc. SU9346**  
Intro: Production workflow applications; content delivery and distribution solutions; legacy archive integration.  
Also: IP streaming, broadcast operations and media convergence

**Dayport Inc. SU9346**

**DB Elettronica N500, N2138**  
Intro: MD1000 transmitter, featuring 1,000 W in analog or 300 W in digital operation; MDTL TV digital microwave link series, designed to operate in the 1.3 to 24 GHz range can carry up to 4 digital video programs; MD20000/WKD transmitter, featuring 20 kW in analog or 6 kW in digital operation.

**Decisionmark SL4116**

**Dedotec USA Inc. C10721**  
Intro: Dedolight location lighting kits  
Also: Dedolight precision lighting instruments

**Delec Audio und Videotechnik N4208**  
Intro: Voice-over-IP unit connects to Oratis digital intercom via a computer network or standard Internet link with the same functionality as with a traditionally connected unit; AES interface for Oratis intercom.

**Delta Digital Video SL4253**

**Delta Meccanica s.r.l. N3233**  
Intro: 250 W DVB-T 8-pole filter with cross-coupling for critical mask

**Deltacast SL5824**

**Denon & Marantz Professional N313**

**DeSisti Lighting C6817**

**DFH Global Communications SU11827**

**DG Systems C12441**  
Intro: DGConnect, an online order entry and order management product allows

users to upload spots, attach traffic instructions, distribute media to thousands of destinations and confirm delivery at the station level through the DG Spot Box server; DG SpotBox program enhancements include increased satellite bandwidth and a secure new Windows platform operating system; Source TV provides advertising agencies, advertisers and production houses with a searchable database of more than 350,000 television commercials, on a subscription and per-transaction basis; Spot Acquisition, a new service to aid advertisers and agencies in quality assurance and tracking.  
Also: DG Online, AdCatalog, Production services

**DH Antennas C12329**

**Dialight Corp. N3928**  
Intro: Class 1, Div. 2 LED obstruction light for hazardous environments.  
Also: 860 Series LED obstruction light

**Dielectric C7807**  
Intro: 7C, 7P and 7S Series, a full line of antennas for the 700 MHz spectrum, including slotted coaxial as well as panel antennas that can be horizontally, vertically or circularly polarized; TPU-UT Antenna, a patented bow-tie slot turnstile model for low-power broadband (470-860 MHz); a UHF omnidirectional antenna that needs no feed lines, hardware, radiators and the need for a support mast, and allows for dual inputs for single-channel operation or the simultaneous broadcast of two channels without the need for a separate combiner.  
Also: Dualband, Deltalite, TPU-DSB, VHF Deltawing Panel, TLS-V

**DiGico N306**

**Digigram N2428**

**Digital Anarchy SL1019**  
Intro: Data Animator 1.0, a set of seven After Effects plug-ins for generating animated charts & graphs for corporate communication projects, including EasyChart, a graphical user interface and chart presets for animating the data; Toon!, a filter for

After Effects and Final Cut Pro that gives video the look of a cartoon.

**Digital Broadcast C11709**  
Intro: MediaFire broadcast server works with Pathfire to play syndicated programming directly to air from the Pathfire DMG Server.  
Also: MediaBank Automated Master Control Systems, NewsBank Automated News Systems

**Digital ERA SL3652**

**Digital Juice Inc. SL447**  
Intro: VideoTraxx has more than 9,000 clips in 3 volumes; Jump Backs are animated backgrounds; StackTraxx is production music in a remixable format; Editor's Toolkits are graphics and effects editing packages including animated wipes, transitions, motion design elements, matching sets of lower-thirds, overlays, stock photos and mattes.

**Digital Rapids SL5331**  
Intro: StreamZHD professional multiformat HD/SD video encoding solution featuring support for multiple formats including AVI, WM9, QuickTime, MPEG-2, AC-3, and many more, for archive, dailies, VOD or streaming media delivery from SD or HD source material; StreamZHD-WXS, a WM9 acceleration option for StreamZHD that allows the highest quality/fastest throughput WM9 encoding from HD or SD source material; StreamZ, a professional SD video encoding solution with simultaneous output to multiple formats including AVI, WM9, MPEG-1, MPEG-2, QuickTime, Real, MPEG-4, Flash, AC3, MP3, WAV (with multichannel audio); Stream Software offers complete control over I/Os from one streamlined workflow; Copper Data & Copper Media offer wire-speed, secure delivery of media with tuneable rate control & bandwidth scheduling which allows complete control over network utilization.

**Digital Transaction Group SU11533**

On Display: Standard and professional content and delivery management software; DTG workstations have identical software and configurations, no dedicated, single task workstations; Single to scalable eXtensible Device Servers, (XDS) support from 64 to 1,024 devices, with all device drivers shared across all clients and channels; XDS Resource Management, an open, standards-based, transactional SQL database to facilitate data exchange and integrate with other systems and databases.  
Also: AIRO Automation

**Digital Vision C9732**  
Intro: DVNR RGB image processing platform supports SD and HD 4:2:2 formats, as well as 4:4:4 RGB and YUV; AGR4 ME RGB film grain and camera noise management System; ASC3 ME RGB random scratch and film dirt concealment system; Valhall RGB color grade system, Version 2.0.

**Digital Voodoo/Bluefish444 SL3537**  
Intro: New hardware product announcements for Digital Voodoo (Macintosh) and Bluefish444 (PC) product lines.

**Disc Makers SL3616**

**Discreet SL1920**  
Intro: Combustion 4 for Windows and Macintosh features vector paint, particles, effects, animation & 3D compositing; 3ds max 7, a 3D modeling, animation & rendering tool for game development, design visualization, feature film & television effects, and education, featuring Cloth Extension cloth simulation system; Lustre 2.5, devel-

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## FRONTLINE'S NEW ENG-350 LT

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oped with Budapest-based Colorfront, is a digital intermediate system for 2K- and 4K-colour grading & look creation; Inferno 6, with spline-based warping and morphing tool with 3D look-up-table capabilities, improved automated 3D tracker, clip history & collaborative workflow enhancements; Smoke 6.5 integrated editing & finishing system with SD/HD scalability, off-load rendering, open-access file features, the ability to import multilayered Adobe Photoshop PSD files, featuring color management systems from Kodak ARRI & Imagica; Flame 9 with spline-based warping & morphing; Fire 6.5 noncompressed, non-linear editing & finishing system with off-load rendering, open access and PSD import capability.

**DK Technologies** C2757, C3612A

**DMT USA Inc.** C3016  
On Display: Liquid-cooled, high-power TV transmitters; air-cooled, low-power TV transmitters; TV translators & TV panel antennas.

**DNF Controls** SU8552  
Intro: Data logging option for The Analyst RS422/RS232 tester; Playlist playout & router control modules for Flex; ST304-DSR1K-T slow-motion controller.  
Also: VTR controllers, clip control systems, playlist playout control systems, sports controllers, machine-control system, Ethernet-based Flex control network

**Dolby Laboratories Inc.** SU7870  
On Display: DP564 multichannel audio decoder; DP569 multichannel Dolby Digital encoder; DP572 Dolby E decoder; DP571 Dolby E encoder

**Doremi Labs Inc.** C2342  
Intro: Orca Capture Station, a HD MPEG-2 record & playback system capable of real-time compression rates up to 160 Mbps; HDG-10 portable HD & SD video test generator with 15 still & 7 moving test patterns in SD & HD at full broadcast quality; Nugget HD MPEG-2 video player features HD-SDI, SDI, DVI and composite video outputs with MPEG-2 transfer up to 80 Mbps to internal IDE drive via Ethernet; MCS-HD 4-channel HD broadcast video server features 2 record and 2 play-independent HD video channels with shared storage & selectable JPEG2000 compression rates; V1-HD VDR features compressed JPEG2000 storage for up to 6 hours of recording on just two internal removable drives.  
Also: V1 DDR, MCS video server, V1-UHD VDR, Orca MPEG-2 encoder, V1-MP2 VDR

**Dorrough Electronics Inc.** C1833  
Intro: Audio Alignment Generator features a tone burst that confirms that a channel has sufficient headroom to pass the peak of the program material.

**Dove Lighting Systems** C2039  
Intro: DM-412-WM, a wallmount dimmer pack compatible with fluorescent and incandescent fixtures. It features four channels of dimming at up to 1200 W per channel and accepts DMX-512 and 0 to +10VDC control signals. Fitting in standard 8" X 8" X 4" enclosures, it is easy to install and maintain; The IQ512, a 12 channel control console is now available in a wall-mount configuration.  
Also: Sublime, MPX-100 lighting controller, StarPort, Dimmermaster 406 SUG shoebox trussmount dimmer, Dimmermaster 412 wallmount dimmers

**DPA Microphones Inc.** N506  
Intro: Windpac, a 9-oz. ultra-lightweight

weatherproof pack for location recording; 4006-TL omnidirectional microphone with a new transformerless preamplifier design, powered via standard 48 V phantom power and featuring increased sensitivity with an extra octave of low-frequency capability.  
Also: Standard, compact, miniature microphones

**Draper Inc.** SL3916

**DRS Broadcast Technology** N2302

**DRS Weather Systems Inc.** C10044

**DS Technologies**

SU9938

**DSC Labs**

C10119

Intro: CamBelles skintone charts, with "summer" and "corporate" versions in a combined 16:9/4:3 format and available in several sizes.  
Also: ChromaDuMonde colorbar/grayscale, CamAlign chip charts, Ambi/Combi system

**DTVinteractive**

C1853

**DVB**

SU11408

On Display: DVB-H, DVB-S2, MHP, DTV standards

**DVEO Inc.**

SU11119

Intro: Dual Input DVB ASI I/O card with redundancy-oriented loop-through relay on buffered outputs; Dual input ATSC PCI I/O card; PSIP table manipulation software with 24 high-level PSIP table manipulation commands; Tool for Table EPG and PSIP generator creators; DVB ASI disk recorder has new and better GUI remote management and features a built-in viewer; Dual-channel HD SDI I/O card with Linux support has low-cost up- and down-conversion in real time.



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**858-613-1818**  
**Fax: 858-613-1815**  
**E-mail: laszlo@computermodules.com**  
**Web Site: www.dveo.com**

**DVS Digital Video Systems SL1260**

**DynaScan Technology, Inc SL3448**

**e2v technologies C3146**  
*Intro: 400W Tri-Band Stellarcool amplifier, the latest addition to e2v's growing range of reliable outdoor satellite communications amplifiers, rated for operation at 50 deg C/122 deg F ambient in direct sunlight.*

**Eartec C2643**

**Eastman Kodak Co. C6226**  
*On Display: Kodak Vision & Vision2 film stocks (35mm & 16mm), Kodak Display Manager, Kodak Look Manager system, Kodak telecine calibration system*

**EBS srl N500**  
*Intro: 10 kW UHF solid-state, liquid-cooled transmitter; 2 kW VHF solid-state, air-cooled transmitter; 2,200 W UHF digital DVB-T or 8-VSB liquid-cooled transmitter; 500 W VHF DAB air-cooled transmitter.*

**Echolab C4915**

**Econco N1811**

**Edirol Corp. SL4926**  
*Intro: R-4, a 4-channel portable digital recorder & wave editor that records*

*directly to an internal 40 GB hard drive providing storage capacity for 58 hours of 16-bit/44.1-kHz stereo recording or more than 17 hours at 24-bit/96 kHz; CS-50 stereo shotgun condenser microphone.*

**EditShare SL3445**

**Editware SU11301**  
*Intro: Fastrack SE now has an interface to Accom A6000 video server, allowing linear insert editing with a video server (emulating VTR control with the bonus of random access and other non-linear aspects); Interface to KayakDD video switcher for complete control of all keyers, timelines, EMEM storing/recall and fast selection of wipe patterns from icons; PEGS implementation with video switcher EMEMs and dissolve/wipe/key commands and GPI control. Also: Fastrack VS, Fastrack SE, Media DB*

**EEG Enterprises, Inc C7441**

**Efron Computerized Studios, LLC N4508**

**Egatel C12327**  
*Intro: TAE6103AC UHF 10 kW transmitter features 2 exciters, separate audio & video processing, 8 modules for video amplification, 2 modules for audio amplification plus control and automatic switching unit; MRED9000 (Frequency Agile) DVB-T transposer/exciter features RF/IF down-converter, IF processing board with integrated precorrector, IF/RF upconverter, integrated echo canceller (optional); TAE6202A UHF 2 kW transmitter; Microwave Radiolink SRE8000 Series (10/13 GHz) modulator (IDU-Tx); RDE6000 DVB-T transposers. Also: Low-power analog transmitters, digital transmitters, DAB transmitters*

**Egripment C9216**  
*Intro: Xtreme T12 carbon-fiber telescoping crane; MegaHead over-sized remote camera head; Scanner Elite Crane/Remote Head system. Also: Scanner Elite, JanJib, HotHead, MiniShot, MicroShot, dollies*

**Elber C1212**

**Electronic Exporters Group C10248, C11432**

**Electronic Script Prompting C10533**

**Electronic Theatre Controls C6517**

**Electronica Quasar-Tech N3735**

**Eletronika srl N4218**  
*Intro: VEGA TV transmitter series, features entirely modular sections that simplify maintenance operations; Remote Control Unit, along with the ERCoS software, allows a direct and immediate control of all of the apparatuses of a site; TXUD400 digital transmitter includes a DVB-T COFDM exciter, a pre-driver amplifier, a final power amplifier stage and an output cavity band-pass filter; Multichannel Audio Link E1, a G.703 compliant 2 Mbps serial digital interface for multiple hi-fi audio channels, exciters and RF components.*

**Electrosys S.r.l. C10244**

*Intro: Multimode exciter for analog and digital transmission (DVB-T & DTV) and for band III & band IV-V; T694KA IOT Dual Cast high-power transmitter for analog & digital transmission; Transposer TV DVB/DTV for small-area coverage; W322D VHF air-cooled power amplifier. Also: T633WN UHF DVB transmitter, W682D amplifier, W692D amplifier, W352D amplifier, W322D amplifier*

**Elenos N2131**

**Eletronika S.R.L. N4218**

**ELTI N3731**

**EMC Corp. SL3955**

**e-mediavision.com SL4531**

*Intro: Point-HD, a high-definition graphics presentation system for sports, news & weather.*

**Empire State Filter C12236**

**EMR Corp. N1000**

**ENCO Systems Inc. C3612C, N2826**

**Encoda Systems SU10048**

**Energy-Onix N2527**

**E-N-G Mobile Systems Inc. C8548**

**Engstler Elektronik C7614/8 Entwicklung**

*Intro: SA series of products feature fully graphical LCDs in 32x16, 36x24 & 64x32 pixel resolutions integrated into a pushbutton key; DA series of displays use the RGB-backlit, fully programmable LCD module for applications where a switch function is not required; DS0000 DemoBoard rapid prototyping & development kit controls 2 SA switches or DA displays via an RS232 interface.*

*Also: SA6432, SA3624, SA3216, DS0000*  
**Enhance Technology SL4010**

**Ensemble Designs SU 10217**

*Intro: Avenue 7600 HD embedder & dis-embedder with audio channel mixing &*

# 6800+ PLUS

HIGHLIGHTED 6800+ MODULES

## Single and Triple Serial Monitoring DA VSM6800+, VTM6800+

### Ideal for:

- Utility conversion and monitoring applications
- Rack-space and module cost savings

### Features:

- Combines the functions of equalizing, re-clocking, distribution and conversion of SDI to NTSC/PAL
- VSM6800+ provides monitoring for 1 channel, with up to 4 analog composite and 5 SDI outputs
- The VTM6800+ provides monitoring for three input channels with a corresponding composite and SDI output per channel
- The VTM6800+ monitors up to 30 channels in a single 2RU 6800+ frame
- Built-in color bar test signal through local or remote control per channel on the VTM6800+
- Vertical blanking (pass/blank)
- Local gain control for each channel

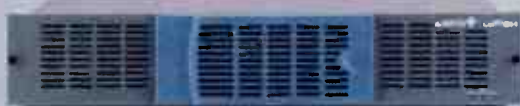
### CORE PROCESSING FOR:

- Video Synchronization/Processing
- Video A-to-D & D-to-A Conversion
- Audio Conversion/Delay/Synchronization
- Multiplexing (Embedding)
- Demultiplexing (De-embedding)
- Logo Generation/Keying
- Test Generation
- Fiber Optics
- Distribution**

OVER 100 MODULES AVAILABLE

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level adjustments is the latest module in the Avenue signal integration system; Avenue 5350 four-channel A/D video converter with TBC—great for bringing analog sources into digital routers and production switchers; BrightEye 15 serial D/A video converter allows the user to time the analog output into a production switcher or routing switcher and is 5.5" wide; BrightEye 16 is a D/A video converter with audio demux and analog output and is also just 5.5" wide; BrightEye 26 is an analog video and audio-to-SDI converter with TBC and framesync with optical and electrical outputs.  
Also: Avenue Signal Integration System, BrightEye converters and SPGs  
Mondae Hott, Sales Mgr.  
P.O. Box 993  
Grass Valley, CA 95945  
530-478-1830  
Fax: 530-478-1832  
E-mail: [info@endes.com](mailto:info@endes.com)  
Web Site: [www.ensembledesigns.com](http://www.ensembledesigns.com)

**EnviroCycle Inc.** SL5823

**Envivio Inc.** SL3310  
Intro: Envivio media transport system with 4Caster Broadcast Series real-time H.264 encoder & Envivio 4View H.264 decoder delivers HD broadcast-quality video over satellite, cable & telecommunications network; Envivio MPEG-4 'IPlay3' complete television-over-ADSL system includes MPEG-4 video-over-IP, VoIP, billing & OSS services; Envivio 4Front enterprise communication, training, & digital multiple-platform signage system (Macintosh, PC, set-top box & plasma screens).  
Also: 4Coder MPEG-4/H.264 non real-time encoder; 4Front EPG portal MPEG-4

middleware system; 4Sight MPEG-4/H.264 streaming server; 4Forum live presentation system

**Eonstreams Inc.** SL4450

**ERG Ventures Co.** SU10134  
Intro: HDM-EV85 8.4" monitor for HDV camcorders.  
Also: EV30D, EV35D, EV80D

**ERI-Electronics Research** N1306

**ESE** C2639  
Intro: ES-185U enhanced receiver with higher accuracy, more timecodes, NTP ready & much more; GPS master clock/timecode generator receives accurate time & date information from GPS satellites and supplies data in several forms; ES-461U SMPTE timecode generator features jam-sync operation in drop frame & non-drop frame modes; ES-462U ESE-to-SMPTE timecode converter generates SMPTE timecode synchronized from an external source of ESE timecode; PC-471PCI timecode interface card synchronizes PC clock to master clock or other time source; ES-210 10 MHz frequency distribution amplifier; variety of distribution and interface devices.  
Also: Master clock systems; audio & video distribution amplifiers; SMPTE/EBU timecode products; audio-level indicators & interfaces  
Fernando Vallin, Sales Mgr.  
142 Sierra St.  
El Segundo, CA 90245  
310-322-2136  
Fax: 310-322-8127  
E-mail: [ese@ese-web.com](mailto:ese@ese-web.com)  
Web Site: [www.ese-web.com](http://www.ese-web.com)

#### Esser Test Charts

**C7614a**  
Intro: Mini HD Set Kit with three test charts—back focus (TE 148), grayscale with super black (TE 232) and color-circle test chart (TE 233) for selective color correction; Color vector test chart TE 238 for Sony color vectors; HD full-field resolution test chart TE 237 for resolution measurement of the complete picture area; Spherical Illuminator LE 6-100 with adjustable light density up to 9,000 lux.  
Also: Esser Test Charts

#### Euphonix

**N3616**  
Intro: System 5-MC is an audio recording, editing & mixing system that integrates the System 5 control surface with EuCon-aware applications such as Steinberg's Nuendo and Merging's Pyramix. The MC is a powerful workstation control device with keyboard, trackballs, touchscreen, SmartSwitches, faders & knobs for the professional who requires a control surface that speeds operation & enhances creativity. The MC also includes Studio Monitor Pro, a monitoring application that provides surround monitoring with multiple speaker controls on the surface; The System 5-B can handle a large number of digital & analog sources with a high-end control surface that can be configured to meet the size of the control room. The design includes provision for backup power supplies & redundancy tailored to the on-air environment. Two versions are available: The System 5-B is for on-air & line-to-tape applications and supports up to 96 channels. The System 5-BP includes dynamic automation and can support more than 300 channels for applications where the console needs to handle live & audio post

situations; Max Air is a 96-channel digital mixing system for on-air, live-to-tape & outside broadcast applications. It uses the same DSP core and converters as System 5-B and also shares much of the same control surface software. It includes hardware redundancy and software diagnostics; As well as providing MADI routing solutions integral to the System 5, Max Air & the R-1, Euphonix can also supply stand-alone MADI routing solutions for broadcast, audio-post & music applications; Series of multi-channel analog-to-MADI-to-AES/EBU converters for use with System 5 & Max Air; FC726 format converter allows MADI, TDIF, SPDIF, AES/EBU and Pro Digi sources to be connected to the console's MADI inputs & outputs and include sample rate conversion.  
Also System 5-P digital audio post-production mixing system  
Theresa M. Grant, Marketing Mgr.  
220 Portage Ave.  
Palo Alto, CA 94306  
650-846-1142  
650-855-0400  
Fax: 650-855-0410  
E-mail: [tgrant@euphonix.com](mailto:tgrant@euphonix.com)  
Web Site: [www.euphonix.com](http://www.euphonix.com)  
Eutelsat C7247

**EV Microphones** N3834

**Eventide Inc.** N502

**Evertz** SU6433  
Intro 5600MSC Master Sync/Clock Generator provides all synchronizing signals needed while solving the problem of locking the in-house master clock system to the master video sync pulse generator; VIP multi-input display processor & signal moni-

## ADVANCED APPLICATIONS PIECES

NEW HIGHLIGHTED NEO MODULE

### NEO VR Modular Disk Recorder DVR-3901

#### Ideal for:

- Newsroom: News feed recording
- Newsroom set: Large screen display video source
- Master Control: Playout of short clips. Confidence recorder for incoming feeds.
- Mobile production: ISO camera recording, remote recording and playout.

#### Features:

- Up to 8 hours of storage
- RS-422/Ethernet control and automation interface
- FTP transfer of content
- Playlist™ management software application



# NEO



#### ADVANCED APPLICATIONS FOR:

- Modular Disk Recording
- Simplicity (Audio/Video Processing)
- Master Timing Generation
- Aspect Ratio Conversion
- HDTV up/down Conversion
- Multi-Source Display Processing
- Content Branding Systems



toring solution provides a feature-rich yet cost-effective signal monitoring and display solution for up to 12 video inputs with embedded and discrete digital or analog audio; HDSD9545DLY-PRO Profanity Protection device gives an operator control over the program content being broadcast to air; 7707ADVT & 7707ADVR are single card modules which transport analog or SDI video and 4 channels of analog or AES audio over fiber optics; 7702DA4-RF/7703DA4-RF 1x4 & 7702DA8-RF/7703DA8-RF 1x8 series of active splitters provide inexpensive, amplification & distribution of RF signals from 10 MHz to 3 GHz; 7702BPX-LB/7703BPX-LB L-Band & 7702BPX-IF/7703BPX-IF 70/140 MHz IF series of 2x1 RF protection switches provide signal path protection & auto-changeover functionality for L-band & 70/140 MHz IF signals; 7705LTA/7707LTA, 7705LR/7707LR L-band & 7705IFT/7707IFT, 7705IFR/7707IFR 70/140 MHz IF fiber optic transmitter/receiver modules transport L-Band & 70/140 MHz IF satellite signals over fiber optic cable.

Also: Cross Converter, MVP, VistaLINK

**EVS C4534**

**Exanet SL3957**  
Intro: ExaStore 2.0 system consolidates data into a single pool that can be directly accessed by all workstation clients & workflow servers, regardless of operating system (Unix, Linux, Windows, Mac, etc.), and provides unlimited & independent linear scalability in capacity, by adding RAID systems, and bandwidth, by adding nodes, ensuring uninterrupted data access & data integrity.

**Exavio SL4634**  
Intro: ExaMax 9000 Network Platform for digital media access & distribution, with 5 GBps of network storage access, scalable, nonblocking switch fabric, 36 2-Gb fiber-channel ports and 2 TB of dynamic cache.

**Eyeheight Ltd. SU 8501**  
Intro: Eyeheight SQ-2E 2D DVE system with integrated keying, picture-in-picture, image-squeeze, real-time horizontal and/or vertical resizing effects; Eyeheight enigma data transcoder enables metadata & machine-control information to be transported through an SDI channel; Eyeheight irisHdi compact vision switcher, based on genetics Evolution hardware platform, has 8 HD-SDI inputs, program & preset control and two

auxiliary bus outputs; Eyeheight's legalEyesHdi, a 1RU HD-SDI video legalizer with full 10-bit processing for mobile-production vehicles, post-production facilities & broadcast centers.

**eyeon Software Inc. SL1126**  
Intro: Fusion Version 5 compositing technology offers a 3D environment with Open GL support, ASCII flow management, B-splines, ROI, flow & masking enhancements, etc.

Also: Fusion, DFX+, DF Render Node

**EZ FX Jibs Inc. C4144**

**EZNews by Automated Data Systems SL3906**

**F.J. Westcott SU11019**  
Intro: Spiderlite TD5 for use with halogen or fluorescent lamps up to 750 W, with 3 controls for setting up lighting ratios in multiple heads; 8'x 8' Scrim Jim collapsible diffusion & reflection system of anodized aircraft aluminum weighs less than 5 lbs. and comes with diffusive, reflective, single- and double-net fabrics, reversible chromakey green & blue, and egg-crate grids; Spiderlite Single, a one-bulb Spiderlite with 3200 Kelvin of continuous light with 500 W or 1,000 W lamps. All metal construction with built-in points for direct attachment of a soft box, handle for quick rotation. Kits available.

Also: Spiderlite, Spiderlite TD5 & Scrim Jim

**Facilis Technology Inc. SL4446**  
Intro: TerraBlock 8xs system is a Fibre Channel storage system for shared video workgroups with up to 3.2 TB in a desk-side form factor.

Also: TerraBlock 24D, TerraBlock 12D

**Fairlight SL340**

**Fast Channel Network C12014**

**Fast Forward Video C3253**  
Intro: FieldPro mini DVR measuring 5.2"x0.8"x3.7", is powered by an external 12-VDC adapter and features video capture & playback at 60 fps, resolution greater than 550 lines at 4:1 compression, user-selectable compression ratios ranging from 4:1 to 20:1, and recording times averaging from four to 20 minutes per GB; Mini DVR Pro On-Body DVR, a standalone, handheld, battery/external-powered

pocket-sized DVR with scalable MJPEG compression and 720x486 pixel image resolution; Outrider CF Board-Level DVR measuring 4.69"x2.21" for OEM applications and high-resolution recording; Outrider-IDE Board Level DVR, like the CF, has time/date stamp & character display, time-lapse recording, NTSC/PAL compatibility, composite & Y/C input/outputs, pre-event record, and loop record of PC-viewable or secure video files.

Also: OMEGA Deck, DigiDeck DVRs, Recon Board-Level DVR, F-Series Timecode Generators

**Fiber Systems International C11035**

**FilmLight SL2625**  
Intro: Version 2.2 of the Baselight grading and finishing system is available on the full range of Baselight systems, including Baselight Eight, enabling real-time 4K grading & video I/O support.

Also: Baselight Four & Eight, Truelight & Northlight

**Final Draft Inc. SL3663**

**FirstCom Music C3024**  
Intro: Online music library featuring downloadable AIF, MP3 or WAV files & new search and organization tools; PowerPlay V1 sports rock series features sports highlights, promos, gaming, extreme events.

Also: FirstCom Music Library, Chappell Recorded Music Library, OneMusic Library, Connect, Hollywood Music Library, Gotham Music Library, Velocity, Access Music Library, Galarie, Headspace, Total Access, Vivid!

**Fischer Connectors Inc. SU11812**  
Intro: 1053 Series HDTV connectors are SMPTE compliant, have field-installable fiber optic contacts & decrease assembly labor costs.

Also: 1051 (PAL) and 1052 (American broadcast standard) Series triax connectors

**Fission Software Inc. C9807**  
Intro: Modular automation software for NTSC and/or PAL cable systems and TV stations, featuring multiple traffic compatibility, customized transmission reports, native DV & DV50 support and GUI

**Fliir Systems SU9369**

**Floral Systems Inc. SU10000**

Intro: Join-in-progress feature for the AirBoss presentation controller; TrafficAssist works with traffic & automation systems to make unattended on-air operations a reality; Supervisory Monitor is a single workstation that provides a horizontal timeline status of multiple channels; NewsGrabber rapid news acquisition system, including presentation of available resources & automatic assignment of satellite dishes, microwave dishes, receivers, recording devices & file names.

Also: AirBoss, MediaMaster, ShowTimer, MediaFilter, MediaTimer

**Fluke Corp. C11814**

**Focus Enhancements SL505, SL4255E**  
Intro: ProxSys media server manages low- and high-resolution video, audio, images and data from a Web browser; MoniSys 24/7 monitoring server provides 24/7 TV program monitoring; FireStore FS-2 studio DTE recorder brings direct-to-edit technology into the studio or production vehicle; FireStore FS-4 portable DTE recorder works with handheld camcorders; FireStore FS-M MPEG digital disk recorder saves hours of MPEG-2 video on removable hard disk drives.

Also: FireStore FS-3 camera-mount DTE recorder, FireStore DV Conversion Suite, MX-4 digital video mixer, MX-4DV Digital Video Mixer, MediaConverter DV/SDI/analog converter, TitleMaker 3000 character generator

**Focus Optics SU8977**

**For-A Corp. of America C4519**  
Intro: Hanabi HVS-3300HS, a multibit-rate two M/E, 16x16 switcher featuring support for all major SD & HD formats, ideal for mobile production; FA-128 14-bit internal processing frame synchronizer comes as a standalone unit or as a modular card (UFM-128FS); digiStorm HD on-air graphics developed in collaboration with Brainstorm Multimedia's eStudio virtual studio software program simplifies virtual studio & graphics creation by integrating the functions of a variety of devices, including chroma-keyer, switcher, camera calibration software & numerous plug-ins.

Also: VertigoXmedia's X-Presenter, a PowerPoint TV studio in a box

**Forecast Consoles Inc. SU7131**  
Intro: MasterRail Console System; GC1 edit console.

## Easily Convert BNC to Fiber

Digital Video Transport Over Fiber

### Mini Media Converters

- Ultra compact... fits anywhere
- Rugged design for tough environments
- Provides fiber links to 20km!
- Field-proven
- 75ohm BNC to ST singlemode
- SMPTE HD/SD/SDTI & DVB-ASI
- Diagnostic interface and status LED
- 18 module rack available

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**FortelDTV Inc.** SU10463

**Foxcom, a Division of OnePath Networks** C6648

**Fresh Interactive Technologies** SU8974

**Frezzi Energy Systems** SU10718

**Intro:** FQC-2 dual-channel quick charger delivers simultaneous fully automatic charging; MF-LED high-output mini-fill LED light for broadcast cameras; Super Sun-Gun 400 HMI Model SSG-400 mini-DV stablecam support system for extended power & image stabilizing with output equivalent to 800 W conventional HMI heads; Total Control pan & tilt systems for professional & high-end video application facilities.

**Also:** Frezzi mini-fills, micro-fills, SSG-200 HMI sun-gun light heads, advanced high-energy rechargeable batteries, automatic charger systems, location & portable lighting kits in quartz & HMI light sources.

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**Front Porch Digital** SU11036

**Intro:** DIVArchive 5.8 digital archive management software includes Content View & Browse and integration of Telestream Flipfactory; Total Solution turnkey storage & archive systems, including Archive in a Box for smaller broadcast studios.

**Also:** DIVArchive, Bitscream

**Frontline Communications** C8835, MM25

**Intro:** ENG-350 LT broadcast vehicle.

**Also:** ENG-350 HT, SNV NT-8, ENG Sprinter, WCI Rebuild, SNV NT-7, Sprinter DSNG

**Fu Hou Corp. / FH Video Inc.** SU9707

**Fuji Photo Film U.S.A. Inc.** SU6370A

**Fuji Television Network** C10207

**Intro:** Music Eraser provides effective elimination of music from an all mixed single soundtrack.

**Fujiiryoki USA, ACIAI** SL353

**Fujinon Inc.** SU6370

**Future Media Concepts** SL4031

**On Display:** Avid, Apple, Adobe, Macromedia, Boris, Digidesign, Discreet, NewTek, Softimage, Maya & Quark manufacturer-authorized training.

**GCS** C7144

**GDC Technology** SL5600

**Gee Broadcast** SU1052H

**Gefen Inc.** SL501

**Intro:** HD-SDI-to-DVI converter; 1:4 HD-SDI distribution amplifier creates 4 outputs of HD-SDI video from just one source and sends it from 1 HD-SDI source to 4 SDI displays simultaneously; 4x1 HD-SDI switcher links 4 HD-SDI sources to 1 SDI display and is IR remote-controlled; Gefen FireWire Repeater 800 can transmit data at 800 Mbps over FireWire IEEE 1394 up to 33' and up to 250' with additional repeaters; USB 2.0 Extender uses a sender/receiver system to connect a computer to an extended USB peripheral using CAT-5 cables and renders an average data transmission rate of 480 Mbps.

**Also:** DVI-DL Switcher, DVI-2000 HD

**GenArts** SL1213P

**Gencom Technology** SU11801

**Genelec INC.** N1726, SL1143

**Geneva Aviation Inc.** C11421

**Genum Corp.** C8514

**Gepco International** C9341

**Intro:** VDM260, an ultra-miniature HD coax cable achieves exceptionally low weight & small size without sacrificing the critical electrical & mechanical properties

required for reliable transmission in broadcast applications; CT504HD heavy-duty tactical Category 5e cable is for portable or remote patching of Ethernet networks or digital A/V formats using CAT5e type cable; HDC120P, a 12mm heavy-duty hybrid fiber optic cable; SMPTE 311M-compliant, the HDC120P for HD camera to CCU interconnections in studio or mobile production environments, where extra durability is required.

**Gerling & Associates** C6734, MM1

**GigaSat Ltd.** MM6

**Glidecam Industries** C8929

**Intro:** Glidecam Smooth Shooter professional body mounted camera stabilization system for cameras weighing up to 10 lbs., when used with the Glidecam 4000 Pro, or for cameras weighing up to 6 lbs. when used with the Glidecam 2000 Pro; Glidecam V-35 professional body mounted stabilization system offers a full electrically integrated, no-tools sled design, dual action six titanium spring arm & comfortable support vest for cameras weighing 10-30 lbs.

**Also:** Gold Series System, V-35 System, Smooth Shooter System, V-16/V-20

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System, 2000 Pro, 4000 Pro, Camcrane 200, Vista Head

**Global Communications C6346**

**Global Media Resource C2750**  
On Display: Blank videotapes and date media

**Global Microwave Systems Inc. C1221**

**Global Sports on Demand Inc. SL4901**

**Globalstor Data SU9363**

*Intro:* ExtremeStor-HD is conveniently packaged in a single 5U rack-mounted enclosure incorporating 24,250 GB hot-swappable SATA hard drives for up to 6 TB of local storage or 24,400 GB hot-swappable SATA hard drives for up to 9.6 TB; ExtremeStor-VS is a low-cost, high-performance fault-tolerant video storage server incorporating as many as 24,250 GB hot-swappable SATA hard drives for up to 6 TB of local storage or 24,400 GB hot-swappable SATA hard drives for 9.6 TB; FibreStor-DI, for the high performance digital video storage and playback requirements of HD, digital intermediate, color correction & other eCinema and video applications, features Fibre to Fibre Channel RAID storage providing sustained raw performance levels well above 700 MBps under RAID 5, making the FibreStor-DI perfectly suited for Spirit 2K, DaVinci 2K and other applications requiring real time 2K playback/record.  
Also: ExtremeStor-HD, ExtremeStor-VS, FibreStor-DI

**GlobeCast C2129**

**Globecom Systems Inc. C9048**

**Globix Corp. SL4259J**

**Global Society for Asset Management SL4259D**

**GMPCS Personal Communications C2944**

*Intro:* BGAN offers high-speed circuit-switched and packet data services, plus voice telephony, via a portfolio of small, lightweight user terminals.  
Also: Inmarsat, Thuraya, Globalstar & Iridium satellite services

**Groove Addicts/Who Did That Music? C3053**

**G-Technology Inc. SL4060**

**Hamilton Metalcraft C1739**

**Hamlet C7031**

*Intro:* Flexiscope multifunction, multistandard handheld waveform, vector, audio picture monitor uses a built-in 3.5" TFT display; LCD Scope 292WVA; Protean Generators are handheld video and audio generators and include a multifunction HD-SDI generator.  
Also: Monitor Scope, DigiScope, Adept, Microscope, Picoscope

**Hannay Reels C11714**

**Hardigg Cases SL357**

**Harmonic Inc. SU10707**

*Intro:* HD encoding solutions based on MPEG-2 and advanced codecs.  
Also: DiviCom MV 100 SD encoder, DiviCom MV 450 HD encoder, DiviCom Ion Multichannel SD encoder, NMX Digital Service Manager, DiviTrackXE Statistical Multiplexer

**Harris Networking and Government Solutions C3612A**

*Intro:* MPEG-2 HD encoder supports multiple HD video formats including 1080i/29.97, 720p/59.94 and 1080i/25 as well as standard 4:2:0 and 4:2:2 professional profiles. Its plug-and-play design ensures easy upgradeability of NetVX systems already in operation; Transrating Transport Stream Multiplexer (TMX) module allows content providers and broadcasters to optimize bandwidth usage while maintaining full video quality; NetVX will now support switching and editing of compressed feeds through program splicing for glitch-free operation.  
Also: NetVx, Invenio, Intraplex

**Harris Software Systems Unit C3612A**

*Intro:* Harris Software Systems (featuring the combined Harris and Encoda portfolios) will showcase total content delivery solutions for applications that include digital asset management, playout automation, traffic/scheduling/billing, advertising, and integrated content management and distribution.

**Harris Television Systems C1907**

*Intro:* PowerCD High-Power UHF is an intelligent transmitter optimized for the modern IT infrastructure; The eCDi enhanced transmitter network monitoring & control system is built in and serves as the core of the transmitter control system; PowerCD is SNMP-ready with a reliable control environment regardless of remote or local control; E2V ESCIOT (Energy Saving Collector IOT) tubes promote a multi-staged depressed collector design that enhances energy efficiency; Atlas Analogue Series UHF transmitters are ideal for customers looking to replace older tube transmitters with solid-state transmitters, while also providing a path to DTV with its common amplification design; Mobile video over DVB-H devices will start with content creation and move through the broadcast chain to the receiving mobile device.  
Also: Platinum VHF DTV transmitters; eCDi enhanced transmitter network control and monitoring; ReCon remote control and facility management system

**Harrison Audio Consoles N2418**

*Intro:* Trion console system features a traditional surface architecture that eliminates the need for a central, shared-knobs control panel.  
Also: HD synchronizers; genlock products; format/standards converters; video test equipment; upconverters/downconverters; Time Tailor editing system for time/program compression.

**Hash Inc. C12317**

**Hauppauge Computer Works C5847**

**Helicopters Inc. C7926A**

**Henry Engineering N1300**

**Herman Electronics SU9814**

**Hewlett Packard SL1961**

**HHB Communications N2822A**

**Hi Tech Systems Ltd. SU9711**

**Hibino Corp. SL4441**

*Intro:* DLC-118HD processes Hi-Vision resolution in real time with 12-bit color depth; IMC-880 signal processor is multifunction and works in conjunction with the DLC-118HD; LVD Series of LED panels are built around 3mm, 4mm, 6mm and 10mm pitch LED tiles for standard buildout.

**High Tech Industries SU6631**

**Hilomast USA C9944**

**Hitachi Denshi America C5119**

*Intro:* Low-cost digital recording system for the Z-series line of cameras capable of recording up to 6 hours of DV25 video on removable Hitachi 2.5" hard discs; SK-31B series; a high performance to cost ratio HDTV (1080i or 720p) camera for unmanned applications in field and studio.  
Also: DHDR-1, SK-31C

**Hi-Tech Enterprises SU8600**

*Intro:* Turnkey multicamera system featuring a trio of Sony's BRC-300 fully robotic 3-chip cameras, which can be used in 4:3 or 16:9 mode, and come with lenses capable of 48-to-1 magnification.  
Also: New & used broadcast video equipment

**HLW SU11015**

**Hollywood Edge C2346**

**Honeywell Obstruction Lighting N3318**

**Hoodman Corporation C2650**

**Horita Co. Inc. C10120**

*On Display:* TCP-50 time code processor; Pocket PA; pocket PC-based Bluetooth wireless TC logging system; low cost SMPTE/ EBU LTC & VITC generators, readers, translators, inserters, blackburst, color bar, test signal generators, Video DA GPS-based time code/sync.

**Hosa Technology Inc. SL256**

**Hotronic Inc. C9015**

**Huge Systems Inc. SL3628**

**Hybrid SL5818**

**IABM C1405**

**iBASE-Technoland N328**

**IBC C1605**

**IBIS Inc. SU10332**

*Intro:* IBIS News & Sport allows the capture of highlights at ingest from up to six different feeds; IBIS PAC (Process, Automate, Control) is a distributed control & automation architecture that provides a range of process, control & automation systems in a straightforward manner.

**IBM SU7049**

**ICF-Interactive Content Factory SL2461**

**iDirect C6348**

**IDX System Technology C3036**

*Intro:* Four new Endura batteries with higher capacities; Four new Endura chargers feature high-impact mold and faster charge time; X3-Lite, a new LED on-board light for ENG cameras.

**IGP MM235**

**Ikegami Electronics C5426**

*Intro:* HSS-3000 HD/SDI multifunction

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switcher; DNS-33W digital tapeless acquisition; HDK-79EC multiformat C-MOS camera; HC-D57W SDI triax camera; HLM Series HD LCD monitors.

**ILC** **SU9307**  
Intro: NetLink Element Control Processor (ECP) provides real-time management of smaller communications networks & facilities, especially hybrid networks.

Also: Broadcast facilities management, MaxView AperiaWeb, MaxView Carrier Monitoring System (CMS), transmitter remote control, MaxView Scenario Scheduling, MaxView Chorus trouble ticketing

**illbruck/SONEX** **N1600**  
On Display: SONEX acoustical wall panels; Fabritec fabric-wrapped wall panels; Prospeg barrier

**ILY Enterprise Inc.** **SL3408**

**Image Video** **SU7077**  
Intro: LVX-4, a rack or wall mount 17" LCD panel with built-in quad split processor accepts SDI & analog video inputs with embedded audio metering & UMD tally capability; VxV-4-DVI quad processor accepts SDI & analog video inputs to a DVI output, with embedded audio metering & UMD tally capability; VxV-4-SDI quad processor accepts SDI & analog video inputs to SDI & composite analog outputs, with embedded audio metering & UMD tally capability; VxV-16 combines up to 16 mixed format video sources on a high-resolution display. The unit comes standard with 16 inputs, which are software-selectable for analog or digital formats. The VxV-16 may be integrated with the Image

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Also: RDU1510 Series UMDs, GSI-1, GSI-2, GSI-3, TSI-1000, 7115/7116 signal presence alarm systems  
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**Imagica Corp. of America** **SL4234**  
Intro: Imager XE-Advanced can scan 2K in 2 seconds, 4K in 4 seconds.

**Imagineer Systems Ltd.** **SL253**

**IMAS Publishing China** **SU9713**

**IMP Electronics Ltd.** **C10349**

**Impact Case & Container** **C12330**

**Impact Cases Inc.** **C11143**

**IMT RF Products** **N329, N429**  
Intro: 10 W peak sync RF Amplifier; 50 W peak sync RF amplifier

**Independent Audio** **N4522**  
Intro: E.A.R. 660 Fairchild-type valve lim-

iter-compressor; Phoenix Audio DRS-2 mic-pre/DI; Signex CPJ48D25 rear D-sub patchbay with standard contacts; Signex CPJ48D25G rear D-sub patchbay with gold contacts.

Also: Audio Developments, Cedar Audio, Pearl Lab mics, Signex patchbays

**Industrial Acoustics Co.** **N2524**

**Ineoquest Technologies** **SL4270**

**Infortrend Corp.** **SL3962**

**InfoValue Computing** **SL3447**  
Intro: QuickVideo, for streaming video over cable & IP networks, includes VOD, multicasting, network PVR & content distribution. Modules include InfoValue BizTV; InfoValue KeynoteTV & InfoValue SimulcastTV.  
Also: QuickVideo HD, QuickVideo Archive

**Inlet Technologies** **SL5829**  
Intro: Fathom professional, real-time encoder for VC-1/WMV HD content creation, supports live HD SDI input, as well as uncompressed AVI & QuickTime source files and offers a reuser interface, integrated workflow management tools, advanced encoding options and a comprehensive analysis package to make HD content creation accessible, efficient & affordable; Optimized Compression, Encoding and Analytics (OCEAN) platform is the first and only professional encoding platform optimized specifically for VC-1/WMV HD content creation & distribution.

**Innovision Optics** **SU8661**  
Intro: Vertical Camera Tracking (VCT) system, with platform that travels up & down

a 3-meter vertical track, pan, tilt, lens focus & zoom capability, 10 pre-settable camera positions.

Also: HD Probe; Mini Shuttle & Super Shuttle remote camera platform tracking systems; Movie Engineering's remote controlled camera heads & tracking systems; Radcam Miniature Camera Cars for remote low-angle action.

**Inovonics Inc.** **N1818**

**Inscriber** **SU8434**

**Intelsat** **C5241**

**International Datacasting** **C6637**

**Invidex Inc.** **C3259**

Intro: VideoLink, a Java-based modular system for broadcast video transmissions that supports inventory, booking, accounting, invoicing, scheduling, statistical reporting, and with the VideoLink Web Module service, ordering, booking & route requests from a remote location; MyInvidex on-line tool for researching and ordering video transmission services.

**IPV Limited** **SU11501**

Intro: nSpectre Pioneer Microsoft WM9 1RU hardware encoder unit with onboard timecode capture & generation, 2 or 4 channels of SDI ingest and WM9-to-SIF or -D1 resolution output to an IP network; nSpectre Mariner 1RU MPEG-1, MPEG-2 & Microsoft WM9 hardware encoder unit with dual-channel SDI input MPEG-1, MPEG-2 and WM9 ingest with timecode capture & generation, 2 or 4 channels of SDI-to-QSIF, -SIF or -D1 resolution output to an IP network; nSpectre Voyager a 1RU multiformat

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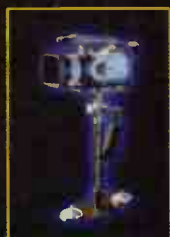
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mat software accelerator encode unit, dual-channel, multiformat software accelerator card that provides up to 8 channels of upload & download streams; SpectreView Product Suite v3.0, released in conjunction with IPV WM9 encoder platforms, contains enhancements that enable legacy MPEG & WM9 content to be used seamlessly on applications using the SpectreView API; SVStudio v 2.0 DirectX-based client API allows the monitoring & browse of legacy MPEG & new WM9 material.  
Also: SpectreView, nSpectre Mercury, SVPClcard Mercury, SVPClcard Pioneer, SVPClcard Mariner, SVStudio

**Irdeto Access SU8365**

**Isilon Systems SL4063**

**ISIS Group & Graham-Patten Systems C1836**

*Intro:* Two new Innovision by ISIS routing switchers—16x16 & 32x32—support HD; SoundPals adds a new HD 8-channel analog output de-embedder; MDRTS-201 adds HD support to ISIS automatic changeover switchers.

*Also:* Innovision by ISIS broadcast & multimedia routers, OpenStore tapeless archive system, MiniBlox with video format converters, distribution & audio embedders & de-embedders; RTS analog & digital changeover switchers, S8400 multi-function switchers.

**I-Star USA Inc. SL3762**

**Iwedia Technologies SU10362**

*Intro:* Comedia Technology is a comprehensive software suite for DTV TV devices that target various networks & devices, broadcast & broadband (satellite, cable, DTT xDSL), home networking (gateways, A/V devices); Maestro is a software product for interactive devices UI creation & customization.

**J.L. Fisher C6847**

**Jadoo Power Systems C10135**

*Intro:* NABII fuel cell power systems for ENG cameras provides runtimes far superior to that any battery.

**Jampro Antennas/ RF Systems Inc. C2316**

**Jennings Technology N400**

**JK Audio N3926**

*Intro:* PBXport rackmount digital hybrid is capable of providing talk-show quality caller audio from PBX phone system.  
Also: AutoHybrid, ComPack, RemoteMix 3, THAT-2, Daptor 2, Innkeeper series, QuickTap IFB, RemoteAmp

**J-LAB Co. C4641**

**JLCooper Electronics SU9650**

*Intro:* ES-SloMo ES-SloMo, a compact controller for news, sports, scoreboard, etc., featuring universal jog/shuttle remote; MCS-Spectrum Colorist Control Station includes 3 transparent, backlit trackballs with free-spinning control rings, 6 high-resolution rotary encoders, dual VF displays and 14 function keys—it can be used stand-alone or interfaced with other MCS-3000 Series modules; MCS-Clipshot Tactile Palette provides instant video clip access or audio playback triggering in broadcast, post production, etc., and supports Odetics protocol, Doremi & other servers via RS-422 or Ethernet, plus it has Macintosh support for USB interface; MCS-Keyshot/Rackshot/ Quickshot provides instant video clip access or AV play-

back triggering; Interface Card Slots for a variety of connections including RS-232, RS-422, USB, Ethernet, Quad 422/9 Pin & GPI. e-Box is an Ethernet-to-Quad RS-232/422(9-Pin) and -GPI hardware interface for control over long distances or via the Web.

Also: MCS-3000 Series

**Joseph Electronics C6248**

**Jünger Audio Studioteknik N919**

*Intro:* d06, a 2-channel audio level processor with Level Magic algorithm for automated audio leveling, analog & digital I/Os; b46, a 4-channel audio level processor with Level Magic algorithm, digital I/Os & optional SDI interface; MIX8 digital desktop mixer with 8-fader remote panel, 1RU audio processor box, two MIC inputs, digital & analog I/Os and optional SDI interface.

Also: MIX4, b40 series, C8000 modular audio processing system, transmission processor d07

**Juniper Networks SL4450**

**Jupiter Systems SL4568**

**Just Edit SL3341**

*Intro:* VSN Matic, master control room automation playlist, featuring multiformat file playlist in the same rundown, DV, MPEG, M-JPEG, MXF and WM9; VSN Archive, digital asset management software, now featuring compatibility with the main robot libraries and improved material browsing and retrieving procedures; VSNLG for logo insertion; VSNCG advanced automated character generator; VSNCG Plus ticker system with video resizing and external data interface, includes a SMStv module; VSN Legalrec, the legal back-up system for up to 6 months 24x7 automatic, unattended recording in a single workstation; The latest VSN News version. Featuring high- and low-resolution editing, independent render farm and HDV compatibility for low-cost high-definition operations.

Also: VSN Autorec, VSN publi, VSN Storage

**JVC Professional Products Company C4526**

**K2E Co. SU11815**

**K5600 C10241**

**KAE Corp. C10719**

**Kathrein-Scala Div. C8538**

*Intro:* FM circular/elliptical sidemount broadband antenna type 75010022; FM 2-element broadband yagi antenna type 75010034; Special customized VHF and UHF antennas for DVB-T.

Also: FM, TV, DAB, DVB-T, MMDS broadcast antenna systems, filters, combiners, accessories, engineering, satellite & terrestrial reception systems, cable TV networks & test equipment, broadband UHF panels, custom receive antennas.

**Kathrein-Werke KG C8538a**

**Kay Industries Inc. N1700**

**KD Kanopy Inc. N2426**

**KDDI R&D Laboratories SL3622**

**KenCast Inc. C8545**

**Kenwood Communications C12141**

**Keyhole Corp., a Google Company SL3348**

**Keywest Technology C9337**

*Intro:* MX5 Plus HD & the MX5 Plus Key, with multimedia messaging control functionality, CG & 7 independent element layers of the original MX5 with the addition of new capabilities; New GUI that will let users build presentation templates; MediaXtreme MX3 advancements that transform the unit into a full-featured digital signage player—supported media include MPEG-1 & 2, VOB & AVI files, Macromedia Flash & Microsoft PowerPoint presentation files and any standard graphic file format, such as JPG, GIF, TIFF & TGA.

Also: MX1 MediaXtreme, InfoZone, BVTBC10, QS-440 Quad Split & LogoStar 300.

**Killer Tracks C2553**

**Kings Electronics Co. C8131**

**Kino Flo Inc. C10437**

**Kintronic Labs Inc. N1707**

**Klotz Digital Audio Systems N2807**

**KLZ Innovations N317, N318**

*Intro:* VideoLogger captures and maintains the last 30, 60, 90, or more days of broadcasts; PhoneBOX features full and immediate caller ID, silent transfers, hang-ups and dead lines, call timers on all lines, customizable interface for radio or television applications, call-queuing and automatic hang-up, DTMF/tone capture and shout lines.

Also: i-Prompt teleprompting software

**Knox Video SL923**

**Ko Yong Photo Co. Ltd. C3144**

**Konan Technology Inc. SL3919**

**Kramer Electronics SL856**

*Intro:* 840 DVI pattern generator with 32 built-in patterns, including some containing movement to allow testing of display refresh rate performance, plus 12 output resolutions, supporting 4:3 and 16:9; TP-300FW FireWire (IEEE-1394) range extender for sending FireWire signals over a long distance, i.e. over unshielded Category 5 up to 300' to a second TP-300FW that will convert the signal back to FireWire; VM-100C 1:10 component video distribution amplifier for component video and HDTV systems with 450 MHz bandwidth at -3dB. Level (gain) and EQ controls are available to provide compensation correction for signal loss in long distance cable runs.

Also: 840, TP-300FW, VM-100C

**Kroma Telecom C3239**

**KTech Telecommunications SU9567**

*Intro:* GigE-1200, RF-to-GigE conversion, GigE-to-HD-SDI optional; PMUX-150E takes two MPEG-2 ASI streams and merges the PSIP into the resulting stream and gives one ASI output; Xtreme-2000 DTV translator with output power levels of 100 W, 50 W, 10 W & 1 W; Xtreme HPA Series/30 kW amplifier uses L3 Communications Constant Efficiency Amplifier MSDC IOT, cooled outside with a refrigerated chiller, has standard touchscreen control system with event-alarm logging, user-configurable menus, GUI, integrated remote control system & linear/nonlinear adaptive pre-correction 8-VSB modulator; VSB-ENC-PC150U takes one PCI slot and interface to a host PC for spooling MPEG-2 HD compressed files into 8-VSB RF carriers, with an RF output fixed at user-selectable Channels UHF 14, 15, or 16.

Also: DVM-150E professional receiver/

decoder; VSB-ENC-150E 8-VSB modulator; VSB-FRQ-200 RF-to-ASI/SMPTE-310M converter; SPG-100 static PSIP generator; DMUX-150E MPEG-2 demultiplexer; MUX-150E MPEG-2 multiplexer; Xtreme-1000 DTV translator.

**Kupo Co. C11349**

*Intro:* New C stand with quick-released system; Kupole with locking system; KuHand-Glove; Gaffer Tape; Velcro

**KW/2 Lighting Products C10819**

**K-WILL C8941**

*Intro:* QuMax-2000 (Quality Matrix) real-time video & audio quality evaluation uses the ITU recommended practices for double & single stimulus measurement, automated & remote capabilities with logging feature and up to 12 channel monitoring for single stimulus & up to four pairs of double stimulus; TSI-2000 Transport Stream Inspector evaluates HD & SD MPEG-2 transport streams in real time. Extracts video quality from the elementary stream and reports results to PC using Ethernet networking (TCP/IP, UDP, SNMP); TMax-2000 Transport Stream Inspector evaluates up to 6 ASI transport streams simultaneously. Extracting video quality from the elementary stream allows the user to set a threshold for video quality levels whether HD or SD; VP21S (video probe) recommended by ITU document J.144 for double stimulus SDTV video quality evaluation.

Also: QuMax-2000, TSI-2000, TMax-2000, VP21S

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**L.T.M. Corp. of America C7311**

**L-3 Communications C8507**  
Electron Devices

*Intro:* L-3 Plug-In IOT 70, a plug-in style IOT that can be used in new or existing transmitter installations. Designed as a replacement for the most popular build-up style IOTs, the Plug-In IOT 70 provides the convenience of a drop-in tube without the expense of a new trolley. A simple, free conversion kit is installed in minutes, and the existing output cavity is ready for the L-3 plug-in. L-3 also can supply new input-cavity assemblies that are shorter, lighter & more efficient than the older e2v units. The combination of L-3 plug-in style IOT and the new input cavity allows the user to replace the IOT without removing the trolley from the transmitter.  
Also: L-3 CEA 130, L-3 IOT 80, L-4945A Thyatron, L-3 "Made-in-USA" circuit assemblies for CEA & IOT tubes, L-3 Microwave Power Modules Buzz Miklos, Dir., Sales & Marketing  
1035 Westminster Drive  
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570-326-3561, Ext. 201  
Fax: 570-326-2903  
E-mail: joseph.miklos@L-3Com.com  
Web Site: www.L-3com.com/edd/

**LaCie SL4452**

**Laird Telemedia SL1243**

*Intro:* Phatcat system with exclusive Laird MOC-5 (Media Over CAT5) circuitry to convert video, audio & serial control data to standard CAT5 properties while



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maintaining full CCU control to CCU enabled cameras; Inertia all-format transcoder delivers a new platform for economical, high-tech hybrid signal conversion for all media professionals; CapDiv a portable, open-format DVR can play & record DV directly from a DV camera and/or camcorder onto its hard disk drive; Waveshot wireless video monitoring system may be used with any standard NTSC composite video signal & can transmit a clean UHF signal up to 250 ft. line-of-sight; ER4DX2 digital edit router, a FireWire, SDI & AES/EBU edit router, provides an elegant interface of digital signals into an NLE system.

**Lamar Systems SL4100**

**Lamont, Hanley & Associates C1232**

**Larcan USA C5620**  
Intro: 8-VSB Regen Transcoder/Exciter for digital translator networks; Meridian Series solid-state UHF analog transmitter series, 1 kW-10 kW; "Customer-fit" engineering. Also: M Series analog VHF solutions, MD Series digital VHF solutions, Magnum Series digital UHF solutions, Landmark Series (IOT) analog/digital UHF solutions, MX/MXD Series analog/digital UHF & VHF solutions, LP translators/transmitters

**Lasergraphics C11449**

**Lawo AG N816**  
Intro: The mc266 compact broadcast & production console with core-integrated routing matrix and I/O interfaces & DSP resource flexibility allows a matrix capacity of 3072/8192 I/Os as well as up to 192 DSP channels & 144 summing buses; z4 Digital Mini Mixer with integrated high-quality voice processor and limiters in the summing buses to prevent overload. Also: mc282 HD, zirkonXL

**LEA International C1563**  
Intro: Low-clamp, ease of service, enhanced diagnostics field-upgradeable surge capacity; series-connected low amp surge protection-patented wagon-wheel technology; capacitive filtering, replaceable modules per mode. Also: PowerVantage

**Leader Instruments Corp. C3150**  
Intro: LV7700 multi-SDI rasterizer, a multiformat rasterizer that conforms to 17 SD & HD standards, accommodates two SDI inputs, and has waveform, vector, audio, picture & data monitoring, XGA output, extensive error detection, error logging facilities, gamut detection & front-panel or Ethernet control. AC adaptor included; LV7720 SD-SDI rasterizer, upgradeable to HD, has many of the same features of the LV7700; LV5700A MPEG optional card to monitor MPEG streams; LG 3803 8-VSB/QAM signal includes 8-VSB and 64QAM/256QAM and covers VHF And UHF bands; Coding Modulator with C/N generator & upconverter integrated in a single instrument, with built-in pseudo-random (PN) signal source and BER counter. Also: Waveform monitors, vectorscopes, signal generators & RF field strength meters.

**Lectrosonics Inc. N3611**  
Intro: SM Wireless Mic super-small 100 mW transmitter (1.8"x2.3"x.6"); Digital hybrid wireless audio transmission, 256 frequencies in each of 9 groups, with compatibility emulation modes for operation with existing analog receivers, LCD for easy frequency selection & audio level setting. Also: UCR411A receiver, UM400 transmitter, UH400A plug-on transmitter, LM transmitter & venue receiver.

**Lee Filters C12314**

**Leightronix SU11223**  
Intro: Nexus, a new playback automation controller that includes a multichannel digital video server, DVD/VCR machine control & an internal A/V routing switcher.

**Leitch Technology SU7805, SU8199, SU8709**

Intro: The X75HD combines up/down/cross conversion, HD frame sync and extensive video & audio processing capabilities all in a 1RU package, and is equally suited for analog, digital or HD hybrid facilities; Nexio HD server brings to market the first software-based agile codec for HD video; VelocityHD format-flexible HD/SD NLE system features full-quality HD playback of two video streams (compressed or uncompressed), two dynamic graphics streams, true real-time HD transitions & effects, optional 3D effects and extensive SD performance; Inscribe IncaStation is the first on-air system combining logo, multiple real-time data crawls & DVE capability to maximize viewer impact & retention; Inscribe InfoCaster quickly creates the impressive multi-zone on-air look for digital signage, broadcasting, satellite & cable; IncaRTX HD real-time 2D/3Dgraphics, video & clips platform for custom HD broadcast applications; Inscribe Inca Studio HD graphic system provides advanced multi-layer, multi-object & multichannel capabilities in rich HD; Videotek VTM-450E HD/SD, VTM440HD/SD, VTM-420HD/SD, VTM-330EG, VTM-310G & VTM-300G multiformat on screen monitors offer illuminated user controls & labeling optimized for use in any lighting condition, precision tactile feel & cooling architecture for low ambient noise requirements; Videotek TVM-950HD multiformat HD-SDI Monitor with integral, high-resolution color LCD display is an advanced & versatile HD/SD-SDI audio & video monitoring instrument in a half-rack scope package.

**Lemo USA Inc. C7831**

**Libec USA Inc. C11346**

**Liberty Wire & Cable SL3362**  
Intro: EZlinx termination system features bulk cable consisting of 26 AWG coaxes & 22 AWG shielded-twisted pairs, with a threaded 13-pin female connector on each end; Serial digital siamese video cable, 20 AWG/RG59 type; Mini precision video cables, 25 AWG single, siamese or triamese construction; ConnecTecCoaxial termination system includes 360 degree radial crimp BNC, RCA & F-style connectors, crimp tool & strippers for RG6/RG59 and 25 & 26 AWG mini coax; RGBHV "Projector Plus" multi-purpose cable contains 7 (26 AWG) coaxes plus 3 pairs (22 AWG) of jacketed-shielded audio/control cables.

**Lightning Eliminators & Consultants, Inc C7834**

**LightTech Group Inc. SU9943**

**Ligos SU9632**  
Intro: MediaRig Encoder SD is a complete, "out of the box" SD MPEG-2 encoding system for ATSC, DVB & broadband encoding applications. The system is a low-cost, high-performance & compact 1RU encoder capable of dual-channel processing, with options for either analog or digital input of NTSC/PAL formats, and SCPC/SPTS & MCPC/MPTS output to DVB-ASI, IP (UDP) or file. MediaRig Encoder SD also supports Dolby Digital (AC-3) 2-channel audio, PSIP & PSI/SI control tables, closed captioning, bug insertion, and

remote control & management of multiple encoders through its powerful, intuitive user interface. MediaRig Encoder SD offers more flexibility and features to video professionals when compared to other encoding alternatives in a single package.

Also: MediaRig Core, MediaRig Encoder

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**Linear Acoustic C3607F**

**Linear Equipamentos C11216**  
Eletrônicos S/A

Intro: Complete family of 10 kW VHF & UHF TV transmitters in analog or digital and in several standards; ATSC 8-VSB modulators; ATSC 8-VSB transmitters. Also: LD510K, LD610K, LD710K, PC0201-DigiAna, PC0202 ATSC & AT7300.

**LINEAR srl N302**

Intro: The new LK series of microwave links features a modular construction formed by plug-in, which are mounted inside a 19" 3HE rack cabinet, allowing easy installation; EMD module includes the MPEG-2 encoder & DVB-T modulator, in one unit.

**Link Electronics Inc. C1816**

**Link Research C11837**

Intro: Link HD wireless camera offers ultra low delay & signal robustness. Also: Link XP, Link XPR, Link XPRV, Link XPe

**Lipsner-Smith C3951**

Intro: Lipsner-Smith CF-8200 HFE motion picture film cleaning system uses environmentally safe liquid for film cleaning prior to editing, printing or transfer; BHP film printers; motion picture film printers; Calder film processors are simple, reliable modular processors for any film stock format or speed, and to suit individual customers requirements.

**Listec Video C6237**

Intro: Z-Prompter for DV camcorder, weighing from 2-15 lbs. without the need for counterbalance. Also: Spectra-Lite S-Series composite LCD prompters, Vu-Lite T-Series LCD multi-input prompters, A-Series monitor prompters, Windows A-7000Win Run-order software, A-6000Win InstantEdit production software

**LitePanels C12237**

Intro: LitePanels Infrared employs infrared LED technology to facilitate shooting in total darkness; LitePanels 1'x1' is a modular flat-panel 2-in-1 system that uses LED technology to produce variable beam and color temperature; Mini-LitePanels LED-20-degree Spot is a portable daylight balanced lighting system employing ultra-efficient LED technology to produce soft, projected output ideal for interviews, car interiors, or tight spots. Also: LitePanels Mini LED light, Ringlite compact LED source.

**LNS Captioning SU11838**

**Location Sound Corp. N3917**

**Logic Innovations Inc. C9947**

**Logic Keyboard/BSP SL2471**

**Logitek Electronic Systems N2022**

Intro: Mosaic digital console is a modular, flexible control surface for the Logitek Audio Engine. Also: Audio engine digital audio router, audio VU meters including 5.1 & 7.1 surround

**Logus Microwave Corp. C7846**

**Loral Skynet C10644**

On Display: Video-over-IP via SkyReach, a networking service that delivers reliable, high-speed IP applications and access over public & private networks.

**Lowel Light Mfg Inc. C8526**

On Display: Tota/Omni System, Rifa-lite System, ViP System, DV Creator Kits, Multisystem Kits & Lowel Fluo-Tec Studio fluorescent systems.

**LSI Logic SU10036**

**lynda.com SL4637**

Intro: "Learning Adobe Premiere Pro 1.5," a 7-hr. tutorial that teaches basic skills such as creating a new project, capturing footage, basic editing and adding effects, and then moves on to more advanced topics such as exporting a project to different formats; "Learning Apple DVD Studio Pro 3," a 6-hr. tutorial for beginning or intermediate DVD Studio Pro users who want to learn how to create custom DVD content & delivery but also want to take advantage of some of the software's more advanced features; "Learning 3ds max 6 training bundle" provides hours of training; everything needed to own professional work in 3ds max 6. Also: Learning Adobe After Effects, Learning Adobe GoLive, Learning Macromedia Flash, Learning Macromedia Dreamweaver, Learning Adobe Photoshop, Learning Adobe Illustrator, Learning Adobe InDesign, Learning Apple Final Cut Pro

**Lynx Technik Inc. SU8972**

**M&I Network Inc. SU10363**

**Mackay Communications Inc. C7148**

On Display: Provider of secure, wireless, portable satellite communications equipment & airtime, using Nera WorldCommunicator GAN units. Mackay offers Inmarsat, Iridium, Globalstar & VSAT equipment and services.

**Mackie SL254**

**Macromedia SL4048**

**MacroSystem Digital Video SL353**

**Maestrovision SU9638**

Intro: Maitre D Asset Manager integrated media access system for community TV stations, uses an intuitive search engine which permits the user to locate, retrieve, organize, search and store material easily & quickly. Also: Bulletin board system, video servers, master control automation, material acquisition, video editing, application software, asset management software

**Mager Systems Inc. N1231**

**Magma Inc. SL3612**

**Magni Systems Inc. SU9349**

**Magnum Towers Inc. N1911**

**MainConcept LLC SL4536**

**Management Science SU9963**  
Associates, Inc.



**Manhattan Production Music C2641**

*Intro:* Live Trax is music recorded by live musicians, never any synthesizers or samples; Apple Trax is a cutting-edge music library that has just reached 100 discs with the release of Dark Orchestra Vol. II: a disc of orchestral and choral music perfect for disaster themed trailers, promos & features.

*Also:* MPM, BRg, Apple Trax, Live Trax, Audiophile Sound Effects Series, Chesky Records Classical Series

**Manzanita Systems****C10222****Marketron International****C6731****Marshall Electronics****SL913**

*Intro:* V-R231P-AFHD 23" native resolution for 1920x1080 HD LCD TFT monitor accepts all analog & digital formats, and has standard inputs with active loop-through on each connection for HDSDI/SDI, Y/C, and composite video with PAL/NTSC automatic recognition, a scaleable WUXGA input, remote control, setup memory, zoom, six-frame marker overlays & direct access for adjustment and selection; V-R171P-HD 17" HD TFT LCD 6RU, 12-lb. monitor with universal input configuration, multiformat connector for HD or SD analog component signals & other features; V-R653P-HDSDI Triple Serial Digital HD/SD monitor set with 6.5" TFT-megapixel displays with a zero-depth configuration, 1.2-megapixel TFT screen & digital signal processing; Dual TFT-MegaPixel HD 8.4" screen, 1024x768 monitor with 2.4-megapixel, TFT LCD screen & digital signal processing; 7" TFT-Megapixel standalone/video assist monitor with digital TFT-megapixel LCD screen with 1.2 million pixels, V-

Mount battery adapter, 4-pin XLR power jack & optical grade polycarbonate screen protection.

**Martin & Ziegler****SL2671**

*Intro:* C72 EL Electric height adjust edit desk, from 28"-47", gives the operator a true sit-to-stand workstation; Max Rack 91, based on our CF91 Max, integrates a 14RU equipment rack into the desk; Ergo Duet electric height adjustable desk offers independent movement of the front & back work surface, giving almost unlimited possibilities for positioning of the operator and monitors.

*Also:* Ergo Duet, C72 EL, chairs, CF91 MAX desk, CF115 desk, corner desks, equipment racks, custom consoles, accessories

**Masstech Group Inc.****SU10236**

*Intro:* New features for MassStore end-to-end, nearline, archive & asset management solution system include distributed redundant architecture, intelligent partial file extraction and restore, scalable data mover technology, integrated parallel access high-performance file system and disk storage platform and distributed multiple tape library support; New features for Mass Media Box, a tightly integrated, end-to-end workflow and production platform for digital content management, include Syndication Content Delivery interfaces with Pathfire and IDC -Commercial Content Delivery Interfaces with FastChannel, MediaDVX, Vyvx and DG Systems, plus Commercial Content Delivery Workflow Manager; New features for MassBrowse II, the second generation of Masstech Group's desktop application for content and

media preparation include low-resolution proxies with multichannel audio, full high resolution MPEG-2 support, closed captioning for MPEG-4 & MPEG-2, picture strip display for enhanced frame selection for low- & hi-resolution content; New features for MassLogger include a new & enhanced user interface, capture & display of closed caption & XDS data, extended storage configurations up to 20 months, support of archival devices and print to tape and export capabilities; MassDR is a complete solution for video storage, playback and automatic replication for business continuity and disaster recovery.

**Masterclock Inc.****C1430****MATCO****SL2568****Matrox Video Products Group****SL1131**

*Intro:* Matrox Axio features no-render HD & SD finishing in compressed and uncompressed formats, superior color correction tools, advanced real-time effects, and a full range of analog & digital audio and video IOs; Matrox DSX family of HD and SD video & audio components are available to OEMs and developers of high performance broadcast products.

*Also:* Matrox RTX100 Xtreme Pro

**Matthews Studio Equipment****C10735**

*Intro:* MAX, an adjustable arm that reaches up to 21' high and will parallel a 10' ceiling more than 17'; Vator II, a new family of Matthews Vator Stands, including Super Crank O Vator, Crank O Vator & Low Boys; Atta Pin, a new device to use when permanently lighting a studio set, it

keeps flags, scrims & cutters from slipping over time; Western Dolly, a new, lightweight large dolly for transport & camera mounting; Road Rags II, the newest version of the Matthews location lighting kit. *Also:* Light stands, camera support & light-modification equipment

**Maxell of America****C8530**

*Intro:* DVD-R Plus 16X Series has a 4.7 GB capacity and currently supports 16X write speeds for 200% more productivity, as compared to the general purpose 2X discs; DVD-R BQ 16X Series features a lower error rate, a 4.7 GB capacity and can support 16X write speeds; MPEG-IMX videocassette for TV broadcast, achieves 4:2:2 component digital recording with a 50 Mbps intra-frame system, making it backward compatible with the Betacam SP and the digital Betacam formats.

*Also:* HDCAM, D-5, DVCPRO-HD, DVD-RAM, DVD+R, DVCPRO, DVCAM, Digital Betacam, Betacam, Betacam SP, Mini DV

**Maximum Throughput Inc.****SL5712****Medea Corp.****SL3360****Media Concepts****SU9323**

*Intro:* Pre-owned television production equipment

**Media Excel****SL5826**

*Intro:* SoftStream MPU PCI-card based media processing unit encodes & transcodes HD MPEG-2 media to H.264 in real-time; SoftStream IP-STB software decoder & streaming client on x86- and

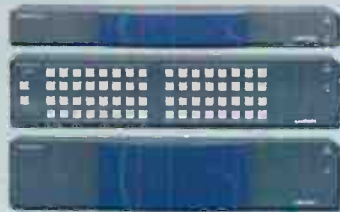
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## Integrator Gold

Our Integrator Gold wideband router provides a clear growth path from lower bit rate AES, SDI and ASI to high-bandwidth, high-definition format signals and **now offers internal conversion of analog video saving you space and lowering your budget.**

**Encoder/Decoder****INTG-DEC8-IB and INTG-ENC8-OB**

An Integrator Gold router containing internal conversion modules not only provides easier transitioning to digital, but also offers a **128x128 analog/SDI video solution in just 8RU**. Both the input and output modules below are plug-in replacements for the standard Integrator Gold boards.

Each INTG-DEC8-IB offers **8 inputs** of high-quality, 10-bit Analog Video to SDI decoding, allowing composite analog video to be connected directly to an Integrator Gold router.

Each INTG-ENC8-OB offers **8 outputs** of high-quality, 10-bit SDI to Analog Video encoding, allowing composite analog video to be connected directly to an Integrator Gold router.

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## BROADCAST ROUTERS

• **Integrator Gold** — Wideband digital multi-rate (from 3 Mb/s to 1.485 Gb/s) routing

• **Integrator** — Large-scale routing for multiple signal formats

• **Panacea** — Affordable, compact routing for all signal formats and sizes

• **Panacea Lite** — 12x1 economical mixed-format utility routing

• **Panacea Clean & Quiet** — Clean HD and/or SDI video and quiet embedded audio routing with transitions

## ROUTER CONTROL



• **CCS Navigator** — Customizable graphic system control for Leitch products

• **RouterWorks** — Specialized router control software

• **Panacea Web** — Direct-to-the-frame, Web-based control and access to Panacea routers

• **Local and Remote Control Panels** — Hardware control for routers

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DSP-based MPEG-2 and H.264 IP-STB; SoftStream Live, an H.264 real-time encoder & streaming server, available as a standalone version or PCI-card based; SoftStream Mobile H.264 & MPEG-4 encoder, decoder and streaming client-server on PDA and portable media player devices while using low clock cycles to preserve battery power; SoftStream Relay Server is a standards-compatible (RTP/RTSP, ISMA) streaming server to broadcast & on-demand viewing for multiple clients using H.264, MPEG-4 & MPEG-2

**Media3 LTD. C7149**

**Medialinks Systems SU8972**

**Medialocate USA C11136**  
*On Display:* Translation services into & out of more than 73 languages including voice-overs, subtitling & dubbing.

**mediaproxy pty ltd SU11801**  
*Intro:* Enigma 5.1, a complete rebuild of the logging platform that incorporates several new features & enhancements, including improved reliability & fault-tolerance, more intuitive setup and management, re-focus on EXE clients to provide extended customer functions.

**Mediatone Music Inc. C2963**

**Medical Coaches MM16**  
*Intro:* Aluminum custom-built TV production; Audio and entertainment support vehicles built with full aluminum main frame chassis on all expanding side trailers; Vehicle engineering package includes a computer-generated 3D trailer model for customer reference and absolute weight analysis prior to manufacturing process.

**Megatrax Production Music C2957**  
*Intro:* Megasonics sound design production elements package.  
*Also:* Music Libraries: Megatrax, Sensacion, Amusicom, Intervox, Arts

**Melenium Crane Systems C10448**

**MemoryLink SU10038**  
*Intro:* The MemoryLink Strongbow video transport system provides a broadcast quality, low latency, affordable system for video compression & transport across wired and wireless Ethernet devices.  
*Also:* Strongbow, Bandwidth in a Box

**Merging Technologies SL2349**

**Metaglug Corp. SL12101**  
*Intro:* Diffuser software, a reference and management tool for metadata dictionaries, enables comparison and management of public & private dictionaries, facilitates the managing of dynamic metadata; AAFixer, a tool to manipulate AAF Files, works with binary & XML representations of the file, allows users to connect AAF-based media systems with XML-based business & media systems, plugs in to Diffuser system for integration of standard & private metadata; MXFixer, a tool to manipulate MXF Files, also works with binary & XML representations of the file, allowing users to connect MXF-based media systems with AAF-based post-production systems and XML-based business and media systems, plugs in to the Diffuser system for integration of standard & private metadata.

**MGE UPS Systems C10521**

**Micro Communications Inc. C7736 (MCI)**  
*Intro:* Broadband UHF antennas to combine NTSC & DTV or DTV & DTV signals into one antenna; Coax & waveguide RF passive components for internal RF systems including coax & waveguide switches.  
*Also:* Coax and waveguide combiners, filters

**Microboards Technology LLC SL2753**  
*Intro:* DX-2 automated disc publisher features Print Factory print engine, dual high-speed CD or DVD recorders & a FireWire 800 connection for 16X DVD recording; PF-2 disc printer, an update on Print Factory, has a 100-disc input hopper and a spindled output.  
*Also:* Orbit II; QD Series; CopyWriter Towers; DSR DVD Towers.

**Microdolly Hollywood C10833**  
*Intro:* Video Glasses allow operator to move freely without being locked to viewing a fixed or stationary monitor when shooting dolly or jib shots; Luxan lenses feature a diopter to focus the miniature color video screen, controls for saturation, hue, brightness & contrast, independent power supply & cables included; Universal Focus Motor Kit remotely adjusts focus on zoom lenses, mounts on most lenses, miniaturized motor & gear arrangement allows for mounting when lens has times-two lens multiplier attached, motor is shielded for weather & RF interference, self-powered system, has Focus Motor & cables, weatherized battery case; Sandbag Kit, a line of double-pocket sandbags, come three to a pack, filled with sand, shot, stones or water; made of ballistic nylon with comfort-grip handles & loops for hanging on light stands or tripods; Adapter Cup Kit allows pan/tilt heads to be mounted on the pro line of jibs, dollies & mounts.  
*Also:* Jibs, dollies, camera mounts & tripods.

**MicroFirst Automation SU 9643**  
*Intro:* Digital Automation System (DAS), a single-rack unit, embedded hardware platform, running our own real-time 10-second boot OS; Multipurpose Computer (MPC 3200/1600) processing platforms provide real-time operation for the automation processing software in a 1RU box, powered by a Motorola PowerPC processor. The MPC provides frame-accurate serial machine control for up to 32 serially controlled devices, which are software configurable to RS232 or RS422/485. It also has two Ethernet ports, multiple types of memory (SRAM, SDRAM & FLASH), a 30 GB hard drive, keypad, and LCD & LED indicators. The clock is accurate to 50 parts in a million. The Digital Automation System (DAS) accepts an external SMPTE linear drop-frame timecode or network time protocol signal; Intelligent Changeover Switch (ICS 3200), an auto/manual multipoint A/B intelligent changeover switch that enables redundant automation processors contained within the MPCs in the DAS. The ICS-3200 has 32 "A," "B" & common serial port connections; MicroFirst General Purpose Interface 16x16 unit allows the user to transmit contact status over a dedicated serial communications link; Serial Port Expander Units (SPE) provide serial port expansion from 16 or 32 serial ports to up to 319 serial ports.  
**Jerry Berger, VP, GM**  
**11 East Oak St.**  
**Oakland, NJ 07436**  
**732-522-3532**  
**201-651-9300**  
**Fax: 732-617-1316**  
**E-mail: jberger@aol.com**  
**Web Site: www.microfirst.com**

**Microsoft Corp./ SL332, SL425A-MR, Microsoft Digital Theater SL425B-MR**

**Microspace C12046**  
**Communications Corp.**

**Microwave & RF Resources C1239**

**Microwave Radio C3007**  
**Communications**

**Microwave Service C1539**  
**Corp.**

**Middle Atlantic Products SL3606**

**Middle East Broadcasters (MEB) C12322**

**Mikrom C7614E**  
*Intro:* MVD400/500 19" MPEG-2 HD source decoders for main ATSC & DVB formats, also supports MPEG-2 Advanced Audio Coding (AAC), applications include broadcast, digital cinema & film/post production; MVP100/110 MPEG-2 HD player solutions, 1-4 channels, applicable also for synchronized playback, applications include presentations & advertising at POI, POS and in 3D-cinema, split-screen solutions & multi-projections; MVS100 next-generation Caching HD Streaming Server for "Big Broadband," applications include A/V streaming over IP network for HD VOD services; MVK100 development kit for integration of HD-decoding functionality into products incorporating MikroM's ASIC "HiPEG+."

**Milestek Corp. SL4647**

**Miller Camera Support C6937**  
*On Display:* Arrow Fluid Heads, DS Series Fluid Heads, Solo Tripod Series, Sprinter Tripod Series, HD Tripod Series & accessories.

**Mindspeed Technologies C10714**

**Miranda Technologies SU7841**  
*Intro:* Dual DVE & multigroup audio mixer for Imagestore HDTV master control switching & channel branding processor; Imagestore HDTV can be controlled by automation or with PresStation panel, scalable for basic HD branding activities or advanced graphics & master control switching; Extended range of Imaging Series XVP HD interface modules with HD downconverter, upconverter & crossconverter and HD frame synchronizer & downconverter; Imaging Series QXC-801i HD crossconverter module offers interfacing between HD standards 1080i and 720p; Compact Densité Series interfaces include DEC-1021 NTSC-to-SDI 3D/2D decoder, frame synchronizer & proc-amp, which offers probing and streaming of video over IP for remote control & monitoring; Added features for iControl monitoring & control over IP system, adapted for incoming feed management, multichannel HD/SD master control & network operation centers for cable, satellite & IPTV operators, leverages industry-standard SNMP protocols for monitoring & control of video and surrounding transmission, networking and building infrastructure; Third Party Zone feature allows third-party applications to be hosted within iControl. Scripted macros enable automatic reaction to element failures or guide operators through diagnostic & repair procedures; iControl Solo software provides configuration & control of Miranda's signal processing and distribution modules from a PC over a standard IP network; Workflow-enhancing HD and DV camera interfaces include DVC-802/822 HD downconverter & DV encoders for Sony & Panasonic HD cameras, MDC-902/922 HD downconverters, each featuring 24p to 50i support; DV-Bridge-CAM interface for DV cameras for DV-to-SDI conversion, fits on DV camera's tripod mount, eases output of broadcast standard video for compact & low-cost DV cameras.

**Mirror Image C2347**  
**Teleprompters Inc.**

**Miteq/MCL Inc. C6546**

**Mitsubishi Electric Corp. SL1267**

**Mitsutech C12416**

**Mobile Desktop Solutions SL4353**

**Mobile Power MM8**

**Modular Components National N2533**  
*Intro:* Manufacture, assembly & testing of high-frequency interconnect designs; machining capability for multilayers & pre- or post-bonded machining of circuits with metal heat sink carriers; strategies for thermal management dissipation.

**Modulation Sciences Inc. C1223**  
*Intro:* MSI 4400 8-VSB analyzer provides tap-weight equalizer graphs, eye-pattern diagrams, constellation displays, SNR/MER/EVM strip charts, signal-strength metering, bit-error rates, data logging, user configurable alarms & capability of zeroing the tap weights; PRO-3 Delay Corrected PRO channel receiver for use with our PCG-II generator in time for the BAS transition, provides 4 solutions to correct delay caused by digital transmission and can be configured to deliver up to 6 independent mix/minus feeds to the field.

**Modulus Video Inc. C11416**  
*Intro:* ME6000 AVC HD video encoder, a real-time, full-resolution AVC video encoder with support for encoding digital video at Main Profile @ Level 4; ME1000/MD1000 AVC SD Video Encoder and Professional Decoder deliver the AVC compressed stream over MPEG-2 transport stream using IP or optional ASI, making it easy to deploy AVC into the existing video delivery infrastructure.

**MOG Solutions SU11837**  
*On Display:* MXF: SDK, MXFComponentSuite, theScribe, MXFExplorer

**Mohawk SU11839**  
*Intro:* Mohawk Stadium Cable is a 3-circuit cable with a cost comparable to a single-circuit cable, containing Corning SMF-28e fiber and is available for riser, plenum, or outdoor applications. Turnkey end-to-end solutions are also offered. No Lemo connectorization training required.  
*Also:* Studio, Triax, Multi-core  
**Leslie Hicks, Inside Sales Rep.**  
**9 Mohawk Dr.**  
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**978-537-9961**  
**800-422-9961**  
**Fax: 978-537-4358**  
**E-mail: leslie.hicks@mohawk-cable.com**  
**Web Site: www.mohawk-cable.com**

**Mole-Richardson Co. C3021**  
*Intro:* Type 6741 5 kW tungsten par with axial lamp, operates like traditional HMI pars but is incandescent; Type 6631 1.2 kW DayLite par, the latest HMI in the DayLite HMI line is more compact & powerful; Molescent Biax, a complete line of compact 55 W Biax fluorescent fixtures with local and optional remote dimming; Type 6801 DayLite Fresnel, a new 24" HMI Fresnel with vastly improved optics, ventilation & user-friendly features.  
*Also:* SolarSpots, MolePower Distribution, DigiMole & Tungsten Kits.

**Monitors and More SU7331**

**Moseley Associates N2306**  
*Intro:* HD Link 6500 transmits DVB-ASI at 40 Mbps.  
*Also:* DTV

**Motion Analysis Corp. SL2749**

**Motion Picture Enterprises SU8500**

**Motorola SU7133**

**MOTU SL5328**

**MPEG Industry Forum SL5310**

**mSoft Inc. C1860**  
*Intro:* A new stock footage video library server system, which can expand an mSoft music and SFX system or be a standalone product; MusicCue 3.6 features a new automatic usage tracking feature.  
*Also:* ServerSound.



**MTI Film, L.L.C.****SL3912****Multidyne Video & Fiber Optic Systems****C2850**

*Intro:* The Multidyne RGB-5000 provides a long-haul, transport solution for RGB or VGA video up to 1,600x1,200, high-resolution via one fiber, with operational temperature range from -20 to 60 degrees C, analog bandwidth of up to 600 MHz; Products for the fiber-optic transport of up to 110 VSB/AM CATV channels; Products for the fiber-optic transport of L-Band Satellite RF signals from 950 MHz to 2,200 MHz over single-mode optical fiber; DTM-2200 8 two-wire, digital telephone fiber-optic multiplexer for sending up to 8 telephone lines over fiber; Coarse Wave-division Multiplexing (CWDM) systems are available for up to 16 wavelengths or 16 systems over one fiber; smaller matrix sizes to the FOS Series of fiber-optic routing switches, from 8x8 to 32x32 bi-directional optical ports; Patent-pending fiber transport system that reduces the equipment required at the central node from eight to 10 rack-units to one or two.

*Also:* RGB5000, RGB2000, DVM2000, DVM2500, DVM2700, DVM3000, DVM4000, DVM8000, VAGC200, VAS1000, WVS, AVS, DVS, TS12, AEA-1, AIA8550, AIA880, VLD2, FOS, HEMS400, M500, CATV, IFL, LFL, TAC2000 & CG200

**Music Box****C2447****Musicam USA****N3914**

*Intro:* RoadStar offers benefits of NetStar in a road-ready case, features four-channel mixer, 48 VDC phantom power, analog & AES/EBU inputs and outputs and headphone monitoring system; NetStar sends & receives full fidelity, real-time stereo audio, contact closures & ancillary data not only via ISDN & dedicated data lines

but also via IP, contains standard coding algorithms like G.711, G.722, MPEG-1 & 2 Layer 2 and MPEG 1 & 2 Layer 3, and MPEG 2 Advanced Audio Coding (AAC) and MPEG 4 AAC-Low Delay.

**Myat Inc.****C1407**

*Intro:* DTV Mask filters for high, medium & low power, digital & analog channel combiners, wide-band elliptical waveguide, motorized coaxial & waveguide switches, "Magic Tees," switchless combiners, line of passive components.

**Dennis Heymans, Sales****380 Chestnut St.****Norwood, NJ 07648****201-767-5380 ext. 220****Fax: 201-767-4147****E-mail: dheyman@myat.com****Web Site: www.myat.com****MyWeather, LLC****C10214**

*On Display:* Personal MicroCast & Live Online

**N Systems Inc.****C4841****Nada-Chair****C8914****Nagravision****SU10701****Nalpak Inc.****C9437****Narda Satellite Networks****C5941****National Association of Tower Erectors****C3527****National Captioning Institute****SU10045**

*Intro:* Captioning for webcasting/video streaming

*Also:* Subtitling, translation, audio description, captioning for webcasting/video streaming, live Spanish closed captioning & other closed-captioning needs.

**National Religious Broadcasters****N425****National Weather Service****N311****Nautel****N2811****ND Satcom AG****C11046****Nebtek****C1444**

*Intro:* NEB 50 Viewfinder, a 5" LCD monitor; Nebtune Pro Tuner, a 181-channel cable-ready tuner with professional connections & push-button controls; Raptor 50 variable speed digital recorder & playback machine with swappable hard drive capability; 15" & 20" Sharp LCD monitor brackets, baby-pin mountable, for Video Assist & Client monitors.

*Also:* LCD monitors, mounts & cables

**Nelson Case Corp.****SL3965****Nemal Electronics Intl. Inc.****C1844****Nero Inc.****SL2068**

*Intro:* Nero Digital MPEG-4 AV solution for PCs, consumer electronics, mobile, broadcast, content streaming & delivery; Nero Digital with VCPs; Nero 6

**NES Communication Services****C1424**

*Intro:* Video & data communication services to broadcast, corporate, medical & education marketplaces; live production, satellite transmission, video conferencing, Web streaming and audio-visual reinforcement.

**Net Insight AB****C2153****Netia****N3622****Network Electronics US****SU9311**

*Intro:* Portable Enclosure MOT-BOX, a compact 3RU, lightweight mobile transport enclosure that houses all

flashlink optical transport, signal processing & distribution cards including WDM/CWDM. Options include a fiber reel with MIL-specified tactile fiber, AC/DC power supplies and a monitoring/alarming function via a Network GYDA controller; CP-MDP with image viewer is a router control panel capable of providing a preview of live video; VikinX CP-MDP Modular Control Panel allows video preview of sources and destinations via a QVGA high-resolution color graphics display. The largest and most flexible panel, it features TCP/IP interconnectivity allowing preview on multiple MDP panels, extensive programmability & user-friendly operation; 16-Channel 2RU CWDM package offers 16 independent SDI or HD-SDI channels multiplexed onto a single fiber. Based on Network Electronics' new dual-optical converters and widely deployed ultra-compact eight-channel CWDM filter, the low-power design consumes only 30 W and operates without fans. The unit features dual redundant AC/AC, AC/DC, or DC/DC power supplies with dual mains and front-loaded, hot-swappable optical transmitter & receiver cards; Dual optical converters furnish increased density & improved cost efficiency in a 2RU package offering enhanced functionality & flexibility. The SDI-EO-2/OE-2 & HD-EO-2/OE-2 dual-optical converters provide high-sensitivity receiver/high-performance laser for long haul, full DVB-ASI compatibility, built-in crossover allowing wavelength swap and emergency switching, and re-clocker bypass for non-video formats; MR-TR 2.5G multi-rate optical converter and transponder, a multi-rate optical O/E-E/O converter & O/O transponder in one unit capable of data rates up to 2.5 Gbps. The MR-TR-2.5G supports SDI, HD-SDI, SMPTE

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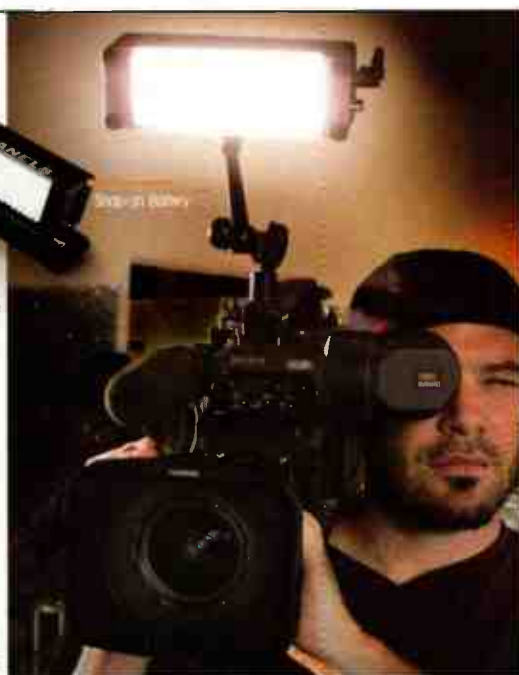
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Garnett scores 22 points, 24 boards in T-Wolves' win...e

Portland: Partly cloudy this evening; rain tomorrow; highs in

MCP-601 IN SPLIT MODE WITH VIDEO SQUEEZE ALPHA KEY AND GRAPHICS OVERLAY



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## Presenting The SDI Product Line

The **Model SDI-900\*** is an all digital **Color Corrector/Video Processor** that directly interfaces with the 4:2:2 video at 270 Mbs. (Optional analog inputs and outputs are also available). It features individual control of Red, Blue, Green gains and setups, luminance brightness, high frequency response and gamma. There is no need to navigate a menu, all controls are independent and instantly responsive. The **Model SDI-900\*** comes in several versions for additional features. It can have up to 400 memory presets, as well as up to 9 dBs of random noise reduction. Noise reduction is automatic or manual. It's ideal for matching any video feed to any display characteristics and for video pre-processing to maximize compression efficiency. Priced from \$1350.

The **Model SDI-313** is a **Universal Transcoder** that converts any analog video format (525/625 lines 50/60 fields/sec) to SDI as well as to any other analog format having the same scanning rates. It also converts a SDI input to any corresponding analog format. List price \$1495.

The **Model SDI-333** is a **Universal Analog to SDI Converter**. It converts any analog format (NTSC or PAL scan rates) to SDI. List price \$895.

Other SDI products from Xintekvideo include the **SDI-1 SDI to NTSC Converter** (\$295), the **SDI-3 Analog to SDI Converter** (\$345), the **SDI-10 Noise Reducer** (\$1295), the **SDI-110 Professional SDI to Analog Converter** (\$895), the **SDI-310 NTSC to SDI Converter** (\$995), the **SDI-330 Components to SDI Converter/Noise Reducer** (\$1395), the **VP-3000 Pre-Compression Processor with SDI output** (\$2995).



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**Network Music C2646**

**Neural Audio Corp. C1907**

**Intro:** NeuStar Powerlift DTV Loudness Management Powerlift is an intelligent volume management tool customized for broadcasters.

**Also:** NeuStar HD Radio Audio Conditioning System, NeuStar 5225 Mix-Edit Transcoder for digital radio

**Neutrik USA Inc. C5137**

**Intro:** NC\*\*XX series of XLR cable connectors, similar in style to the NP\*X series of 1/4" phone plugs, will be available in 3 to 7 pole configurations, die-cast shell has internal threads that mate with external threads on the boot to eliminate damage found on exposed threads, incorporates Neutrik's chuck-type strain relief for higher cable retention force, color-coding on boot; NP\*X series offers features of NP\*C phone plug series, improves upon existing phone plugs with 1/4" plug with chuck-type strain relief, plugs meet 15.88mm requirement for highest packing density.

**New England Satellite Systems Inc. C1424**

**New Wave Tech SL3960**

**Newpoint Technologies Inc. C9447**

**Newsroom Solutions LLC C12019**

**Intro:** NewsTicker ticker allows the user to show automated & manual ticker content, school closings & severe weather on primary & digital channels without having to stop and start multiple programs.

**Newtec America Inc. C9344**

**NewTek SL1949**

**Intro:** TriCaster portable live production suite targets the enterprise and corporate communication markets and allows presenters to mix live and recorded video sources with titles & graphics, including full-screen graphics and video brought in from another system across the local network.

**Also:** VT[4], VT[4] Live, LightWave [8]

**Nexstar C12112**

**Nextamp SU9954**

**Intro:** NexMaster HD, an antipiracy processor for HD master tapes offers on the fly invisible watermark embedding with HD-SDI input/output; NexInvestigator facilitates the investigation of pirate samples, either Internet DivX files or black market DVDs, in the framework of forensic tracking.

**Also:** NexMaster, NexScreener, Nex-Manager, NexInvestigator

**Nicom USA Inc. N325**

**Nixus SL3900**

**NKK Switches SL2454**

**Intro:** The IS Series SmartSwitch is fully programmable, produces positive tactile feedback, expands LED-backlighting options

and is available at a lower price point; The KP01 Series of silent actuation pushbuttons give positive-indication circuit transfer, as well as smooth operation with 12, 15 & 17.4mm cap sizes (with the same height dimension off the PC board); The HB2 Series is a quiet-actuation, illuminated pushbutton switch combined with crisp & tactile feedback, making it well-suited for broadcast equipment; The UB2 Series offers several models of low-profile push-buttons; washable, low-profile illuminated tactile switches are part of NKK JB Series.

**Also:** Illuminated, process sealed, miniature, specialty, surface mount & LCD programmable switches.

**NL Technology SL1213F**

**nNovia Inc. SL3759**

**Nokia Visual Radio N1522**

**Non-Stop Music C1850, RT719**

**Noren Products Inc. SL3618**

**Norpak Corp. C2350**

**Norsat C7848**

**Novella SatComs Ltd. C10248**

**NPR Satellite Services C5944**

**N Systems Inc. C4841**

**NTT Electronics Corp. SL4206**

**Nucoda SL3649**

**Intro:** Colour Timer, a resolution-independent digital color grading system that replicates the film lab process; Film Master, a resolution-independent end-to-end film finishing system with editing, effects, color

grading & mastering toolsets, for editors & artists; Film Cutter conform, edit & review system is based on a standard PC platform, feature set provides functions for digital dailies, film-to-tape, tape-to-film & digital intermediate conforming.

**Nucomm Inc. C1416**

**Intro:** Newscaster VT2 digital/analog ENG/OB van transmitter consists of rack-mounting control unit & mast mounting RF unit, available in single & dual band, features include an internal 4:2:2 MPEG2 encoder, COFDM modulator, ASI, SDI & composite inputs, optional 10 W digital PA available; Newscoder TX3 standalone 4:2:2/4:2:0 MPEG-2 encoder features up to 3 software-based modulation formats, integrated SDI-to-composite converter, etc.; ChannelMaster digital/analog portable transmitter and receiver, available in single or dual band, features internal MPEG-2 & COFDM, FM modulator and integrated SDI to composite converter; CR6D digital/analog central receiver with internal MPEG-2 decoder & COFDM demodulator, compatible with most remote control systems, capable of multiband operation when used with block downconverters; CamPac/Go Pack is a wireless camera transmitter with an internal 4:2:2 /4:2:0 MPEG-2 encoder/COFDM modulator, available in 2 GHz or 7 GHz, features on-screen display, 250 mW out, SDI and composite inputs; GoPack provides a multi-role format for the CamPac transmitter, allowing it to be used in an ENG van, helicopter or news car, system consists of docking station & 10 W HPA.

**Also:** Fixed-link transmitters & receivers for STL, TSL & ICR application; analog coder.

**NVerzion C8541**

**Nvidia SL5501**

**Intro:** Quadro FX 4000 SDI, for use in virtual-sets, sports & weather news systems to composite live video footage onto vir-





## Discover the Synapse Advantage

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- > ASM-10 Analog to Digital A/V Bridge

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tual backgrounds and send the result to live video for TV broadcast, offers 3D compositing, editing & color grading in real time on HD broadcast monitors, delivers uncompressed 10-bit SDI from programmable graphics, enabling a direct connection to broadcast monitors, switchers, tape decks or SDI projectors; Quadro FX Go Mobile workstation features 128-bit floating-point graphics precision pipeline, up to 256 MB memory and DX9 shader functionality; Gelato Rendering software, with architecture that leverages advances in mainstream graphics hardware to accelerate final-frame rendering for film, TV & design; Quadro FX 540 features an HDTV output connector; nForce Professional MCPs, platform PCI-Express core-logic solutions for AMD Opteron processor-based computing platforms, support for Linux and Microsoft Windows environments, employ scalable, single-chip architecture.

**nVision Inc. SU11226**  
Intro: Synapse media system provides multifunction signal processing in modular, remotely controllable platform; Two modules within Synapse series, SAM-10 digital to analog A/V bridge & ASM-10 analog to digital A/V bridge, handle conversion, audio embedding/ disembedding and timing when integrating legacy analog equipment into a digital facility; NV7512 expandable 512x512 digital audio router, 2-channel system expandable to 2048x2048, accepts AES, MADI or stereo analog inputs & outputs, supports mono routing; NV5256 expandable machine control router interconnects remote devices that communicate using bi-directional SMPTE 207M, RS-422 or RS-232 data, expandable to 256 ports in blocks of 16 ports; NV5128-MC multichannel master control switcher enhancements.  
Also: NV5128 multiformat 128x128 router; NV9000 router control system; NV8256-Plus expandable 256x256 digital video router.  
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**OConnor Engineering C7319B**

**Ocean Systems SL1213G**

**Octopus Newsroom Trading Ltd. C8233**

Intro: Octopus5 newsroom computer system enables research, assignments & resource tracking, script writing & news program scheduling, MOS 2.8-compliant, interface to prompters, NLEs, playout/news automations, CGs, stillstores & graphic systems; Octopus Track resource tracking system for TVs & radios, manages people, ENGs, control rooms, allows control of the resource usage, integrated with Octopus5 newsroom system; Octopus LARS Web content management system, integrated with Octopus5, publishes stories & attached media.

**OMB Sistemas Electronicos N3433**

**Omneon Video Networks SU10724**

Intro: The Omneon Spectrum media server has been upgraded to allow simultaneous playback of HD & SD content on either the same channel or independent channels via the new MultiPort 4100 series, a new family of interface devices for MPEG-2 decoding that can support simultaneous playback of SD & HD MPEG-2 material.

Also: MediaDirector, MediaStore, MediaPort, MultiPort

**Omnia N2816A**

**OmniBus Systems SU7165**

Intro: OPUS content management suite, driven by G3 architecture features a modular design and ensures content is ingested, managed & tracked in and around production facilities and taken to air so broadcasters can integrate their systems under an operational interface; HeadLine newsroom system includes HeadLine Ingest suite of G3 components, covers news station ingest requirements such as crash recording of line feeds, recurring scheduled bookings; HeadLine TX offers a combination of manual & semi-automatic

layout, operators can choose to allow a story to play to air automatically along with associated secondary items, or by using manual Betacart-style playout, MOS-compatible; G3 Control station management system provides device access, operation & management over distributed networks, solutions for router control, machine control & integration with signal processing equipment, from user interface with access available to multiple local & remote users; Colossus V3 combines

the delivery system's automation architecture with G3 technology, system controls channels, items or devices through desktop-based user interfaces, user interface with timeline-based display allows operator to monitor status of channels and focus in on a single stream, confirm its data and drive it in the traditional manner; TX>Play is based on G3, a scalable, modular automation system for facilities operating up to 12 channels, features playlist editing and schedule importing, content metadata and schedule management

# Inter BEE 2005

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#### Exhibition Categories

- Audio Equipment ● Cameras and Related Equipment
- Recording Equipment
- Editing and Production Equipment
- Electronic Displays ● System Conversion Equipment
- Output Systems ● Relay Systems
- Transmission Systems ● Lighting Equipment
- Measuring Equipment ● Transmission Cables
- Electric Power Units ● HDTV Systems
- Satellite Broadcasting Systems ● Virtual Systems
- CG Production Systems ● DVD Systems
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**Thursday, April 28, 2005**



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Web Site: www.omnibus.tv

**Omnimusic C2953**

**Omnirax N1800**

**Omnitek SU9714**

**OMT Technologies N3911**  
On Display: flint, smoke, flame

**ON-AIR Systems SL5710**

Intro: ON-AIR playKast, a new master control system for automated playout and live news production; ON-AIR Kore, a new database application for scheduling, media asset management and workflow automation; ON-AIR infoKast in ON-AIR's new integrated production tool and automated playout system for the delivery of graphic information and live video in a single workstation; ON-AIR Kapture integrates the ingest of tape-based content and satellite and line feeds into a single application; ON-AIR reKorder, a Windows media encoding system for Web streaming and VOD.

Also: ON-AIR Studio, ON-AIR Scheduler, ON-AIR transKoder

**Onan Corp./Cummins Power C11343**  
Rent & Power Generation

Intro: Onan generator sets from 2 kW to 40 kW, including inverters, hydraulic- and PTO-powered and diesel, LP and gasoline fuel-powered models for rugged mobile applications; Cummins PowerRent rental power solutions for scheduled maintenance, mobile power, special events, utility peaking, peak shaving or standby emergency needs, offering trailerized and containerized generator sets from 35 kW to 2 MW, as well as turnkey temporary power installations from 5 MW to 100 MW. PowerCommand models and digital master control facilitate paralleling with other generators or the power grid.

**One Domain Inc. C11019A**

**Optec Displays SL3352**

Intro: Dream Display-Video, an outdoor-bright LED video display for sports, entertainment & outdoor digital signage applications, pre-built, pre-

configured, five-year warranty, pro A/V dealers wanted; Live Video Option for custom LED displays adds NTSC input to the 16.7M RGB control system, scheduling & playing back looping graphic animations, standard on Dream Display-Video, works with MediaEditor Pro software; MediaEditor 3.0 software, a release of Optec Display's media management software, allows users to create digital signage content, import media files & schedule playback sequences, features GUI, advanced scheduling options & text editing, graphic animation & transitions for outdoor LED digital signage applications; MediaEditor Pro includes the interface required for the Live Video Option.

Also: LED Electronic Message Centers, LED signs.

**Pamela Thompson, Dir. of Marketing**  
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City of Industry, CA 91746

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Fax: 626-369-7858

E-mail: pthompson@optecdisplays.com

Web Site: www.optecdisplays.com

**Optibase SL343**

Intro: MPEG MovieMaker 200S (Mac) MPEG-2 encoding platform for content creation, broadcasting, archiving & VOD applications, offers video & audio interfaces, video resolutions, audio encoding formats & MPEG multiplexing capabilities, integrated with Optibase's developer tools and video streaming & networking platforms, boards are bundled with the MPEG Composer 200 encoding management application; MGW 1100 compact carrier-grade TV streaming platform, enables TV over IP or ATM broadcast services for a small to medium number of channels, provides encoding, transcoding, transrating (rate shaping) & recasting at the edge of a service provider's TV distribution network or at MDU access points; 844/X Version 3.0 includes real-time, multistream capabilities such as advanced keying; 3D digital video effects (DVEs), shadow and glow effects, XML-based metadata interchange, performance optimizations for editing longer-form, layer-intensive projects, includes added support for HP xw8200 platform; Media 100 HD for the Mac, 10-bit uncompressed SD & HD editing system, allows editors to work in SD & HD and mix SD & HD content in the same programs and enables real-time mixing M-JPEG, DV, animation & other QuickTime codecs in the same timeline, viewing SD & HD output simultaneously.

Also: MovieMaker 200 line of HD & SD

HW PCI MPEG-2 encoders; MGW 2000; VideoPlex HD, VBox line of ATSC; satellite receiving cards & appliances; Media100 line of editing & rendering hardware & software; MediaPump.

**Opticomm Corp. SU10460**

Intro: The DVI-1000 is a DVI extender for single fiber DVI transmission over multimode fiber up to 1000 meters; The DVX-5400 is a four SDI video mux (270 Mbps) 4-channel Serial Digital Video SMPTE 259M TDM/MUX uncompressed 270 Mbps Digiband System over 1 singlemode fiber (20-70 km); DVX-6400 4 HD-SDI video mux 1.485 Gbps 4-8-channel HD-SDI/HDTV serial digital video SMPTE 292M CWD/MUX uncompressed 1.485 Gbps Digiband system over 1 singlemode fiber (20-70 km); RGB-4006A/B/C digital VGA, audio/data/keyboard/mouse Digital RGB/VGA video, stereo, keyboard/mouse & data over fiber up to 25 km; RGB-4006A 1280x1024x75 1.25 Gbps RGB-4006B 1600x1200x75 2.30 Gbps RGB-4006C 1800x1440x75 3.11 Gbps; The FDV-8000/10000 is an 8-bit digital video/audio/data mux 10-bit digital video/audio/data mux multichannel transmission TDM mux for video, 24-bit audio, RS-232/422 data over fiber up to 25 km.

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Web Site: www.opticomm.com

**Optimal Solutions Inc C10707**

Intro: AdConnections is a browser-based sales software program for multibook breakouts & central management of Nielsen ratings.

Also: OSI-Traffic

**Opus 1 Music Library C1763**

**Opvison Technology SU11017**  
Co., Ltd.

Intro: OPV 2300 products transmit 1 channel of analog video & 2 channels of audio over one multimode or single mode fiber; OPV2400 products provide unidirectional or bi-directional transmission of 2 channels of analog video & 4 channels of audio; OPV2500/2520/2600 system provides unidirectional or bidirectional transmission of high quality broadcast video, audio & data with high standards; OPV 3100/3200

series broadcast multichannel fiber optic video/audio/data transport systems transmit multiple channels of analog video, audio & data over one pair of fiber; The 1000 series is a high performance fiber optic serial digital video transport system to transport SMPTE-259M or SMPTE-305M digital video signals over long distance through either singlemode or multimode fibers.

**Orad Hi-Tec Systems SU7170**

Intro: Maestro HD/SD switchable 3D character generator & on-air graphics system; 3Designer authoring software, sports & virtual advertisement systems, Pro Set & Smart Set Virtual Studio's solutions and the Forum video server; All systems on the Orad booth are powered by the next generation of Orad's HDVG graphic platform.

**Orban/CRL N813**

Intro: The programmable Optimod-TV 8382 digital audio processor controls program dynamics to maintain a comfortable range for the typical home viewer, and, using its built-in CBS Loudness Controller, tames subjective loudness to prevent commercials from becoming overly obtrusive.

**Orbital Data SL1210T**

**Otari Inc. N4511**

**P+S Technik GmbH C7614**

Intro: SKATER mini camera dolly gives direct control over tracking shots in any direction, as well as all sorts of precisely defined curved moves; CMotion lens control system is a modular system which combines lens control, camera control & motion control in one modular remote system; New Kit on the Block, a connecting kit for the new Sony HDR-FX1 camera is now available for the P+S Technik Mini35 Image Converter.

Also: T-REX Superscope, PRO35, MINI35, 35BL Evolution, Viewfinder, 16mm camera modifications

**PACSAT C10042**

**PAG Ltd. C9719**

Intro: PAG L95 Li-Ion time battery provides 95 Wh of capacity and powers a camcorder & camera light up to 35 W; PAG Power Circle Li-Ion battery has a capacity of 95 Wh incorporating PAG Power Circle capacity indicator; PAG Power Plate, a dual battery mount for PAGlok batteries compatible with either V-Mount, snap-on or PAGlok battery mounts; PAG Freelancer charger, an all-chemistry, low-cost, 2-channel, ultra-compact charger for PAGlok batteries.

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Also: Pulsar chargers, Quasar chargers, Paglights

**Paladin Tools SU11826**

**PanAmSat C2123**

**Panasonic Broadcast C3617**

**Panavision MM12**

**Pandora International Ltd. C1446**

**Paradise Datacom LLC C11444**

**PatchAmp C4146**

*Intro:* PA-6000-802 HD downconverter card for the PatchAmp system features an HD input, 2 SDI outputs, 2 analog outputs & 5 HD outputs; PA-10032 is a PatchAmp 32-position wired frame with 10 1RU patch panels with mini WeCo jacks and is internally wired for 32 1x9 or dual 1x4 distribution amplifiers. Also: PatchAmp patching & distribution products

**Path 1 Network Technologies Inc. C11419**

**Pathfire SL1353**

*Intro:* Pathfire Direct enables broadcasters to monitor, gather & disseminate live and store-and-forward content, then move content over any network connection; DMG News Connect provides access and control of Pathfire-delivered news content & metadata by integrating DMG functionality into AP ENPS & Avid iNEWS newsroom computer systems (NCS); DMG Server Connect for Programming enables digital file transfer from DMG server to play-to-air servers; Automation Connect gives automation systems direct access to Pathfire-delivered metadata and control of content movement; DMG Server Connect for News transfers digital content from DMG servers to editing systems & play-to-air servers. Also: Pathfire Digital Media Gateway, Pathfire Digital Cinema

**Patriot Antenna Systems C5843, MM4**

**Peak Communications C6246**

**Pebble Beach Systems SU9343**

*On Display:* Anemone, a low-cost playback product for small broadcasters; Neptune, a full-scale multichannel automation system.

**PESA Switching Systems Inc. SU7852**

*Intro:* The Cheetah V5 for coax is a family of video transmitter & receiver modules used to distribute high-resolution computer video & audio signals over a single coax cable; PESA 3500PRO V2.0 is an expansion of control panel & configuration options. The additional control panels supported include the RCP-JS and RCP-GPI for joystick or GPI applications, the RCP-EXP for multi-panel source or destination expansion, and the low-cost RCP-MP32D for up to 128 multiprogrammable functions in 1RU.

Also: Premiere routing switcher, MCLite master control switcher, Cheetah multiformat router, Bobcat audio/video router, Cougar compact router, Jaguar family of routing switchers

**Petroff Matte Boxes C9719**

*Intro:* Slip-on 4x4 matte box for the Sony HDR camera.

Also: Petroff Matte Boxes

**Petrol SU6365**

*Intro:* HDV raincover for Sony HVR-Z1U & HVR-FX1 camcorders; HDV WingBag & WingRoll lightweight camera bags for Sony HDV camcorders; Petrol CAB camera accessory bag; Cocoon Pak hugs the back and cradles professional cameras (DV, still); PDCB Petrol digital camera bag.

Also: Professional soft bags & accessories for HD to DV cameras, lighting & sound, including extra protection semi-hard U-Bags, Caboose rolling backpacks, CamWraps for protection while shooting, Petrol Jet Set traveling suitcases, Eargonizer and Mixer bags.

**Pharos Communications SU11835**

*Intro:* Pharos Pilot Ria provides control of broadcast routing equipment from any Web browser via local or secure-coupled intranet; Pharos Playtime interActive (iA) enables broadcasters to deliver viewer-controlled games and vote-enabled content.

**Phasetek Inc. N602**

**Photron USA Inc. SL1145**

**Pictron Inc. SL1213C**

**Pilat Media**

**SL5306**

**PilotWare Systems Inc. SL3760**

**Pineapple Technology Inc. N315**

**PIN-MIC N4517**

**Pinnacle Systems Inc. SU6341**

*Intro:* Pinnacle Deko 1000HD featuring 2D motions & effects, clip playback w/matte, and "SuperChannels," which allow one channel to do transitions from one graphic to another; Pinnacle Deko 3000HD real-time HD character generator with 3D is

now switchable between native SD output & native HD output modes; Pinnacle Liquid 6 real-time SD/HD NLE adds true multi-stream native HD editing, format-independent real-time effects, integrated DVD authoring, advanced audio tools, multicam support & a new highly intuitive interface; Liquid 6 Software provides true broadcast editing by combining a plug-and-play USB-2 based I/O breakout box with feature-rich software and support for MXF, MPEG-2 4:2:2, XML project export, Sony XDCAM & Panasonic P2; Liquid ChromeHD, a hardware/software package that offers all of the broadcast quality SD and HD I/O options,

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including HD-SDI I/O, to complement the native FireWire support; Liquid Blue Turnkey System, Version 6 adds multi-speed SDTI capture, background capture & full DVCPRO50 support; Pinnacle Thunder HD supports MXF and easily integrates to share content with Pinnacle Deko and Liquid, or other MXF-based broadcast devices. Also: Deko 3000, Deko 1000, Deko 550, DekoCast, MediaStream 8000, Vortex Networked News

**Pioneer Electronics C8136**

**Pixel Instruments Corp. SU8953**  
Intro: A technology demonstration of new techniques for the direct measurement & correction of lip sync errors. Also: AD-3100 audio synchronizer, DG-1200 Tally & GPI Interface, UMAT-1200 audio monitor & transcoder

**Pixel Power Ltd. SU7132**  
Intro: Clarity5000 offers HD functionality equivalent to the Clarity500 range of character generators, including real-time 3D animation, video/audio clip player & 2D DVE squeezeback capability; Clarity300 is a single-channel expandable CG featuring uncompressed clip playback, 2 channels of 2D DVE & SDI preview and program outputs. Also: Collage, Graphite, Clarity, Collette

**Pixelmetrix Corp. C7316**  
Intro: VisualMpeg family of analysis tools evaluates & tests MPEG-based advanced coding, including MPEG-4/H.264; DVStation-IP Portable, a standalone product for the transmission on MPEG-2 data over IP networks; DVStor 2 TB extends the product line to include a storage range up to 2 TB; DVStation DTA, a software package that applies DVStation MPEG analysis features offline to transport files captured by IneoQuest IQController software; MPEG TS test suite, an SI/PSIP parsing engine that supports decoding of MPEG, DVB, ISDB, ATSC & Motorola DigiCipher II tables. Also: DVStation, DVStation Remote, DVStation Pod, DVStation IP, DVStor, DVShift, DPI Auditor & Consolidator

**PixelTools Corp. SL2453**

**Playbox Digital Media Technologies SL4070**

**Pleora Technologies SL3350**  
Intro: PL1453A & PL2453A EtherCast Engines allows standard gigabit Ethernet networks to replace video routing gear; PL1253A EtherCast Engine allows HDV camera data to be transported to PCs in real time over gigabit Ethernet links or LANs.

**Polecam/STE-MAN C9719**

Intro: Polecam HD is a single-operator crane now available as an HD product. Polecam's reach is configurable from 5'-20' and operates from either a standard lightweight tripod & dolly, or from the supplied body harness, for complete mobility; Polecam RCP is a remote joystick for the Polecam pan and tilt head, allowing the Polecam to be parked unmanned & operated remotely. Also new is a fully submersible pan & tilt head and camera housing, allowing the normal Polecam reach of 5'-20' above the water, then submersion of the camera and head to a depth of around 13'.

**Porta Brace, K & H Products, Ltd. C7334**

**Porta-Jib/Hollywood General Machining C12319**

**Post Holes SL400**  
Intro: Three new collections of royalty-free, prematted, full-motion HD stock clips.

Also: Emotion 1 Collection, Characters 1 Collection

**Potomac Instruments Inc. N2511**  
On Display: FIM-71 VHF field-strength meter, FIM-72 UHF field-strength meter

**Precision Communications N315**

**Premier Mounts SL4231**

**Prime Image Inc. C5614**  
Intro: HD synchronizer format conversion genlock video test generator remote control; HD standards converter standards conversion up/down conversion format conversion genlock video test generator remote control; Up/down converter up/down/cross conversion format conversion genlock video test generator optional 4-channel audio delay remote control; Time tailor editing system reduces content up to 8% without artifacts passes close caption intelligent micro-editing HD format insertion/deletion/moving of black.

**PrimeLED Inc. N604**

**Primera Technology SL4267**  
Intro: BravoPro Disc Publisher automated CD/DVD duplication & printing system uses a robotic arm to automatically burn a disc and then prints full-color, photo-quality images directly onto the surface of the disc; Signature Z1 CD/DVD printer prints text, logos & line-art on up to 4 separate areas directly onto the surface of standard lacquer CDs or DVDs; DS360 Disc Shredder Protect destroys CDs, DVDs, photos, credit cards & folded paper.

**Primera SL4267**

**Princeton Case West SL1464**

**Prism Media Products N1813, N2412**

**Pristine Systems Inc. N1111**

**Pro Consultant Informatique SL4419**

**Pro Cyc C9332**

**Pro8mm C12417**  
Intro: Classic SP16 Camera shoots Super16mm film; Classic Super 8 Widescreen Camera is an expanded aspect ratio Super 8 camera for filming Super 8 for widescreen applications. Also: Classic Super 8 and classic 16mm cameras & DVD demo of Pro8mm, Pro16mm & archival film to video transfers.

**Pro-Bel SU10730**

Intro: Procion's next generation software control platform contains major new features for the management of broadcast systems & media workflow and allows customers to design their own user interfaces to suit their needs; Sirius Gold is a format-independent router with the ability to mix & match different signals within the same frame (up to 512x512); Masterpiece has been updated with a range of new features while making use of key resources from the TX Range; A fully working Morpheus next-generation automation system will be shown. Also: Sirius, Eclipse, Halo, ICON

**Production & Satellite Services Inc. MM3**

**Professional Sound Corp. N4518**

**Project S SL3636**

**ProMax Systems Inc. SL306**

**Promedia USA SU10041**

**Prompter People C1839**

**Promusic C2651**

**Propagation Systems Inc. C9229**  
On Display: UHF low- and high-power slot, UHF broadband panel, VHF slot, VHF panel

**Prophet Systems Innovations N1402**

**ProPrompter (Bodelin Technologies) SU8502**  
Intro: Upgraded ProPrompter Pocket PC version; GO! Prompter weighs less than 1 lb. and attaches to any camera in seconds.

**ProSource/BMI C10137**  
Intro: Vocas DV MK II is a matte box system for all DV cameras, including the new Sony HVR/HDR HDV cameras & the Canon XL-2; Vocas DV MK II Wide Angle Matte Box is for use with a rail adapter when using wide-angle attachments on any DV camera; The DV Follow Focus system is for use with DV MK II matte boxes with 15mm rail supports; The Vocas MB-310 matte box system features 1 fixed and 1 rotating 4x4 filter holder; The Vocas Z-10 Digital Zoom Control is for all broadcast & industrial lenses from Canon, Fujinon & Angenieux. Also: Panasonic HD Varicam, Ikegami DNG, Sachtler tripods, Bron HMI Lighting, PortaBrace, Anton-Bauer, Sound Devices mixers, John T. O'Keefe, Pres. 1515 Black Rock Tpke. Fairfield, CT 06825 203-335-2000 800-322-7767 Fax: 203-335-3005 E-mail: info@prosourcebmi.com Web Site: www.prosourcebmi.com

**Proware Technology Corp. SL4449**

**Proximity Corp. SL4562**  
Intro: Artbox, Proximity's video asset management system for broadcast television & post production creative departments has been upgraded to include newly designed GUI; Also new is the latest version of Xenotrack, to track the order creation, queue management and review & approval of all graphics.

**QEI Corp. N2831**

**QTV SU7865**  
Intro: Software Spider Box is a software-only version of the now-discontinued hardware Spider Box; Wireless hand-control-a wireless version of the two-button hand-control uses Bluetooth technology. Also: FDP 7, FDP 12, FDP 15, FDP 17, MVP 10, Executive Speech Prompter, WinCue, WinCue Pro, WinCue Pro News, WinCue LT

**Qualstar Corp. SU3355**  
Intro: TLS-Series SALT & LTO 3 tape libraries, up to 340 TB in 7 sq. ft., & RLS-Series rack mounted SALT & LTO 3 tape libraries, up to 57 TB in just 5U.

**Quantel SL1147**

Intro: Newsbox, a complete newsroom system in a box, includes everything from ingest & playout automation to journalist and craft editing, all based on Quantel's sQ server technology; Picturebox sQ graphics playout server gives broadcasters versatile stills and moving image playout capability that fits perfectly with 2005 integrated workflow models; New version of Paintbox; "Pay-as-you-go HD," a new addition to the Quantel eQ range of multi-resolution editing systems gives customers not yet fully ready for HD all the quality, performance and tools of eQ now at a highly competitive price; Entry level, HD-upgradeable server; Near-instant Sports Highlight packaging, a new system that enables highlights capture, top-and-tail and play-out within moments, including slo-mo replay; Zoning brings new levels of resilience and operational flexibility to pro-

vide the ultimate workflow for multi-server, multi-application systems. Also: iQ, eQ, sQ,

**Quartz Electronics Inc. SU9652**  
Intro: QMC-2, a new high-end master control product in the QMC range can be switched between a number of HD & SD signal formats and provides enhanced features including 16 channels of audio with internal Dolby E decoding, 2 layers of internal logo storage/keying with animation capabilities and 3 external key layers; Upgrades to the Xenon advanced multiformat router. Also: Topaz router range, Q256 multiformat router range, SC-1000 system controller, range of control panels, QMC product range

**Quest Research & Development Corp. C11414**

**Quickset International Inc. C3529**

**Quintech Electronics and Communications Inc. C9348**

**QuVIS Inc. SL4416**

**QVS SL3500**

**Radian Communication Services C3028**

**Radiant Communications SL3719**  
Intro: Streaming video MPEG-2 to IP; fiber optic baseband video/audio plus DVB/ASI transport systems over single fiber 50+ km; Fiber-optic L-band transmitters and receivers; Fiber optic 80-channel broadband transmitters and receivers; Fiber optic universal 10/100/1000 Ethernet transceivers over single fiber 80+ km. Also: MPEG-2 and MPEG-4, fiber-optic baseband transmitters & receivers, fiber-optic L-band and fiber-optic broadband systems

**Radio Frequency Systems C3031**  
Intro: Next-generation vertically polarized UHF 'PVP' panel array. Also: Heliflex flexible coaxial transmission line, RD slot cavity antenna, UHF panel array, multichannel combining technology, patch panel

**Radio World/IMAS Publishing N1634**

**Radyne ComStream SU9929**  
Intro: HE4000 HD & SD encoder is upgraded to accommodate all applications; HD4000 HD/SD/IRD improves bandwidth savings, lowers bit rates, has more efficient date & motion estimation; SE4000 encoder adds new features. Also: Encoders

**Raidon Technology Inc. SL4033**  
Intro: RAID storage solutions by RAID levels 0, 1, 3, 5 & combination.

**Rapidtext Inc. C3344**

**RCS N1411**

**RDL Radio Design Labs N2534**

**RealNetworks SL4906**

**RealVision Inc. SL4265**

**Rees Associates Inc. C8133**

**Reflecmedia C 6926**  
Intro: Ultimatte DV, Reflecmedia's latest product developed in conjunction with Ultimatte. Also: Ultimatte DV, Chromatte, Chromafelix, Mattenee

**Rentex Inc. SL3931**

**Research Concepts Inc. C9347**



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## Go Wide.

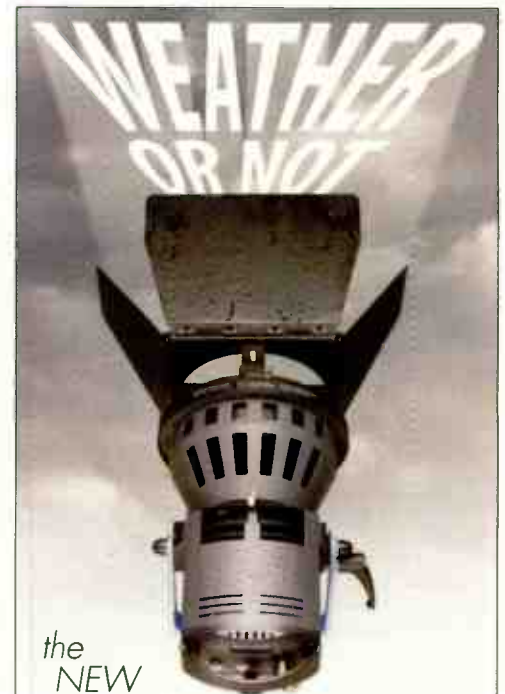
The new MB-350 wide angle mattebox from Vocas features two *independently* rotating filter trays and one non-rotatable horizontal tray. It can accept an additional 4x5.6" filter in the hood for a total of four stages! This fourth stage can also be used with a variety 4:3 or 16:9 mattes.

For lenses wider than 5.0mm the mattebox can use a 4.5x4.5" rotatable filter or one 4x4 non-rotatable filter and two

horizontal filters. The patented internal eyebrow system allows the user to adjust the matte or mask to the zoom position of the lens. The MB-350 can be used as a clip-on mattebox or may require the MBS-100 support and bars adapter for use with standard 15mm rails.

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## RF Central

**C1432**  
Intro: Sale and rental of new digital and analog microwave equipment; RF Extreme Digital Microwave; Live-Eye mobile camera system; Live-Eye high power mobile transmitter packages; RF Extreme microwave rentals; All frequency bands and configurations available, mobile or fixed, short and long term rentals; Traffic/beauty camera and receive site packages; Mobile or fixed locations, many options to choose from, with or without receive site remote control.

## RF Parts

**N619**

## RF Technologies

**C3523**

## RGB Spectrum

**SL1565**

## Rhozet Corp.

**SL2067**

## Richardson Electronics

**C1824**

Intro: IOT L-3 Communications introduces its "plug-in" style IOT allowing for quick development of existing IOTs, cutting time to replace tubes by 75%.  
Also: IOTs, CEAs, amplifiers

## Richland Towers

**C2627**

## Riedel Communications US

**C11107**

Intro: C3 Digital belt-pack/headset station is a fully integrated "digital" solution for combined digital matrix & party-line style intercoms; DHY-101 digital telephone hybrid/VoIP interface for Artist Intercom Systems is designed to be compatible with all Riedel Artist Series intercom systems as a plug-in card for the 1RU DHY-401 mainframe; DHY-102 establishes an integrated solution for connecting Artist intercom matrix products over standard IP networks; Riedel 2000 Series control key-panels are ideal for

use in modern control room architecture and mobile production vehicle and accommodate all requirements of high-quality versatile & economical intercom control key-panels.

Also: Artist-M matrix, Artist-S matrix, MAX headset, RCP "E"-series control key-panels  
Vinnie Macri, Sales Mgr.  
3605 W. Pacific Ave.  
Burbank, CA 91505  
818-563-4100  
Fax: 818-563-4345  
E-mail: [vinnie.macri@riedel.net](mailto:vinnie.macri@riedel.net)  
Web Site: [www.riedel.net](http://www.riedel.net)

## Rimage Corp.

**SL5416**

## Rohde & Schwarz

**C2633**

Intro: The SFU Broadcast Test System has been enhanced with capabilities to operate with DVB-H, DVB-T, DVB-S, DVB-S2 (Broadcast Services), TDS-OFDM (DMB-T), DVB-C and DirecTV Legacy (DSS) standards, and can be optioned with noise, phase noise & fading generation, an MPEG-2 generator/recorder/player, an arbitrary waveform generator, BER measurement and true power measurement using external power sensors; New DVM options include a transport stream generator and/or analyzer and/or recorder function in one box; A new stream library for the SFU, DVRG or DVM400 provides dedicated DVB-H streams; Expanded FSH family of handheld spectrum analyzers has models that go up to 6 GHz, provide analog & digital TV measurements, and can do true power measurement with external power sensors.

Also: NVNH8200 Transmitter, DVG, DVM, DVRG, DVM400, DIP010, EFA, SFU, SFQ, EFA-NET, SFL, ZVB, SMARTS (SM300, AM300, FS300), NRP, FSP, FSQ, UPV

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## Rolollight

**C12427**

## Ross Video Ltd.

**SU7141**

## RSG Media Systems

**SL4259B**

## RTI-Research Technology International

**C3951**

Intro: TapeChek videotape evaluator/cleaners, models for DVD-PRO, Betacam & VHS formats; DiscChek optical disc inspectors & restorers.

## RTW GmbH & Co. KG

**N819**

Intro: PortaMonitor 10641VID, 4-channel stereo display built into a 19" housing suitable for video equipment racks.

## Rushworks

**SU9549**

Intro: Masterplay Broadcast, a low-cost, high-performance automation system for broadcast & cable operations; Masterplay Multizone, an integrated video server/billboard/CG aimed at PEG channels, school districts & digital signage; ToastMaster, a tapeless meeting and event switching and encoding system with custom camera control of up to 4 PTZ cameras with 9 presets per camera along with integrated MPEG-2 capturing, audio mixing & text import of Agenda files for CG; Masterplay DTV, a 5-channel server (4xSD; 1 HD) in a single chassis that seamlessly supports HD & SD multicasting.  
Also: Easyplay

## Russ Bassett Corp.

**SU9708**

Intro: Multimedia cabinets for formats include: mini DV, 4mm, 8mm, audio cassette, VHS, DV,

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Adobe Systems Incorporated

### IPTV - The Technology and Market Outlook



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### Technology Luncheon

Keynote Address



April 20, 2005  
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Engineer/Author

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DLT, small & large DVCPRO, mini & large DVCAM, LTO Ultrium, small Beta, CD/DVD in jewel cases, DVD in albums, 3480/90/90E/3590, 3570 magstar, 3.5" & 5.25" MO, top-tab manila file folders & pendaflex-type files; ProMedia Gemtrac & ProMedia Slidetrac features include 81" or 90" high, adjustable shelves, bookends & backstops provide maximum flexibility for "media-specific" or "mixed-media" collections.  
Also: Desinece, Media Cabinets

**RVR Elettronica N1102**

**Rycote Microphone Windshields, Ltd. N3232**

**RYMSA C7736A**  
On Display: antennas, combiners, passive components

**S.two Corp. SL3325**

**S.W.R. Inc. C1820**  
Intro: FM radio and television antennas & accessories for broadcast.

**Sabre Towers N308**  
On Display: towers

**Sachtler Corp. of America C7319B**  
Intro: Video 15 Plus Speed Balance head for ENG, uses 12 steps of counterbalance to balance any camera from 3.5 lb to 39 lbs.; DV-12 Speed Balance uses 12 steps of counterbalance to balance any camera from 3.5 lb to 34 lbs.; DV-8/100 Speed Balance head & DV-8 for 75 mm for Mini DV, uses 10 steps of counterbalance to balance any camera from 3.5 lb to 28 lbs.; DV-6 Speed Balance head for 75 mm tripod for Mini DV uses eight steps of counterbalance to balance any camera from 3.5 lb to 20 lbs.  
Also: Dv-1, Dv2, II DV -4II, Video 18 Plus, Video 20 Plus, Video 25 Plus, Video 60 Plus, Video 75 Plus and Reporter lighnting, HMI and Tungstern.

**Salzbrenner Stagetec Mediagroup N4208**

Intro: Eight-channel analog output board for the Nexus audio router; Embedder/de-embedder board for the Nexus; Sample rate converters allow for asynchronous treatment of signals with different clock sources.  
Also: Nexus digital audio routing system, Delec digital intercom system

**Samtel Electron Devices GmbH C11412**

**Samy's Camera C7207**

**San Lab Systems Inc. C3525**

**Sanken Microphones N617**  
On Display: CS1, CMS-10, HAD-48

**Sanyo Fisher Company SL1931**

**Satellite Engineering Group C7248**

**Satvision Technology Int'l. Inc. C1231**

**SAV Systemes SU11117**  
Audiofrequency Videonique

**SBS Technologies Inc SU8959**

**SBS/Eddystone Broadcast N1113**

**Scatter.tv C12324**  
Intro: Scatter.TV is an all-new online sales service that improves incremental revenues for local television stations and national networks.

**ScheduALL Software SL767**  
Intro: ScheduALL for .NET substantially enhances the global reach of ScheduALL and redefines teleproduction workflow management; ScheduLINK software manages broadcast satellite & terrestrial networks, offering bandwidth capacity management of events as well as auto-

mated billing, equipment conflict checking and availability & task notifications.

**Schill GMBH & Co. KG C1233**

**Schneider Optics SU10329**  
Intro: Schneider ND Dual Grad Filter controls exposure and/or depth of field for two different areas of frame.  
Also: Digicon filters for digital cameras, Classic Soft, Black Frost, White Frost, Low Contrast, Neutral Densities, True-Pol, Day for Night, Series 9 Achromats, Combo Grads, Sunset Series

**Schoeps Microphones N3231**

**Scientific-Atlanta Inc SU7848**

**Scopus Network Technologies SU8470**  
Intro: Scopus IRD-2900 Professional Integrated Receiver/Decoder targets satellite & cable distribution as well as digital turn-around applications. The IRD-2900 is ready to be upgraded to DVBS2; The new DSNG E-1720 encoder modulator with integrated L-band upconverter is now in production and shipping; The UE-9000 Universal MPEG Encoding Platform now implements dual-channel MPEG-2 real time encoding. The Universal Encoder platform will provide broadcasters with a migration path from MPEG-2 to new compression algorithms such as the standard and HD MPEG-4 Part 10 (H.264) and VC1 formats. Also a live demo featuring news-gathering over IP (NGoIP) will feature Scopus' new de-jittering and includes IP processing. The demonstration combines a Scopus Professional IRD-2900 coupled with its E-1000 encoder that delivers IP input/output.  
Also: IVN (Intelligent Video Network) Mario Rainville, Assoc. VP, Product Marketing, Americas  
100 Overlook Center Dr.  
Princeton, NJ 08540  
609-987-8090  
Fax: 609-987-8095  
E-mail: [mrainville@scopusamericas.com](mailto:mrainville@scopusamericas.com)  
Web Site: [www.scopus.net](http://www.scopus.net)

**ScoreBox SU11115**

**Scott Studios Corp. N3902, C1828**

**Scott Traffic N4005**

**Screen Service Broadcasting Technologies N3922**

Intro: New series of DTV modulators & transmitters with SFN/MFN capability, adaptive pre-correction and "dual-mode" functions; New series of low-cost high- and medium-power solid state TV transmitters in UHF and VHF bands; Digital microwave links for multi-channel, multi-hop point to point connections; New digital repeaters, in regenerative and non regenerative techniques; Analog & digital high end MMDS complete solutions for DVB-T, DVB-C, DVB-S standards.  
Also: Analog & DTV transmitters & transposers, analog & digital microwave links from 2 to 24 GHz, analog & digital MMDS systems, remote controls, encoders/decoders, multiplexers, QPSK/QAM modulators/demodulators.

**Screen Service Italia N3922**

**Screen Subtitling Systems SU8956**  
Intro: Polistream G5000 Specialist is a subtitling transmission system that allows the production of graphics, animated & static logos, tickers and clocks to be transmitted from one box; Poliscript Protile Subtitle is a preparation software system.

**Screenworks NEP, a Division of MM11**  
NEP Broadcasting

**SeaChange International SU6557**  
Intro: Based on the Common Interface File System (CIFS), the MediaClient family is a

series of standards-based client/server products optimized to support workflow throughout the television enterprise, regardless of video file type or compression scheme; The SeaChange MediaLibrary provides compression & file-format independent storage and can house any media type from uncompressed HD to MPEG-1; The ML 24000 provides 1.2 GB per node of cumulative bandwidth and costs less than 1/5 of storage area network architectures for comparable media storage.

**Secuencia Pixels SU8951**  
Intro: SafeView conditional-access system can be customized to meet customer requirements.

Also: EPGs, Internet TV, TV-Chat and TV-Mail, TV-Commerce, TV-Games, Enhanced-TV; system software for digital decoders (embedded software); development & integration of head-end systems; security & Smart Card operating systems and applications.

**Selectracks Production Music Services C2463**

**Sencore Inc. SU10006, C7331**  
Intro: Atlas receiver system, a hardware platform configurable with remote access capabilities & multi-unit management software; DTU-234 RF Probe, in combination with the RF Expert software, offers RF 8-VSB, QAM64/256 & analog measurements including: level, MER, Pre/Post BER directly from a laptop PC; Video Bridge for continuous monitoring of TV signals in any network where video is being carried over IP frames; VIP 1350 provides real time IP analysis plus the ability to extract the MPEG transport stream data and direct it to a physical transport stream output such as ASI, LVDS, 310M or DHEI; H.264

Analyzer Offline Analysis software provides in-depth H.264 analysis and decoding and provides valuable troubleshooting information for video stream, DTV, VOD, and Video Over IP delivery systems.  
Also: MAP1850 MPEG analyzer, HDTV996A 8-VSB player, ATSC997 transport stream player, TMS1780 transport stream monitor, ASM988A QPSK modulator, ATSM1770 transport stream monitor, SLM1456 RF signal level meter, IRD3385 integrated receiver decoder

**Sennheiser Electronic Corp. N2822A**  
Intro: The Rosendahl bonsaiDrive portable standalone hard disk recorder uses a standard IDE drive, permitting uncompressed 4:2:2 PAL or NTSC video (with Huffman lossless encoding) together with stereo analog audio & 8 channels of ADAT at 24-bit/48 kHz.  
Also: HHB PortaDrive PDR2000 portable hard disk recorder

**Seratel Technology N1831**

**Serious Magic Inc. SL4910**

**Server Technology Inc. SL810**

**SES Americom C5245**

**SGT SL3367-MR**

**Shaxon Industries C11044**

**Shively Labs N2007**

**Shook Mobile Technology, LP MM214**  
Intro: A-14HD EFP truck, a low cost 3-4 camera HD field production vehicle uses a new Ford 2006 LFE chassis and provides cable, industrial, educational & religious broadcasters the ability to produce network

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Reduce program content up to 8%  
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quality HD programming at a very affordable cost. Shook will be featuring a COFDM live microwave Hummer that provides real time "On The Move" news coverage for fast breaking stories.

**Shotoku Broadcast Systems C10641**  
Intro: TP-80 pneumatic pedestal is a four-stage air-pedestal that can be operated with almost half the air pressure of existing pneumatic pedestals minimizing affects caused by temperature change. The TP-80 also has a newly designed built-in easy cable guard height adjustment mechanism. Also: TP-64 pedestal, TE-21 fluid head, TT-17 tripod, TT-64 tripod; TD-13, TD-32 and TD-43 dollies will be shown with tripod combination  
Naoki Ebimoto, Pres.  
15375 Barranca Pkwy.  
Irvine, CA 92618  
949-754-9005  
Fax: 949-754-9006  
E-mail: info@shotoku.tv  
Web Site: www.shotoku.tv

**Shure Inc. N3206**

**Siemens Business Services Media SU8541**  
On Display: Colledia

**Sierra Automated Systems & Eng. Corp. N1102**

**Sierra Automated Systems N806**  
Intro: Rubicon SL Broadcast Console/Control Surface targets smaller markets station or less demanding studios. Like its bigger brother, Rubicon, the "SL" offers complete integration with the SAS 32KD & the SAS Connected Digital Network, as well as stand-alone operation with the new upgraded RIOLink mixer/router; New features in the Rubicon Radio Broadcast Console Control Surface

include an on-board microphone & effects processing, including EQ, leveling & compression, and de-essing; an optional LCD display for metering, clock, timer, and more; Upgrades to the RIOLink Remote I/O mixer/router include 32x32 standalone operation.

**Sierra Video Systems SL854**  
Intro: Sierra NLE multilevel, multiformat routing switcher is for nonlinear editing facilities that require flexible digital & analog signal routing with intuitive control features in a single compact frame.

**Sigma Electronics Inc. SU10345**  
Intro: Arbalest digital audio-to-video synchronization equipment uses Sigma's patented Digital Automatic Time Compensation (DATC) technology; Dagger Series routers are for HD & SD in up to 16x16 matrix; Saber Series modular racks house a wide variety of signal processing equipment; The TSG490 signal pattern & test generator is a fully functioned NTSC/PAL composite or composite/component generator with a comprehensive selection of optional features; The CO490 SPG Changeover works in conjunction with the TSG490 or any other SPG or test pattern generator to provide automatic switching to a backup generator in the event of a failure in the primary generator; The DVS-1616 16x16 video matrix switcher is redesigned and now includes auto-equalization circuitry to compensate for up to 1000' of Belden 8281 cable. Also: OctaStream AES audio processing, MRX mid-size matrix routers, SLX source-select routers, 2100 control panels

**SilhouetteFX SL1024**  
Intro: Silhouette Roto operates either standalone or as an After Effects-compatible plug-in and allows users to quickly create sophisticated animated mattes using rational B-spline, NURB or Bezier shapes.

**Silicon Graphics (SGI) SL1943**  
Intro: Silicon Graphics Prism visualization system is an open architecture platform that can easily handle the 4K requirements of digital cinema mastering & digital intermediates; SGI InfiniteStorage RM610 storage for broadcast addresses broadcasters' multiple-stream & low-latency, real-time requirements by delivering increased reliability and substantially increased stream playout on SGI Media Server for broadcast and other media server systems; SGI InfiniteStorage RM660 storage for production includes high-resolution capture from scanner, digital cinema cameras & telecines, resolution-independent editing and compositing applications as well as the growing number of digital film mastering applications for color grading and digital intermediate facilities.

**SintecMedia SL5419**  
Intro: OnAir all-in-one broadcast management system for networks, stations groups, as well as cable & satellite.

**Sira s.r.l. C8538b**

**SISLink C8143**

**SKB/Cases by Source SL2868**  
Also: Shipping cases—foam-lined, water & dust tight, IP67 rated, rotationally molded, elastomeric shockmount, stainless steel locking latches, 4" brake-type casters, mil-spec.

**Sky Lite Communications C10047**

**Sky Micro SL3761**

**Skyline Communications/ Tek-Pacific SU7031**

**Skylite Visiosat 50237**  
Intro: Multisatellite dish  
Also: Satellite dish, satellite receiver, LNBF, switches

**Skymicro SL3761**  
Intro: The MerlinHD/Producer, Skymicro's latest addition to the Merlin video capture/codec hardware series, is a program-mable PCI-X board that provides HD capture/playback board with SD encoding for MPEG-2 and DV up to 50 Mbps; Brec v2.0, Skymicro's application for video encoding now includes a real-time confidence monitor & MPEG-1 proxy generation with timecode burn.  
Also: Merlin05, Expansion PanelA, Expansion PanelB

**SkyStream Networks SL2756**

**Silk Broadcast C10648**

**Smart AV N3135**

**Smart Technologies Inc. SL4423**

**SmartDisk Corp. SL5828**  
Intro: FlashTrax, a palm-sized multimedia player/recorder that records video, transfers photos from Flash cards, plays back on color LCD, outputs to TV or projector; FotoChute, a pocket-sized device that copies photos directly from your camera, connects via USB 2.0; On-The-Go, a portable hard disk drive that holds more than 20,000 photos (based on 800 kb file size) and stores more than 20 GB of images or data files; NetDisk, an external hard drive that combines Ethernet & USB 2.0 to share secure storage with no IP configuration or server required; FireLite, a family of portable, high performance external hard drives that offer secure storage for data in either FireWire or USB 2.0 connectivity; CrossFire, a family of high-capacity external desktop drives that store thousands of digital photos, videos, MP3 songs and other electronic files.

**SmartSound Software SL710, C2961**  
On Display: Sonicfire Pro v3, Quicktracks for Premiere Pro sound libraries.

## TURN POWERPOINT INTO A TV STUDIO



Xpresenter Toolbar  
Dynamic Updates

PowerPoint interface

Live Video

Crawling Ticker

**VERTIGO X MEDIA PRESENTER**



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### THE POWERPOINT VIDEO SOLUTION

- Runs directly inside PowerPoint
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Xpresenter is the all-in-one solution for any application that demands professional quality video, graphics, and animations. Users who are familiar with Microsoft PowerPoint can instantly start creating high-end video presentations, with virtually no learning curve.

Unlike other systems that import PowerPoint presentations and display them as static images, Xpresenter runs directly inside the PowerPoint interface, transforming PowerPoint into a powerful real-time graphics system with features rivaling many much more expensive broadcast graphics systems.

#### FEATURES

- Integrated video keyer • Digital video effects (DVE) • Crawling tickers • Keyframe and flipbook animations • Live data updates • Antialiasing on text and graphics • Broadcast transitions • Image tickers • Scheduling tools • Multiple output formats • Audio support • Scripting engine • Remote management tools, and more...

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**FOR-A**

See the Xpresenter demonstrated at VertigoXmedia booth # SL2620 and For-A booth # C4519



**Snell & Wilcox Inc.****SU6349**

**Intro:** Kahuna multiformat SD/HD production switcher offers simultaneous HD & SD operations in the same mainframe with the same control panel; 25 IQ modular components, including converters, synchronizers, distribution amplifiers, routers & audio modules—all capable of operating in either SD or HD resolutions and all to let broadcasters take control of their transition to digital & HDTV broadcasting; IQDEC00 module packs a 12-bit 3D Golden Gate premium decoder, synchronizer & audio embedder with noise reduction all on a single compact card; IQBRK00 module will take up to two embedded audio streams, break them out to AES, and then re-ingest the resulting signals; HD5300 motion-compensated broadcast upconverter for OB trucks; New version of Comet, a software-based, open-standards ingest system for broadcast servers and asset management systems.

**Softel-USA****SU10341****Softier****SL4068****SoftNI Corporation** **SL1213B, SU8960****Solid State Logic****N3211****Sonic Solutions****SL760****Sonifex Ltd.****C3526**

**Intro:** The S2 is a new, small format, modular digital I/O analog radio broadcast mixer, which uses the latest technology components to offer digital audio quality with analog reliability in a modular format; D:Scribe transcription software has been enhanced to include a recording package, as well as a CD-ripper, to make it a complete recording, playback & transcription package; Net-Log 4 channel audio logger is now fitted with a 200 GB hard drive as a minimum spec. Also: Redbox range of audio interfaces, HY-03 telephone hybrids.

**Sony Electronics Inc.****SU6406****Sorenson Media****SL1210H**

**Intro:** Sorenson Squeeze 4.1 Compression Suite, a full-featured compression application, incorporates HD encoding for MPEG-1, MPEG-2, MPEG-4, QuickTime & RealMedia; Sorenson Media has added the Sorenson AVC Pro codec (also known as H.264) to the Sorenson Squeeze 4 Compression Suite. This codec offers encoding efficiency by creating high-quality video at roughly 70 percent the standard MPEG-4 codec; Built for Flash MX and Flash MX Professional, Sorenson Squeeze 4.1 for Macromedia Flash MX with the Sorenson Spark Pro codec creates a small video file size with high-quality Flash video; The Sorenson Squeeze 4.1 for MPEG-4 open standard ensures that users of any multimedia architecture, regardless of platform, will get consistent performance and maximum quality when viewing MPEG-4 video.

**SOS Global Express Inc.****C11441****Sound Devices****N4212**

**Intro:** The 722, a portable high-resolution digital audio recorder that records to an internal hard drive and/or Compact Flash. Audio is uncompressed up to 24-bit, 192 kHz; The 744T, a portable 4-channel high-resolution digital audio recorder with timecode records to internal hard drive and/or Compact Flash media and records uncompressed audio up to 24-bit, 192 kHz. Both units feature analog and digital I/O.

Also: MixPre, 302, 442

Jon Tatooles, Managing Dir.

300 Wengel Dr.

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608-524-0625

800-505-0625

Fax: 608-524-0655

E-mail: [info@sounddevices.com](mailto:info@sounddevices.com)Web Site: [www.sounddevices.com](http://www.sounddevices.com)**Sound Ideas****C1451**

**Intro:** Series 6000 Ext V: Sound Ideas "The General" Series 6000 sound library grows again with 10 new audio CDs & more than 1,200 new effects.

**Soundminer Inc.****SL3347**

**Intro:** More than 30 new features have been added to the Soundmine 3.1.3 industry asset manager. Database, search, audition, process, edit and batch transfer into any of today's leading DAWs and NLEs.

Soundminer supports OS9 and OSX Macintosh; Soundminer Ripper 3.1.3 allows the user to digitize any supported commercial sound effect or music library CDs into SD2, AIFF, BWAV or AAC formats, complete with metadata embedded in the resulting files; Soundminer HT - Webminer allows any user on a network to share, search & download any centralized assets via a simple Web browser.

**SpectSoft****SL3661, SL3935**

**Intro:** An uncompressed frame-based SD, HD & Dual Link capture and playback DDR with asset management and pro-

grammable cadence.  
Also: RaveHD

**Speedsix Software****SL1564****Spencer Technologies Inc.****SU9356**

**Intro:** Newstore-4, a new 4-channel news production, still/clip store "server." Each channel includes a DVE for creating dual interview boxes over a moving background, built-in linear keyer and transition effects generator. Other features include external machine control and "rundown" from the touchscreen GUI; Newscaster



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allows one person to run a newscast from our touchscreen GUI, which displays the entire rundown; Branding Iron is a control system for animation snypes, squeeze backs with audio ducking, "ticker" text crawls, time/ temp & promo clips. Multilayering of graphics and text is available; The SPT 3500 broadcast quality pan & tilt head stores a hundred camera "shots," is studio silent and performs very smooth On Air moves. A thumbnail of each shot is stored in a "shot library" and displayed on a touchscreen for instant recall. Controlled directly from the Newstore GUI, selected shots are inserted into the newscast "rundown" for instant recall by one operator.

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**Spider Support Systems** C8911

**Spirent Communications** SL3759

**SRS Labs Inc.** N2026

**Staco Energy Products Company** C1207

**Stagetec** N4208  
(Salzbrenner Stageteck Mediagroup)

**Stainless LLC** C1411  
Intro: Stainless Express analysis service is designed to quickly provide full analysis of tall towers.  
Also: Stainless provides inspection, analysis, engineering, design, maintenance, modification, and manufacturing for tall towers.

**Standard Communications Corp.** SU8665

**Statmon Technologies Corp.** C11404  
Intro: The ELF-32 is an "intelligent" device for remote control & monitoring that enables the system operator/engineer to connect remotely to equipment situated in the field at a transmission location to retrieve critical data without visiting the site.  
Also: Axxess remote control & monitoring system

**Statmon Technologies Corp.** C11404

**STE-MAN Inc.** C9719

**StorageTek** SL4632

**Stradis Inc.** SU9338

**Strand Lighting Inc.** C3033

**Stratos Lightwave** SU-10323

Intro: 18 channel HD/SD video media converter rack.  
Also: Small form factor pluggable optical video transceiver module (V\_SFP), SDI Video mux/de-mux engine card, fiber optic cable assemblies for digital broadcast

**Streambox** SL3655

Intro: The Streambox SBT3-9000 Encoder/Decoder System is an integrated video transport system for real-time HDTV video & audio (HD-SDI, SMPTE-292M) delivery over TCP/IP networks. The system provides broadcasters with the means to deliver HD video streams over existing SD-capable network infrastructure. It features a complete range of video resolutions and bit rate choices from 2-10 Mbps to meet every video transport need; The Streambox SBT3-1000 is a video transport system with advanced error correction technology

for unicast (point-to-point) delivery over multiple network types. While other products can only deliver a 1/4-screen low-resolution image over a low data-rate connection, the SBT3-1000 delivers full-resolution video. The SBT3-1000 compression engine is the same one used by broadcasters for high-profile contribution feeds and primary distribution links, so a quality signal is assured.

Also: Streambox ACT-L3 SD Video Transport, ACT-L3 Portable Video Transport Intel Version, ACT-L3 Portable Video Transport Mac OS version, Streambox TV.  
Tim Heiner, Dir., Sales  
2401 4th Ave., Ste. 830  
Seattle, WA 98121  
206-956-0544 Ext. 222  
Fax: 206-956-0570  
E-mail: [sales@streambox.com](mailto:sales@streambox.com)  
Web Site: [www.streambox.com](http://www.streambox.com)

**Studer** N3626

Intro: The new Studer Vista 8 Digital Live Production Console, built on the platform of the Vista 6 & 7, similarly incorporates the Vistonics user interface, but this time has expanded the concept to provide output metering and control in addition to a host of other features.

**Studio Network Solutions** SL3331

Intro: globalSAN, a multiplatform Ethernet-based Storage Area Network (IP SAN) built on the iSCSI protocol; globalSAN X-8, an 8-bay, 4-user package with 2 TB of shared SATA storage & globalSAN X-16, a 16-bay, 6-user package with 4 TB of shared SATA storage.

**Sun Microsystems** SL5234

**Sundance Digital Inc.** SU10011

Intro: Live demonstrations of the remote capabilities of Sundance Digital's large-

scale Titan automation solution using SNMP (simple network monitoring protocol). Titan will drive two channels of an Omneon server remotely from Sundance's Dallas headquarters; playlist control will be handled on the show floor from a Titan user-interface. In addition, Miranda's "Allegro" encoders will be used to allow viewing of real-time low-resolution video from Dallas, while monitoring the hardware's "health" with Miranda's "iControl" SNMP technology; FastBreak Automation V4 for broadcast automation will share some elements of the company's advanced Titan system architecture, as well as a thoroughly updated Graphical User Interface (GUI); Seeker V3.0 is for "real world" broadcast operations, with a primary emphasis on enhanced workflow management. Developed with valuable assistance and feedback from customers, this new release of Seeker provides tools that enable managers, producers and creative staff to collaborate and maximize their efficiency; Digital Delivery Management System (DDMS)—working in conjunction with various digital content delivery providers, such as Pathfire, DDMS eliminates guesswork and minimizes the labor-intensive tasks involved in bringing program-length and commercial content into the broadcast facility. Demonstrations of DDMS integrated with Pathfire and MassBrowse from Masstech will be held at the booth. Responding to the basic necessity for system monitoring in complex, networked, broadcast environments, Sundance Digital will show SNMP status solutions that track the health of hardware subsystems and digital signals. In addition to the company's own "Sentinel," a comprehensive SNMP package designed to provide a single interface to "back-room" software modules, there will be active monitoring of a Titan

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**Sunray Manufacturing C11407**

**SuperCircuits C12136**

**Superior Broadcast Products C1218**

**Intro:** New line of DTV transmitters featuring Superior's own Digital Exciter, as well as a complete line of analog transmitters for LPTV & full-service broadcasters; Broadband panel antennas and single-channel & broadband slot antennas; Superior can customize any antenna pattern to fit your needs.

**Superior Electric N608**

**Intro:** DIN Rail Transient Voltage Surge Suppressors that can be connected in series of parallel. Single-phase 24, 48, 120 & 250 VAC and VDC models.

**Also:** Stabiline Automatic Voltage Regulators, Uninterruptible Power Supplies, Transient Voltage Surge Suppressors.

**Sure Shot Transmissions Inc. C5841**

**Surface Heating Systems C10249**

**SWE-DISH Satellite Systems AB MM5, MM116**

**Intro:** The SWE-DISH IPT Suitcase satellite system combines one-person operation with technical performance to allow live, 4 Mbps broadband transmission of IP standard data, voice & video; The SWE-DISH FA150K Fly-Away system is from the bottom up to be a rugged, easy-to-transport & quick-to-deploy satellite earth terminal; The SWE-DISH DA90K Drive-Away antenna system is for worldwide Ku-Band uplink operation; The SWE-DISH DA150K Drive-Away is a vehicle-mount antenna system. The antenna deploys and automatically points towards the selected satellite.

**SWIT Industry & Trading Co., Ltd. C1339**

**Switchcraft Inc. C2339**

**Intro:** Switchcraft has expanded its line of EH Series connectors to now include USB, FireWire, 3.5mm stereo jacks & S-Video, all in the same XLR panel cut-out. Switchcraft will introduce a new audio patchbay customized for digital audio workstations that incorporates EZ Norm technology for quick, simple reconfigurations.

**Symetrix Inc. N4006**

**Synergy Broadcast Systems SL764**

**SyntheSys Research Inc. SU10132**

**Synthetic Aperture SL1021, SL760D**

**Systems Wireless C3719D**

**Systor Systems, Inc. SL5826**

**Tally Display Corp. (TDC) C9716**

**Tandberg Television SU7858**

**Intro:** Tandberg EN5990 real-time HD video encoder for MPEG-4 part 10 (H.264/AVC) is a 2RU encoder that includes a range of advanced broadcast features with MPEG-4 part 10 (H.264/AVC) Main Profile Level 4.0 real-time video encoding; Tandberg EN5980 HD Encoder for Windows Media

9 Series, based on the Tandberg HD Intelligent Compression Engine (ICE) offers similar performance to the EN5990; E5780 & E5782 are the latest in Tandberg MPEG-2 HD encoding, offering SD & HD encoding; Tandberg ES7110 features four MPEG-2 encoders within a 1RU chassis to provide a space-efficient system for cable headend applications; Tandberg ES784 & ES788 can be deployed within HD Digital Satellite News Gathering (DSNG) systems requiring either L-band or IF modulation output capability in an upgradeable 2RU chassis.

**Also:** EN5930 SD encoder for MPEG-4 AVC; EN5920 SD encoder for Windows Media 9; E5770 MPEG-2 SD encoder; nCompass Control; nCompass Monitoring; REFLEX statistical multiplexing; TT1280/1282 HD receivers; E5714 Voyager DSNG encoder

**Tascam SL1516**

**Intro:** The DM-3200 digital console features 48-channel mixing, powerful DSP & integration with DAW recording systems; VL-X5 home studio monitor system features speakers with 5 1/4" woofers, silk-dome tweeters & a 60+30-W bi-amplified active power amp.

**Also:** US-2400, DV-D6500

**TBC Consoles SU6831**

**Intro:** IntelliTrac Console System offers modularity, user-friendly adjustability & high-end aesthetics.

**Also:** Crossfire XK-300

**TC Electronics C3612G**

**TDK Electronics Corp. SU9636**

**Tec Nec Distributors C2042**

**Intro:** Sony-equivalent CCZAD100 camera to CCU cables; Phatcat CAT-5 video cables.

**Also:** FireWire cables

**Techflex Inc. C2041**

**Technical Innovation C3647**

**Intro:** Newsflow tapeless, IT-centric solution for the news & collaborative editing; DTV ClearChoice, a DTV turnkey solution which includes DTV closed captioning and PSIP packages.

**Techni-Tool C9530**

**Intro:** New Fluke instruments; Cooper Tools; chairs; cleaner/degreaser; benches.

**Also:** Fluke meters

**Technocrane C8510**

**On Display:** Supertechno telescopic camera crane

**Technology Exchange Ltd. SU9936**

**Technosteria Inc. C12316**

**Tecnovision SL3716**

**Tedial SL1213N**

**Tekskill Industries Inc. C8916**

**Tektronix C6231**

**Intro:** K15, Version 2.1 analyzes H.324M video telephony quality of service by monitoring the UMTS core network IU-CS interface; MTS400 MPEG Transport Stream Debugger/Analyzer includes new features such as "CaptureVu," a technical monitoring & analysis tool that, when triggered, captures & analyzes system events in real time to debug the intermittent and complex problems that traditional analyzers miss; Version 5.1 of MTX100 features tighter integration with the MTM400; WVR7000 Series rasterizer monitors HD & SD SDI, analog composite, and audio signals, and simultaneously provides 4 different and configurable views of the signal. The WVR7100 base unit offers HD-only monitoring with the ability to add SD and composite monitoring as options.

**Also:** VM5000, VM700T, SPG600, SPG300, TG700, TG2000, WVR7000, WFM700, WVR600, WFMNLE, MLM1000, MTS400, MTS300, MTS4EA, MTM400, AD951A,

MTX100, MTG300, RFA300A, WFM90D, WFM91D, TSG95

**Telecast Fiber Systems SU8375**

**Intro:** Adder II, a new network line of audio, intercom, and data multiplexers using the Matrix Engine high-speed digital bus; CopperHead T-444 Fiber Optic Link extends "T-Cam" optical block ranges (up to 5 km on a single optical fiber, versus the normal 10 meters on copper); Teleport Wavelength-Management CWDM multiplexer provides high-bandwidth optical signal multiplexing, simplifying and multiplying the effectiveness of fiber optic cables; Mamba ISS Series optical patchbay-based integrated systems solution is a fully integrated optical infrastructure approach to HD/SDI and audio distribution built around Telecast's Mamba active patchbays, which enable facilities to use fiber.

**Also:** Adder, Baker Box BBX, Cobra, CopperHead, CopperHead Cine, DiamondBack II, Viper, Viper II

**Teledyne MEC C1437**

**Telefunken Sender N434**

**Systeme Berlin AG**

**Telemetrics Inc. C7337**

**Intro:** CPS-ROP-S camera control system provides flexible architecture for control of up to 50 cameras or devices.

**Telesat C9647**

**Telescript Inc. C8932**

**Intro:** Fold and Go teleprompters have been enhanced with the addition of new units available in 8", 13" & 15" value and 12" & 15" broadcast/studio quality configurations, and are built to move from the studio to the field and back again with ease.

**Telestream Inc.**

**SU11404**

**Intro:** Flip4Mac is a WMV Export Component to make Windows Media from within any QuickTime-based media application; MAP Media Collaboration allows distributed workgroups to quickly and easily access, contribute and comment on media products across LANs & WANs; MAPone for Mac is a personal IP media delivery software application that loads onto Apple PowerBooks and G4/G5 systems to transmit media across any standard or wireless IP network; The exclusive HyperMAP media delivery protocol enhances transmission over lossy networks and adds encryption for security.

**Also:** FlipFactory, ClipMail, MAPreview, MAPone for PC

**Teletest Ltd. C11042**

**Television SU11823**

**Television Engineering Corp. C6241**

**Intro:** ENG Express, a new way of thinking of newsgathering and truck building, is the result of flexible manufacturing processes includes just what you need for nightly newsgathering; MicroSat Sprinter targets ENG/DSNG scenarios where more height and rack space are priorities.

**Television Systems Ltd. SU9656**

**Telex Communications Inc. C6821**

**Telos Systems N2816, N3606**

**Tentel C4143**

**Intro:** Complete tooling packages for DVCPRO; Accessories and work fixtures for DVCPRO maintenance; DVCAM tool kit; factory tools, parts & components at discount prices; EDS-

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**Teracom Components C3333**

**Teranex Inc. C12024**

**Terayon Communications SU11316**  
Systems

**Texas Instruments SL3645**

**TFT Inc. N3302**  
On Display: Modulation monitors

**Thales Angenieux C5107**  
Intro: 70X & 26X HD high-definition lenses for a comprehensive range of broadcast and production applications; Series 70X HD OB/sports lens for studio & sports applications, features a unique advanced display system; 26X HD telephoto zoom lens provides an extended focal range ideal for news & sports field production applications.  
Also: 70X HD Lens, 26X HD Lens

**Thales Broadcast & Multimedia C4508**  
Intro: Thales will demonstrate the latest advances in compressed content regionalization including Digital Program Insertion (DPI) for ad/logo insertions; Thales will showcase the latest technology incorporating DVB-H broadcasting to mobile/handheld devices. Demo to include content creation, packing, distribution, and RF transmission; DCX Paragon, the reference for high efficiency MSDC-IOT transmitters, combines Soft Arc Technology (SAT) & ultra-efficient MSDC tubes to provide

broadcasters with the lowest cost of ownership; Ultimate/Optimum solid-state transmitters feature a wide choice with analog, digital, air-cooled or liquid-cooled versions available; SmartCast, an MPEG encoding/multiplex platform with integrated MPEG transport stream monitoring & redundancy management.  
Also: Amber, Pearl, Sapphire, Crystal, Granite Sentinel, Argos, Lazulite

**Thales Components C5607**

**The Electronic Farm SL4447**

**The Foundry SL3952**  
Intro: Furnace, a collection of plug-in tools to help compositors correct common problems, include motion vector retiming, wire removal, clean plating, grain tools, texture tools & plug-ins to correct camera shake and non-uniform luma flickering; Tinder, a collection of more than 80 plug-ins that extend the creative possibilities of flame, flint, fire, inferno, smoke & burn; The Keylight keyer is simple to use and is good at tackling reflections, demi-transparent areas & hair; The Anvil collection of color-correction & color-manipulation tools for Discreet Advanced Systems includes an automated tool to produce a perfectly color-balanced image with one button press, a telecine style secondary color corrector with four channels, bleach bypass, print looks, dust busters, selective color correction and more.  
Also: Tinderbox 1, Tinderbox 2, Tinderbox 3

**The Tiffen Co. SU7876**

**thePlatform SL3322**

**Thermo Bond Buildings N2136**

Intro: Prefabricated transmitter buildings with all of the lights, panels, air conditioning, grounding, ventilation, etc. pre-wired.

**Thermodyne International SU7155**

**Thomson Broadcast & Media Solutions SU7823**

Intro: The Grass Valley LDK 4000, for small-to medium-sized broadcasters, digital production studios & media creation companies, supports 1080i or 720p production and features low power consumption & Thomson's (patented) HD Dynamic Pixel Management (HD-DPM) image-sensor technology; The Ignite line of integrated production solutions (IPS), is an integrated software & hardware environment that lets you produce and broadcast live newscasts and other programs with only one or two operators; The Kayak HD 2 M/E production switcher supports 1080i & 720p HD native productions with a signal-processing frame; NetCentral Simple Network Monitoring Protocol (SNMP)-based software allows users to monitor, diagnose & repair device-related problems across a digital workflow network; The LDK 400 camera features a flexible, dockable design, for a range of applications, from affordable studio camera applications over multicore cables to high-end applications over triax connections.  
Also: Zodiac production switcher, Kalypso Video Production Center, Kameleon Media Processing System, Gecko Signal Processing System, ViBE Encoders/Decoders, LDK 6000 mk II Worldcam, LDK 6200 HD Super SloMo Camera, Viper FilmStream camera.

**Tieline Technology N517**

**TM Systems SU10367**

Intro: New language localization software for DubStation II includes: QC Station-Lightweight, quality control PC software that improves & quickens the traditional workflow of a dubbing and/or subtitling project; Key features of QC Station include desktop dubbing & subtitling QC Station software, review casting dialogues against video on desktop, QC individual characters or groups, review WYSIWYG subtitles on desktop, nonlinear access to specific time-codes, "Jump" feature to skip segments with no dialogue; no layback or VCR's required, video displayed on screen in sync with translated dialogue, provides for first-level script checking that includes character identification, length, rhythm of translation, lipsync, simulation, etc.; RenderStation, a bitmap generation module that takes subtitling scripts in the form of Word documents, created by the TM TranStation, containing text, time code and vertical positioning for each subtitle, generating a navigation file and a TIFF file per subtitle, specifically for DVD authorizing.

**Tokina Company Ltd. C10733**

**Toner Cable Equipment Inc. C7944**

**Tools for Stagecraft C1425**

**Torpey Time SU9811**  
Intro: New Digital Timer Displays for use with teleprompters; Large digit clock displays operating from ESE, Evertz, Leitch, or NMEA codes.  
Also: Digital Timers with remote displays.  
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**Toshiba Corporation C6713**

**Total Training Inc. SL921**

**Tote Vision C11341**

**Tower Engineering N3436**

**Towerline Software LLC N516**

**Traffic Pulse C11716**

**Transvideo International C10821**

Intro: The 6.5" 16:9 Rainbow II SuperBright LCD monitor features a 140-degree viewing angle and is switchable to 4:3 & anamorphic (1:2.35); The 5" Rainbow II SuperBright professional LCD monitor features a 140-degree viewing angle and accepts NTSC, PAL BG, PALM, PALN and is switchable 4:3, 16:9 & anamorphic with built-in format converter; The 6" Cinemonitor IIIA SuperBright professional LCD monitor for operators & directors features a backlight system that outputs 1200 nits, neutralizing sunlight for outdoor shoots, while drawing only 13 W (1.1Amp at 12V).  
Also: 4" StarLite monitor, 5.8" 16:9 Rainbow monitor, 8.4" & 10.4" high-brightness monitors, Titan wireless transmitter & receiver (FCC/CE/IC), Mini prompter for DV, video & film cameras, Format converter, Frameline generator.

**Triad Communications SL3719**

**Triangle Software C1225**

Intro: BeatTheTraffic@TV, a video workstation that produces real-time traffic reports, high-quality graphics showing the traffic situation, clear, customizable, information-rich traffic animations & 10 bit SDI video output; BeatTheTraffic3D produces compelling 3D traffic animations overlaid on the 3D terrain; TrafficOnDemand features traffic data service on demand; Weather@TV illustrates the weather conditions & the latest forecasts from the National Weather Service in broadcast-quality.

**Trilogy Broadcast Ltd C11722**

**Trisim Enterprises C12143**

**Triveni Digital SU11411**

Intro: Enhanced StreamScope transport stream monitor & analyzer monitors, measures & analyzes DTV streams & signals to ensure their integrity, reliability and compliance with MPEG-2, ATSC & SCTE standards; GuideBuilder PSIP & DVB-SI generation systems collect, translate, manage & generate metadata; SkyScraper Application Constructor Toolkit for data broadcasting lowers the cost of deployment by minimizing development time for content distribution & playback.  
Also: StreamBridge metadata and data translation systems

**Troll Systems C1427**

**Trompeter SU-10323**

Intro: Available as individual units or loaded into panels, the enhanced J314 Series dual patchjacks for broadcast & production includes the J314W & J314WT (terminated & non-terminated versions) jacks as well as a smaller J314MW and J314MWT jacks for the miniWECO plug standard; M-BNC Series Miniature BNC 75-ohm connector allows for 40% greater connector density in a given area.  
Also: Coax connectors, adapters, tooling and training for HDTV applications

**Tron-Tek Inc. C1544**

Intro: 2.0 GHz analog video transmitter remotely selectable from 17 Mhz channel spacing to 12 MHz channel spacing for the new 2.0 GHz rebinding.  
Also: Transmitters, receivers, tower cams, repeaters

**TSL SU9656**

Intro: The TallyMan range has been expanded with the launch of a new multi-



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purpose interface called the ESP-1; Cameo compliments the existing TSL range of high-quality audio monitoring units by offering compact reference-quality sound monitoring.

#### T-Systems International C2133

**Intro:** Transparent HD contribution network between 12 venues & the International Broadcasting Center for the 2006 FIFA World Cup Germany. Transmission of TV programs to Germany via new POPs for ATM broadcast services at several locations in the U.S.: Atlanta, Cheyenne, Las Vegas, Los Angeles, New York & Washington.  
**Also:** Global satellite services, distribution & contribution

#### Tut Systems SU11817

#### TV One C1846

**Intro:** C2-7200 dual-channel video processor is more than 20 products in one: Dual picture-in-picture box, SDTV-HDTV converter, HDTV-HDTV converter, PC-HDTV scaler, PC-PC scaler, analog-to-DVI converter, analog-to-HD-SDI converter, DVI-to-HD-SDI converter, aspect ratio converter, HD-SDI frame sync, luma/chroma-keyer, standards converter, logo inserter, 10-input seamless switcher; SD-210AD analog-to-SDI converter with integral video proc amp for level adjustments; SD-220DA SDI-to-analog converter with reclocking & equalization to 300 meters, and integral video proc amp for level adjustments; SD-108M 1x8 SDI distribution amplifier with reclocking & equalization to 300 meters; DV-1394 Pro-SDI IEEE1394 DV to SDI & analog converter features video I/O: DV, Composite, S-Video, YUV, SDI. Audio I/O: AES/EBU, low-impedance balanced, high-impedance unbalanced. All outputs active simultaneously from DV Input.  
**Also:** C2-5200 universal scaler, C2-4100 RGB scaler, CS-620A down converter, IM-400 HDTV matrix routers, LM-1042R multiformat dual LCD monitor, CSC-1600HD up-converter, TV One-task signal converters, MPG-200 digital video recorder.

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Web Site: www.tvone.com

#### TV Technology/ IMAS Publishing

SU9812

#### TWR Lighting Inc. N2431

**Intro:** High Intensity Lighting System (HILS) using Special Technology for Ignition of Xenon Flashtubes (STIX) ensures long lamp life, very low UV & ozone generation and the low power consumption; LED BEACON Direct replacement for 300MM incandescent beacons.  
**Also:** Aviation obstruction lighting

#### U.S. Digital Television C5614

#### UAL - Moore Wallace C2744

#### Ultimatte Corp. SL1443

#### Unimar Inc. N2512

#### UNI-SET Corp. C3339

#### Unitex Pasadena SL3910

#### Utah Scientific C5610

**Intro:** UTAH-400 data router, a new addition to the UTAH-400 product family for routing RS-422 machine control data, offers 64 ports in a compact 4RU chassis with a unique expansion capability for adding more ports as required; UTAH-400 digital routers can now be fitted with optical I/O ports for direct connection of SD & HD signals on fiber without the need for external converters; UCP-Series control panels with advanced operational features & full compatibility with the U-Con graphical system configuration utility; SqueezeMAX Plus, an optional software package for the SqueezeMAX Master Control Effects & Graphics System, provides automatic EAS message alerts, time & temperature displays, and animated logos.  
**Also:** UTAH-400 digital routing switcher, MC-2020 digital master control switcher, SC-4 router control system

**Also:** UTAH-400 digital routing switcher, MC-2020 digital master control switcher, SC-4 router control system

#### Utility Tower Co. N2522

#### Vaddio SU11829

#### Valcom Ltd. N319

#### Vancouver Film School SU11805

#### Vantage Point SL4128

**Intro:** Universal Projector Mounts are styled from steel & die-cast aluminum, boasting a clean & finished appearance when viewing it on the ceiling; Universal Flat-panel/Plasma Mounts (UFO) make installation of flat-panels a one-person job; New line of VESA 200mm flat-panel

mounts are built to safely support larger LCD & plasma displays that are VESA 200-compliant.

#### Varizoom Lens Control C4543

#### VBrick Systems Inc. SL4931

#### VCI C11019

#### (Video Communications Inc.)

**Intro:** Sales proposal integration with STARS II+ for broadcast television & cable networks; Business Intelligence Tools  
**Also:** STARS II+, SalesDesk, On-air automation interfaces

#### VCom Inc. SU11834

**Intro:** VCom's MA3000 system can contain up to 10 independent, fully agile, analog MA3020 modulators for CATV use in a 4U rackmount configuration.

#### VDOsys Co. Ltd. SU11116

**Intro:** VDA110, a DVB/ASI Input/Output PCI card, featuring high-speed transport stream I/O, compatible with the DVB document A010 rev 1 & EN50083; VDD300 COFDM demodulator (DVB-T); VDM500 COFDM modulator (DVB-T); VDU1000 upconverter; VDG100 MPEG-2 TS player/recorder.  
**Also:** DVB ASI/SPI Card, DTV Demodulator (Capture), DTV Modulator Card, Upconverter Card, Software

#### VDS SL5300

#### VectorMAX SL3641

#### Veetronix Inc. SU10713

#### Vela SL4401

#### Venacá Inc. SL3636

**Intro:** The S3 Broadcast platform enables organizations to rapidly deploy a state-of-the-art media asset management system, capable of increasing workflow efficiency and the inherent value of existing media, while decreasing costs and streamlining the broadcast and production environments; The S3 Production platform enables organizations to begin the process of implementing enterprise MAM without sacrificing the critical production tools and features associated with the enterprise S3 Broadcast platform; The S3 Media platform enables organizations to deploy a robust media asset management system capable of managing low-resolution video, images, audio and other data associated with such media; AirCom I, a reliable, secure & robust air check system, provides a redundant architecture to record, store,

preview & export content to CD or tape; AirCom II provides all the tools that sales professionals need to quickly and effortlessly search, review and send video to clients, ad agencies and media buyers all from the desktop.

#### Venue Services Group C9634

#### Verizon Wireless SU11830

#### VertigoXmedia SL2620

**Intro:** VertigoXG, a full-featured SD/HD graphics system optimized for use with the Producer Xmedia Suite, provides single- or dual-channel graphics & video playout capabilities for a range of advanced real-time broadcast applications; Now available to Avid editors, Producer Xmedia Suite Version 3.5 adds a bevy of new features that further streamline the graphics production workflow.  
**Also:** XPresenter, Product X

#### VFGadgets.com C2163

**Intro:** Shooter Scooter portable dolly system runs on & off track and also doubles as production cart and folds up into the size of a suitcase; Replacement heavy-duty handles for the F900, HDW-750, VariCam and XDCAM feature lots of thread mounts on top of each handle & an adjustable aluminum viewfinder mount post; Viewfinder Extension Arm system enables you to put the viewfinder anywhere you want around the camera; Hang 'N Shoot, a new, quick miniDV camera car mount system, enables a 3-axis movement, plus 360-degree tilt of the ball head, which allows for many different camera angles from the same anchored position; Road Ace 2, a personal mobile navigation system, incorporates GPS technology to provide real-time, door-to-door, turn-by-turn voice driven route guidance with precision accuracy.  
**Also:** Red Eye Wide Angle Camera Lens, MiniBlox audio/visual converters, WarrenDolly, Lens support brackets, Target Multiformat Framing & Resolution Charts, tilt plates, Monitor Yoke, power supplies

#### ViAccess SA SU9332

#### VidCAD Documentation Programs Inc. C9826

#### Video Accessory Corp. SL400

#### Video Products Group Inc. SU9669

#### Video Technics Inc. C3647

**Intro:** Apella HDS next generation media server, is resolution independ-

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ent SD & HD, 100-percent compatible with the Apella Video Clip Server (VCS) and the company's NewsFlow solution. The Apella HDS is a scalable, multiformat, multichannel, & multiresolution HD video server built on flexible software codecs & compatible with Final Cut Pro via QuickTime & the Matrox Axio HD NLE. The four independent HD or SD SDI output ports, or two HD or SD SDI output ports with corresponding key signals are available within 1 Apella HDS chassis for instant playout of DV or MPEG-2/4 up to 100 Mbps. It sup-

ports the same mixed SQL database as the Apella Video Clip Server with additional formats for HD such as MPEG-4, MPEG-2 up to 100 Mbps and H.264. By supporting external NAS/SAN solutions & Matrox Axio HD NLE, with uncompressed file support, the Apella HDS supplies a complete end-to-end solution for HD video post production & transmission; NewsFlow v3.0, Video Technics' all-digital tapeless newsroom solution, provides the highest quality of asset management control via enhanced security options including

user profiles, user/group settings & storage quotas to allocate recording size and manage disk space. New features include complete offline & near-line archiving solutions through the Apella Auto Archive & Auto Purge function for video clips & audio tracks. NewsFlow v3.0 supports SGL and is certified with high-end nearline and offline archiving solutions. For improved file ingest performance, NewsFlow v3.0 offers the VT Media Encoder Server. This system is dedicated to processing file imports from NLE Exports, as well as the Hotfolder, which is now fully inte-

grated with the PathFire Digital Media Gateway; VT Media Encoders process multiple files simultaneously expediting new media to air; The new remote VT Proxy Editor application provides an improved multitrack timeline editing interface with a sizeable program monitor and a media import and audio record function. Users offline can also edit projects with proxies and use the new AAF file export to finish their work in Adobe Premiere Pro or other NLEs; VT Director application or client allows remote preview and control for multichannel playlists that update instantly through MOS. The Auto Ripple functionality insures the integrity of the channel assignment order will not be interrupted allowing user control over multiple channels across networks under MOS automation.

**Also: Apella VCS**  
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Web Site: [www.videotechnics.com](http://www.videotechnics.com)

**VideoBank** SL3335

**VideoCodes Inc.** C2363

**Videoframe Inc.** SU11806

**Intro:** HD transfer switch module, AES/EBU audio transfer switch module, built in audio signal monitoring, and RS422 transfer switch module, all components of the VF200 Control and Monitoring System; CP8 low-cost general-purpose control panel.

**Also:** Control & Signal Monitoring VNODES, VTECS Control Panel family, VF200 Control and Signal Monitoring System, Tally Mapper tally management system.

**VideoHelper** C2851, SL557

**Intro:** "ScoreHelper," a new library of original, full-length cinematic soundtracks that cover the range of film scores, from huge Hollywood orchestral blockbusters, to Indie label Alt-Folk, to experimental sound design, to reality TV Docudrama, even to recreations of vintage scores.

**Also:** VideoHelper Production Music Library, Noise Generator Sound Design Libraries

**Videokey** SL4041

**Intro:** AquariumSuite HD, a version of AquariumSuite that provides HD technology, also works in SD; Based on Final Cut Pro HD, AquariumEdit4Mac provides similar functionalities to those of AquariumEdit using XML communications and is compatible with AquariumSuite & AquariumSuite HD.

**Also:** AquariumSuite

**Videomagnetics Inc.** SU10711

**Intro:** Complete digital scanners, inner drums and parts for DVW-A500, 500, A510, 522; camera pixel repair; complete VTR service & repair.

**Also:** Betacam SP upper drums & complete scanners, and parts. Ampex, Sony & Hitachi type "C" video heads & scanners, 3/4 umatic upper drums, Ampex & RCA quad video heads

**Videoquip Research Ltd.** C1535

**Videotek** SL1213G

**Videssence** C10519

**Intro:** A miniature addition to the Videssence line, the "Shooter" series fixture provides powerful lighting in a small package. This 57-W instrument features intense light output from a lightweight compact housing. The 10"x6"x6.5" (LWH) unit is excellent for location single-talent shoots and executive three-point lighting set-ups. Permanent intensifier/barn doors can focus or shield the light intensity. An adjustable mounting yoke allows rotation



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for ease of focus and may be locked into place; The 50 W PAR 20 "Shadowcaster" can provide an artistic edge to add hard shadows or create additional depth in the image. Also: Baselines, Koldlites, Modular Series, Power Key Series, Setlites, Softkey Series, Softlite Series, Softwash Series, V-Beam Series, Shooter Series, Lighting Kits

#### **ViewCast Corp. SL4572**

*Intro:* Osprey-440 video capture cards support 4 channels of inputs that can handle up to 16 cameras or other video sources; New drivers for the Osprey Linux support the 2.4 & 2.6 Linux kernel trees; Osprey Ease combines the power of the Osprey-300 video capture card with the editing flexibility and creative control found in Adobe Premiere Elements; Niagara SchedulStream automation software for scheduling and management of Windows Media and RealNetworks RealVideo encoding sessions, is an upgrade to ViewCast's Niagara SCX software, which provides an encoder management interface for Niagara Streaming systems.

#### **Vinpower Inc. SL3619**

*Intro:* Titan Pro DVD/CD Automated Duplication System; Sharkcopier DVD/CD Duplicator; Vinpower CD Duplicator; Optical Quantum Blank DVD-R media; Optical Quantum Blank DVD+R media

#### **Vinten C7319F**

*Intro:* Vector 60 offers better picture control and improved performance, and like the Vector 70, offers familiar features such as LF drag, platform deadlock, illuminated leveling and pan-and-tilt brakes positioned for ease of use.

*Also:* Vision range (pan-and-tilt heads and tripods), Vector range of pan-and-tilt heads, Vision and Osprey pedestals, Quartz and Quattro Pedestals, VintenRadamec and AutoCam robotics: pan-and-tilt heads, pedestals and control units, IT heads and pedestals.

#### **Virtual Katy SL1210**

*Intro:* Virtual Katy workflow is simple. All you need is a new EDL or Avid Cut List. Virtual Katy compares the new file to the existing EDL or ACL and outputs a VK Changelist EDL. Using this, Virtual Katy then automatically updates Pro Tools session to match the picture changes.

*Also:* VK Premium, VK Lite

#### **Virage Inc. SL4934**

#### **Visionary Solutions Inc. SL4533**

*On Display:* AVN200 MPEG-2 over IP encoder

#### **Vista Systems Corp. SL3401**

*Intro:* Spyder 200 & 300 real-time compositing and windowing systems feature flexibility for mixing sources in multiple windows, greater clarity of signal processing, seamless widescreen displays, plus real-time compositing for high-resolution applications in a modular, scaleable package.

#### **Vista Systems SL3401**

#### **Vistek Electronics Ltd. SU7376**

*Intro:* V6406, a modular HD upconverter that uses all of Vistek's experience with standards conversion, coupled with a new, proprietary method of addressing RAM; V6757, a modular fiber product allows analog composite video (with audio) to be transmitted within the data space of a conventional SDI signal across Fiber.

*Also:* Vistek modular interface products

#### **Visual Data Media Services SU9550**

#### **VitalStream SL1023**

#### **Vitec Multimedia Inc. SL3306**

#### **Vizrt SL1137**

*Intro:* Viz|Trio 2.2, an HD/SD real-time 3D CG & graphics system, supports all HD formats and includes a new internal compositing tool; Viz|Weather, Version 1.6, 3D real-time weather software for the creation and playout of weather-related graphics; Viz|Content Pilot, Version 4.1 content management software features full support of Vizrt's Look Ahead transition logic for seamless and automatic transitions between multiple layers of graphics; New user interface to Vizrt's Object Store provides a shared database of video clips and still that can be accessed directly from all Vizrt applications.

*Also:* Viz|Ticker, Viz|Ad, Viz|Arena, Viz|Virtual Studio, Viz|Ibis, Viz|Engine

#### **Vmatte Corp. SL3407**

#### **Vodium SL3758**

#### **Voice Factor SL4650**

#### **Vqual SL4535**

#### **V-SOFT Communications N508**

#### **VTG Broadcast Group**

#### **Vyvx LLC**

*Intro:* HD VenueNet enables broadcasters to backhaul live HDTV feeds from event locations, end-to-end, at 270 Mbps; Vyvx ADS Clients Secure Close Captioning allows Vyvx advertising distribution customers to save time when they consolidate standard post production work such as close captioning; Vyvx provides the occasional fiber video transmission from the Vyvx Television Switching Center (TSC) in Virtual Teleport cities to our Vyvx Teleports without addition fiber fees. Virtual Teleport Service is available in Baltimore, Boston, Chicago, Dallas, Houston, Kansas City, Miami, Minneapolis, New Orleans, New York, Orlando, Phoenix, Pittsburgh, San Francisco, Seattle and Washington Physical teleports are located in Atlanta, Denver and Los Angeles; Vyvx Advertising Media Solutions is the complete source for media content distribution, setting the standard for flawless content delivery to more than 12,000 destinations.

#### **Wacom Technology SL3610**

#### **Wagner Media Inc. SL5100**

#### **Walters-Storyk Design Group SL456**

#### **Wamnet A Division of SAVVIS SL42591**

#### **Ward-Beck Systems C1924**

*Intro:* AMS8-1 & AMS8-2 multichannel audio monitors feature 4 selectable inputs that may be PCM, Dolby-E or Dolby AC-3, optional HD/SD disembedder may be added, 8 LED audio meters, proportional mixing, global volume control, 4 user-defined mix-down presets, Dolby-E voiceover capability; RLM-24, a 24 channel stereo loudness meter features 24 stereo LED bargraph meters in 2RU of space. Each pair has a silence sensor with audible alarm and GPI output.

*Also:* Serialboxx, PODS, SLM Series Meters, AMS4 Audio Monitors, AVB-1 Vidbuddy, IMP Series, BitBuddy and Bitspitter

#### **Wavestream Corp. C10048**

#### **WCInteractive C10214**

*On Display:* ScreenWRITER, SportsWRITER

#### **Weather Central Inc. C10214**

*Intro:* Patented, interactive real-time storytelling; live video input; exclusive SceneLaunching; large coverage area of LandSat and aerial photography available; New VETEC implementation

*Also:* MetroVision, MicroCast

#### **Weather Metrics C10419**

*Intro:* 24x7 Weather.Net is a market exclusive, fully automated, weather and news content management system that integrates information & data from multiple sources and displays it in a single screen for broadcast on a digital and/or local cable channel; City Weather.Net is the newest release of Weather Metrics' proven on-air neighborhood weather product.

#### **WeatherData Inc. C11409**

*Intro:* TV SelectWarn Suite features automatic crawl generation when station-selected criteria are met, automatic severe storm report plotting.

#### **Wegener C2624**

*Intro:* AVC satellite receivers for enterprise, broadcast & cable, support advanced video coding and HD video applications; Nielsen NAVE IIC encoder is the industry's first product to encode the Nielsen Media Research proprietary NAVE identification information, used for TV ratings purposes, and operates entirely in the compressed video/audio domain; Compel Q supports Digital Program Insertion (DPI) applications at uplinks and digital cable headends. It sends required DPI control sequences to encoders and communicates directly with encoder traffic systems to ensure delivery in dynamic encoder configurations; MediaPlan Content Management puts every Wegener receiver and uplink under an operator's control with unparalleled flexibility. Receivers are controlled as individual sites or as a member of up to 6,400 groups. Wegener's next generation of Network Control and Content Management extends functionality to individual digital asset files. Wegener's MediaPlan allows an operator total digital asset management in an end-to-end environment, supporting: ingest of analog & digital assets; management of archived digital assets; remote tracking of individual assets on deployed Wegener iPump Media Servers.

*Also:* iPump Media Servers, Compel



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**Wheatstone Corp. N2802**  
*On Display: D-9, D-5.1*

**Whirlwind C7841**

**WhisperRoom Inc. SL3712**  
*Intro: New sound rooms with wide access doors.*

**White Sands Engineering/TVC N3536**

**Will-Burt Co. C7141**  
*Intro: D-TEC II New, reAC current and object detector with enhanced features. Also: Pneumatic telescoping masts and accessories*

**WinRadio Software Inc. N4211**  
*On Display: wintv*

**Winsted Corp. SU7455**  
*Intro: Pro Series II vertical racks feature independent lift-off side panels, welded frames, NEMA conduit knock-outs, adjustable front & back tapped rack rails, etc.; Freeform custom console features countertop components for easier access to cable connections, ergonomic display mounts, etc.; Arize custom console solves limited workspace issues and features internal convection-based cooling, retractable CPU carriage, Corian solid work surface, and Panduit cable conduits; Reveal display wall system moves forward for quick access through the back and features lower doors for storage, black powder coat finish, welded tubular steel sub-frame. Also: Rackmount consoles, digital desks, multimedia furniture, media storage racks*

**WireCAD C8231**

**Wired SL910**

**WireReady NSI N700**  
*Intro: CallTaker Automated School Closing System, a fully-automated Windows-based storm closing system that answers phones, generates reports, and updates Web sites & SQL servers; ControlReady/XP Automation and 8-track Live-Assist WAV-based recording storage & playback system works with the new line of Broadcast Tools "SS" switcher/controllers and features aut-ofills, autoreconciles, triple overlaps, voice tracks and a new live-assist screen with*

*instant replay and audition channels; WebReady automated Web publishing system reads traffic & program logs and manages real-time updates to Web site to coincide with over-the-air broadcasts.*

**Wireready N700**

**Wireworks Corp. C4541**

**Wohler Technologies Inc. C6221**  
*Intro: The PenPal-hd handheld HD-SDI video & audio test signal generator from Panoramadt, the video division of Wohler Technologies, has a range of 32 video test patterns in 18 HD standards, each of which can be combined with different audio tone settings. The PenPal-hd can be connected to any type of video equipment or patch bay via the female BNC connector using the applicable BNC cable. Operation of the video patterns has been grouped making it easier and quicker to access the desired pattern and functionality is controlled by buttons on the cylinder. The PenPal-hd can be powered using the optional 3-V Mains power adapter. Its true portability lies in powering the unit from a 3-V lithium battery—DL/CR123. 3-V lithium-ion battery type CR-2/DL 123 (a very common consumer camera battery); Tandberg/ Wohler Monitoring IRD accepts standard QPSK or DVB-ASI inputs and provides confidence monitoring of the A/V signals, while decoding them for retransmission in a headend facility; Multiformat SD/HD-SDI level meters feature video display auto sensing SDI inputs allowing the meters to display all embedded audio channels on high-resolution bargraphs. The VLM versions also provide a video display, for added confidence in the SDI input signal. The VLM 1RU model features a 1" video display, and the 2RU model features a 4" video display. As an option, the 16 channels of de-embedded audio signals can be made available on balanced or unbalanced AES outputs; RM 2440 SDI adds SDI inputs to the popular RM2440 video confidence monitor. Each of the 4 LCD video displays now features an SDI input and a composite video input selectable on a front panel A/B switch. The AIM-1 audio indication module is a useful option to show the presence or loss of audio in the SDI input signal. This module can be used with the RM and MON series confidence video monitors; VAMP2-S8MDA offers premium-quality 8-channel analog, AES/EBU, HD-SDI/SD-SDI digital multichannel audio monitoring and conversion with professional level metering. The VAMP2-*

*S8MDA features eight 26-segment high-resolution tri-color LED level meters showing simultaneous VU & PPM for superior level metering. Any of the 8 channels may be selected independently and sent to the 2-channel speaker system, headphone output, and phase indicator. The VAMP2-S8MDA is also a useful tool for converting and de-embedding audio from HD-SDI. The VAMP2-S8MDA also comes with a gooseneck-mounted VPODTM LCD screen (5.8") and offers confidence video monitoring from the two composite analog video sources and two HD-SDI/SD-SDI digital video sources. Also included is a composite video monitor output from the selected HD-SDI/SD-SDI source for use with larger, external video monitors. Also: HD monitors, AMP2-E8MDA, Dolby Digital AC-3 & Dolby E audio monitors, Digital and HD level meters, Audio & video LCD monitors, LCD monitors, MON2-3, RM 2440, RM 3270W*  
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**Wolf Coach Inc. C4845**

**wondertouch SL453**  
*Intro: wondertouch Emitters for Apple Motion features a collection of the extensive particleIllusion emitter library converted exclusively to the Motion format; particleIllusion 2.0 SE for Mac OS X (particleIllusion SE) is a standalone, affordable, introductory version of the company's sprite-based particle effects software application; particleIllusion 3.0 is the advanced, standalone version of the company's 2D, sprite-based particle effects software application for the Mac OS X; The beta version of the particleIllusion plug-in for Adobe After Effects is scheduled to be demonstrated. Also: particleIllusion 3.0 for Windows*

**World Video Group C12138**

**WSI Corp. C9211**

**WYNIT Inc. SL4236**

**Wysong Enterprises Inc. C1663**

**XenData SL4259F**

**Xicom Technology C8148**

**Xtore SL911**

**Xytech Systems Corp. C2260**  
*Intro: New features for Enterprise software include Transmission Module, Web Time Card, Media Logging & MetaVault Quality Control.*

**Yamaha Corp. of America N2531**

**YEM Inc. SU8658**

**Y-Vamp Corp. SU11811**

**Z Technology C3139**  
*Intro: R507DTV is an economical RF signal coverage measurement system for analog or DTV signals for use with PC and records field strength with GPS location information for mapping in Microsoft MapPoint; DTV1010 is a full-featured DTV measurement receiver providing SMPTE310M, A/V & VHF ATSC outputs; New WinDM-Pro software provides Constellation, Spectrum, Eye Pattern and Echo Profile displays and records clear text data to Windows PC; DM101 is a compact ATSC demodulator for OEM applications providing a SMPTE310M transport stream output; FSMeterMate software is a Windows application for the control & recording of analog television & radio signal data. Also: R-507 programmable field strength meter, DSS5800 RF coverage measurement/mapping system, DM1010 measurement 8-VSB demodulator*

**Zandar Technologies SU8367**

**Zaxcom N4215**  
*Intro: TRX900 wireless microphone transceiver with built-in IFB includes IFB receiver, digital modulation wireless transmitter, RF remote control & 1.5-hour internal recording time; Deva Mix-12, a mixing panel that controls the internal mixing features of the Deva IV & V hard disk recorders contains a qwerty keyboard for entering meta-data; Deva V Hard Disk Recorder is a 10-track, 192 kHz hard disk based audio recorder for TV & film.*

**Zaxel Systems Inc. SL964**  
*Intro: zAXiC 2RU video server/DDR multiple concurrent SAN I/O; Zaxtar-H features 4.8 TB of internal storage in 4RU for 4:2:2 and 4:4:4; ZanTar 2K & HD server, also available as 2K 4:4:4 SAN I/O 6-channel digital audio HD & 4-channel on SD. Zaxtar 4K Digital Cinema & Projection Presentation Reference Server.*

**Zaxwerks SL1022**

**Zero Manufacturing Inc. C2663**  
*Intro: Aluminum & plastic protective solutions for equipment, field instruments or sensitive electronics.*

**Zinwell Digitalmedia Inc. SL4252**

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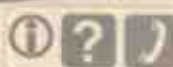
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# TV TECH BUSINESS

## Business News New Chyron Division Targets Digital Signage Boom in flat panels leads to formation of ChyTV

by Mary C. Gruszka

NEW YORK

**C**hyron Corp., known for its high-end graphics for broadcast and post production, is leveraging expertise toward a more mass market—the burgeoning field of digital signage.

"We have formed a new business group to address that opportunity and ChyTV is our first product of a series of products for digital signage," said Michael Wellesley-Wesley, CEO and president, Chyron Corp.

Digital signage is much like traditional signage, said John Remmler, vice president of ChyTV Group, "but here the signs are electronic with dynamic content that's being displayed. It's used for delivering time-sensitive messages instantly and information can be directed to a particular location." The growth in digital signage has been spurred by the availability of a wide variety of displays with sizes growing and prices falling. "We're in the midst of a revolution—that being caused by flat-panel technologies," said Frank Kobylinski, director of engineering. "We're seeing screens 10 feet wide and eight feet high. The future for digital signage is quite spectacular."

Signage can deliver motion and effects, incorporating messages in entertainment programming, leading ChyTV to originally develop its system for delivering content to waiting-room TVs.

"But in the last couple of months, people have come to us for a myriad of applications,"

said Tedd Jacoby, director of sales and marketing. "ChyTV is flexible [enough] to mold to various applications."

### TARGET MARKETS

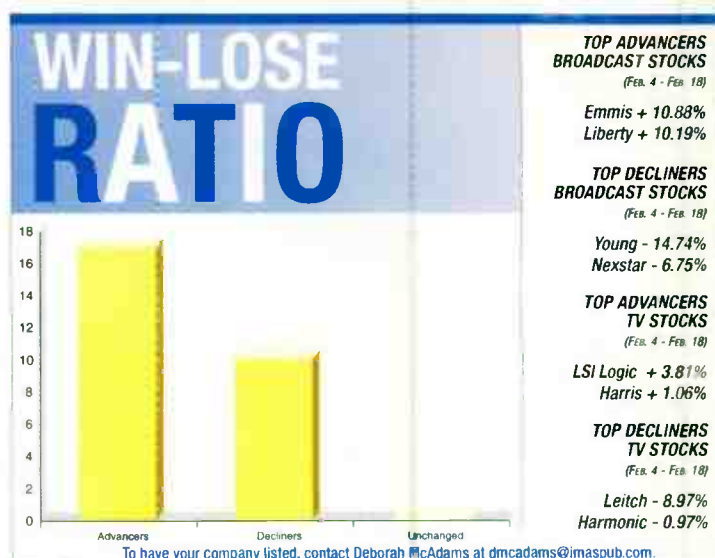
Some of these applications include corporate facilities and business offices, colleges and universities, hospitals and medical offices, hotels, convention centers, sports arenas, transportation centers, retail, amusement and entertainment, government and security. ChyTV could also find a home in broadcast facilities for lobby displays, video logo generation, and in place of under-monitor displays.

The current version of ChyTV is a standalone black box 7.5-by-11.5-by-1.7 inches, with RCA connectors for video and stereo audio-ins and -outs, a slot for a compact flash card and a USB connector. Also included is ChyTV Tools application software.

Shipping since the beginning of the year, the unit retails for \$1,395. An Ethernet model will be available by NAB2005, and a wireless model in the near future. ChyTV is available through professional audio and video dealers, as well as systems integrators, Remmler said.

Demonstrating its support for the ChyTV product line, Chyron launched services for content creation and management, network server hosting and custom user applications. "Some people don't have time to create content, so we'll sell the software content," said Vinny Biondolillo, director of sales support.

Chyron will also offer a software developer's kit in the second quarter 2005 for third-party custom application developers. ■



### TV Tech STOCKS as of Feb. 18

Company Name	52-Week Range	Feb. 4	Feb. 18	% Change
Avid	38.43 - 67.55	64.75	65.43	1.05%
Ciprico	3.15 - 7.21	4.03	4.05	0.50%
Harmonic	4.86 - 13.75	11.39	11.28	-0.97%
Harris	42.37 - 69.15	64.24	64.92	1.06%
Leitch	6.11 - 11.2	7.8	7.1	-8.97%
LSI Logic	4.01 - 10.91	6.03	6.26	3.81%
Pinnacle	3.25 - 9.91	4.27	4.28	0.23%
Sci. Atlanta	24.61 - 36.50	31.06	31.23	0.55%
SeaChange	11.22 - 20.10	13.92	13.9	-0.14%
Tektronix	26.26 - 35.00	28.79	28.52	-0.94%

### Broadcast STOCKS as of Feb. 18

Company Name	52-Week Range	Feb. 4	Feb. 18	% Change
Acme	5.50 - 10.10	5.92	5.95	0.51%
Belo	18.00 - 29.90	23.2	24.27	4.61%
Emmis	17.08 - 26.71	17.18	19.05	10.88%
Entravision	6.85 - 10.77	8	8.41	5.13%
Fisher	45.02 - 52.00	50	50.52	1.04%
Gray	11.20 - 16.19	14.98	15.14	1.07%
Hearst Argyle	22.57 - 27.93	25.49	25.79	1.18%
Nexstar	6.54 - 13.60	8.59	8.01	-6.75%
Lin TV	17.41 - 24.30	18.5	17.92	-3.14%
Paxson	0.90 - 4.08	1.23	1.21	-1.63%
Sinclair	6.12 - 14.20	8.15	7.8	-4.29%
Liberty	38.50 - 51.79	39.45	43.47	10.19%
Univision	25.80 - 37.30	26.27	27.54	4.83%
Young	8.75 - 21.01	9.97	8.5	-14.74%
Tribune	38.74 - 52.63	40.6	41.54	2.32%
Meredith	46.91 - 55.94	47.51	47.4	-0.23%
EW Scripps	44.73 - 54.65	46.64	46.69	0.11%

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