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Underwritten by: Bloomfield & Associates

Our purpose, mission statement, this current edition, archived editions and other relative information is posted on our website. As of this edition, we've had over 24,000 different visitors since we started the website on July 1st, 2000.

Thanks to our regulars and welcome to the new folks.

This is **YOUR** forum!

Editor's comments

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send an e-mail to: webmaster@tech-notes.TV with your issue. Thanks.

This edition's featured television station - keeping history alive!

KTLA Los Angeles celebrated their 55TH ANNIVERSARY with Stan Chambers

By: Larry Bloomfield

In September 1942 W6XYZ, an experimental television station, began broadcasting from Paramount Studios in Los Angeles. It was the vision of Klaus Landsberg^{*}, (then 22, and only recently having escaped from Nazi Germany) who made it successful. In October 1942, W6XYZ (five years later to carry its current call letters, KTLA) did the first telecast inside a motion picture studio (Paramount) "This Gun for Hire."

As part of its experimental program testing, in 1946, W6XYZ did the first telecast of wrestling, boxing and most other sports and in January 1, 1947 they did the very first telecast of the Tournament of Roses Parade with iconoscope cameras and were the first Los Angeles station to do it in color in 1955. And now they do it in high definition (since 1999). Then things began to change. The experimental call letters gave way to commercial ones: KTLA. On January 22, 1947 at 8:30 PM Bob Hope announces the first broadcast of KTLA - the first commercial TV station west of the Mississippi. Hope mistakenly calls the station "KTL."

This was beginning of a rich tradition of setting milestones in the broadcast industry. We take live coverage of news for granted, but when did it all begin? On February 27, 1947 KTLA broadcasted the world's first on-the-spot news coverage from a Pico Boulevard electroplating plant just after it had exploded. The list goes on from there.

KTLA's John Silva invented the very first Telecopter and it went into service in May of 1958. It was the first flying remote unit by any broadcaster and had no equal for nearly ten years.

To see a timeline of firsts, visit : <http://ktla.trb.com/about/station/ktla-about-history1.html#story>

Commemorating 55 years of commercial service, on January 22 of this year (2002), Stan Chambers, one of the nicest guys you'll ever have the pleasure of working with, was guest on the KTLA morning show. That segment is available on the web at: <http://ktla.trb.com/about/station/> Stan shares his special memories of KTLA, as the first television station west of the Mississippi celebrates its 55th anniversary. He was there when it all began and is still a regular news reporter. I'm proud to say that I have worked with him.

^{*} To see our biography of Klaus Landsberg on Tech-Notes website, [click here](#).



May 22, 1952

“Operation Big Shot.” Klaus Landsberg and a team at KTLA present the first live telecast of an atomic bomb test. The broadcast, fed to all three networks, was also notable in that it was fed via a 140 mile microwave link - the longest ever attempted at that time.



January 22, 2002

Commemorating 55 years of commercial service, Stan Chambers, one of the nicest guys you'll ever have the pleasure of working with, was guest on the KTLA morning show. Stan shared his special memories of KTLA, as the first television station west of the Mississippi as they celebrated its 55th anniversary as a commercial TV station. Stan was there when it all began and is still a regular news reporter. I'm proud to say that I've had the pleasure of working with him. That segment is available on the web at: <http://ktla.trb.com/about/station/> it's a must see.

Please submit your suggestions for featured TV stations to webmaster@Tech-Notes.TV.

News



Subject: Ribbons but no Bows from AES
By: Larry Bloomfield

I've known AES's president Wes Dooley for many years. Even bought some of the equipment I put in KBET in Canyon Country, CA from him back when I built it. I can say that he is probably one of the most honest and knowledgeable businessmen in our industry that I know when it comes to audio. I do have to say that their company logo does look a bit familiar. (Replace the AE with an RC)

At the recent Audio Engineering Society convention in Los Angeles, Dooley's company, Audio Engineering Associates (AEA) introduced an all new AEA R84 Large Ribbon Geometry (LRG) microphone. Representing a significant breakthrough in large ribbon microphone technology, the R84 is a versatile mic that utilizes a ribbon element 100 percent larger than other manufacturers' ribbon elements to produce exceptional headroom and an intimate performance with smooth highs and extended lows.

In television, we don't seem to put all that much emphasis on audio. Having been an audio mixer for CBS for a number of years, I'm glad to see that someone is still addressing the quality end of this part of the business.

The R84 is a versatile large ribbon microphone that is suitable for a wide range of instruments, including brass, strings, percussion, electric guitar and bass. This little jewel uses a 0.00007 inch; ultra-thin, low-tension ribbon element that ensures a quick response for whatever application it may be pressed into service for. Quite typical of the better known ribbon mics, the R84 is capable of handling better than 165 dB SPL at higher frequencies. Dooley says that when it is used on vocals or instruments, the R84 offers a performance that is intimate, warm and detailed, yet never harsh.

As an audio mixer of some vintage, Dooley is absolutely correct when he says: "Nothing else sounds like a large ribbon on strings, horns and voices. Our acclaimed RCA 44 recreations and our all new R84 offer a truly opulent sound." AEA has long been a valuable resource for ribbon microphone aficionados seeking repair or replacement of their treasured classics.

Observing the ever-dwindling supply of the classic RCA 44 ribbon mics on the open market, Dooley embarked on a quest lasting several years for the know-how and expertise necessary to recreate this much sought microphone. The R44, manufactured by hand at AEA's facility in California, faithfully reproduces the 1936 original's every strength. "Our ribbon microphones evolved from our creation of accurate replacement parts for the classic RCA studio ribbons," explains Dooley. "In the process we brought a legend back to life."

For more information visit AEA's website at: <http://www.wesdooley.com/>



Subject: **The DirecTV - Dish merger**
By: Fred Lawrence

Nearly everyone who is anyone in the broadcast business had something to say soon after the Federal Communications Commission (FCC) rejected the proposed merger between EchoStar and DirecTV recently.



Edward Fritts, president of the National Association of Broadcasters, applauded the FCC decision. "From the outset, NAB's primary goal has been to extend satellite carriage of every local television station in all 210 markets in America as quickly as possible. We agree with the commission's finding that a competitive satellite marketplace will help reach that goal far faster than through a single monopoly provider," he said.



However, Marc Rhoads, vice president of the United States Internet Council, expressed disappointment that the FCC didn't work harder toward a compromise on the merger. "One of our key goals is to help make broadband services affordable and available to the greatest number of Americans," he said. The decision "is a setback to that goal. We hope that a compromise can be reached whereby the FCC will not let the opportunities represented by the EchoStar/DirecTV merger slip away from the public."

SALOMON SMITH BARNEY

As for Wall Street, Armand Musey of Salomon Smith Barney said the tone of the FCC rejection announcement was "overwhelmingly negative, which we believe means the deal is effectively

dead." Musey added that it's certain EchoStar will "exhaust all possible means before throwing in the towel."

Musey also said EchoStar will likely challenge its termination agreement with DirecTV's parent Hughes Electronics. "Ultimately, we believe EchoStar will be forced to settle with Hughes and purchase PanAmSat, leaving, we believe, Hughes with a more attractive capital structure," he said. "However, challenge of the termination agreement would hold-up GM's ability to pursue alternative transactions and could force a concession."

It is interesting to note, with EchoStar Communications' bid to acquire rival and DirecTV owner Hughes Electronics widely considered failed after the FCC's rejection of the merger, industry observers started discussing likely alternatives for DirecTV. Most are now expecting Rupert Murdoch's News Corp. -- with support from Liberty Media and potentially Microsoft Corp. -- to make another run at DirecTV after Jan. 21, which in the EchoStar-DirecTV merger agreement marks the day when each merger party can abandon the deal. DirecTV CEO Eddy Hartenstein had said Wednesday that he would continue to push for the EchoStar transaction but that the two parties likely would give up if they don't secure regulatory approval by mid-January (HR 10/9). He added that DirecTV would then "consider all options." Some observers suggested that DirecTV could decide to go it alone if the EchoStar deal fails, especially if EchoStar makes good on promises of a \$600 million breakup fee and acquisition of the cash-eating PanAmSat business.

But it isn't over until it's over, to quote Yogi Berra. According to Andy Pasztor, Staff Reporter of THE WALL STREET JOURNAL, EchoStar Communications Corp. and Hughes Electronics Corp. are expected to propose changes to their embattled merger plan by offering concessions covering satellite-broadcast spectrum and distribution arrangements, industry officials said.

The revisions, slated to be submitted to the Justice Department, amount to a last-ditch effort by the companies to save the merger effort.

Details of the revision are closely guarded. However, people familiar with the matter said the concessions effectively would provide an opportunity for new competitors to enter the U.S. satellite-television business, which the two companies now dominate.

In addition to potentially opening up broadcasting spectrum to prospective competition, the companies also are expected to spell out ways that new entrants could resell or help distribute some of their programming down the road. The plans aren't expected to specifically identify prospective competitors. But EchoStar Chairman Charlie Ergen said earlier this month that any changes would "have to include new entrants" and provide a road map for how the industry could be opened up to "a number of companies in a number of different ways."

The commission's order emphasized, in the starkest terms yet, how much of an uphill fight the companies face. The commission, among other things, determined that allowing the companies

to merge would be likely to produce a "less effective" competitor to cable-TV systems and "totally eliminate what appears to be a very healthy level" of competition between the two firms. The commission also said it was concerned that the companies wouldn't "carry through on their promises" to provide consumer benefits. And the members of the commission concluded that "the barrier to entry for any entity seeking to compete" in the satellite-TV market "would be enormous."

The companies are hoping that if the discussions with Justice Department officials go well, they can persuade the FCC to reconsider its position.



Subject: **US to Compete with Al-Jazeera**
From: Broadcasting & Cable's Paige Albiniak

The U.S. government, through the Broadcasting Board of Governors, is developing plans to launch a radio station in Iran, as well as an Arabic-language television network that would provide an alternative voice to Al Jazeera, the Arabic world's only 24-hour news network.



This week, members of the BBG were in Hollywood talking with producers and executives from studios and agencies about backing the idea.

Already, the U.S. sponsors an Arab-language pop-music and news station in the Middle East, known as Radio Sawa. According to the BBG, one-third of listeners in the Middle East between ages 17 and 28 prefer Radio Sawa's news. Last March, Radio Sawa replaced the Voice of America's public-affairs service, playing popular American music, as well as news.

The BBG is in charge of all U.S.-backed international broadcasting programs, including VOA, Radio Free Europe, Radio Free Asia and Radio Marti and TV Marti in Cuba.

Subject: **Canadian Digital TV Biz Heats Up**

Decima

The number of digital TV subscribers in Canada increased by 5 percent to more than 3.1 million during the second quarter, according to Ottawa-based Decima Publishing and its "Digital Domain" publication.

As a whole, digital TV providers in Canada added fewer subscribers between February/March and May/June compared to the previous three-month period, Decima said.

Canada's two satellite TV providers continued to dominate the digital environment during the second quarter, with Bell ExpressVu and Star Choice taking 62 percent of the market share. The new number, however, is down from 63 percent recorded in the first quarter. Cable grew its market share to 36 percent.

Decima Publishing said the percentages will be 60 percent for satellite TV and 38 percent for cable at the end of 2002, and 58 percent satellite TV and 40 percent cable at the end of 2003.

"The Canadian broadcast distribution industry is now firmly in transition from analog to digital and the competition is intense," Decima said in its report. More on the company can be found at: <http://www.decima.ca> .



Subject: **CEA Not Happy Over FCC Tuner Mandate**

By Larry Bloomfield

The Consumer Electronics Association doesn't like the FCC's recent rulings on digital tuners being put in TV sets and has taken legal action to prevent it from happening. The new rules would gradually require inclusion of digital tuners in nearly all new TV sets.

The CEA says that the mandate is both costly and ineffective while the Federal Communications Commission was debating the issue earlier this year. After the rules were adopted in August, the association promised a court battle, and it took the first step Oct. 11 by filing suit in the U.S. Court of Appeals for the D.C. Circuit.

The new rules say, basically, that all new TV sets 13 inches and larger must include off-air digital-TV tuners by July 2007. The phase-in begins in July 2004, when 50 percent of all new

sets 36 inches and larger must have digital tuners.

FCC officials said the tuner mandate was necessary to advance the transition to digital broadcasting.

In the two-page court filing, the CEA reiterated its view that the tuner mandate was pointless because the vast majority of consumers rely on cable and satellite and do not need -- and will never need -- off-air digital tuners, which CEA expects will initially add at least \$200 to the cost of TV sets.

The trade group's chief legal argument is that the commission incorrectly asserted jurisdiction to impose a tuner mandate under the All Channel Receiver Act of 1962.

FCC officials said the law accorded unambiguous authority to require digital TV tuners.



Subject: **Digital Television Transition Scoreboard**
From: NAB

The National Association of Broadcasters says the total number of television stations have Over-the-Air DTV Signals is now 518, bringing the total number of markets served to 153 markets; that include 91.90% of U.S. TV households. In addition, 46% of U.S. TV households are in markets where broadcasters are delivering four or more DTV signals.

Information about AB can be found on its Web site at www.nab.org.



Back Row (left to right): [Ginsburg](#), [Souter](#), [Thomas](#), [Breyer](#)
Front Row (left to right): [Scalia](#), [Stevens](#), [Rehnquist](#), [O'Connor](#), [Kennedy](#)

Subject: **US Supreme Court to take up Copyright issues.**

By: Fred Lawrence

The U.S. Supreme Court will take up a case that could undo one of the entertainment industry's biggest legislative prizes. The high court is scheduled to hear arguments over a 1998 law that extended for 20 years the time copyright holders can make money off their products. The Sonny Bono Copyright Term Extension Act, named for the now dead performer-turned-lawmaker, won congressional passage after years of wrangling on the Hill. While the controversial act was designed to "harmonize" the copyright terms of the United States with the European Union, it has come under fire for locking up works in the public domain that range from the early Mickey Mouse cartoons to the songs of Cole Porter.

Under the Bono Act, material whose copyright formerly would have lapsed 50 years after its creator's death became protected for an additional 20 years. Copyrights held by corporations, movies, television shows and the like were extended to 95 years from 75.

Opponents of the law argue that Congress overstepped its constitutional authority "to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

I





Subject: **Television isn't the only HD on the block**

From: CGC Communicator

The FCC has approved the IBOC/IBAC Digital Radio Technology

In a First Report & Order, the FCC has approved "in-band/ on-channel" (IBOC) technology to bring the alleged benefits of digital radio to AM & FM listeners. The techniques developed by iBiquity Digital Corporation have been specifically approved for immediate use on an interim basis pending the development of final rules. However, iBiquity's AM system may only be used during daytime hours, at least for now.

The iBiquity techniques are more properly called in-band/adjacent-channel (IBAC) since the digital power is transmitted primarily in the first adjacent channel sidebands. However, the term "IBOC" is fully acceptable if it is redefined as "in-band/off-channel" since off-channel is where the digital power lies.

Many claims have been made, such as: Now AM can sound as good as FM. This all remains to be seen.

For more information, visit: <http://www.ibiquity.com/>



Subject: **Just One More Attempt to Curb Digital Piracy**

By Fred Lawrence in the absence of Jim Mendrala

The possibilities are there or is this another attempt to stimulate Hollywood to convert to digital cinema? Robert Schumann and a group of former Divx engineers are hoping for a second chance. Shortly after Divix folded in 1999, Schumann co-founded Cinea, a

Herndon, VA based company that is close to unveiling a beta for its Cosmos digital cinema security system. Cosmos, according to Schumann, will help movie distributors keep track of how their products are used while protecting them from piracy.

For more details, go to: <http://zdnet.com.com/2100-1106-961484.html>



Syncom - world's first geosynchronous satellite

Subject: **Satellites: Possible Target for Terrorists and Hackers**

From a story by Becky Worley

A new report from the General Accounting Office cites commercial satellites as possible targets for terrorism and hacking.

The report, presented to a congressional subcommittee, cites computer network intrusion, transmission jamming, and the use of unencrypted data for satellite control and communication as vulnerabilities. The threat of physical attack on a commercial satellite facility also is a possibility.

Now the GAO is suggesting standards and regulations to keep commercial satellites safe.

Commercial satellites are more than tools for entertainment and newsgathering. But the workload of satellites is diverse and growing.

John Pike, director of GlobalSecurity.org says satellites are a serious part of our national well being.

"Cable TV, broadcast TV, inventory control, cell phones, pagers. Just about every facet of the modern information society at some time or another is being transmitted by satellite," Pike says. "They are essential to the modern economy."

And these satellites don't service just the private sector. During Operation Desert Storm, commercial satellites accounted for 45 percent of military communication traffic. More recently, they have helped transmit surveillance data in the war against terror.

Pike says, "Drones used satellites a lot for those unmanned air vehicles flying over Afghanistan. They had to use commercial satellites to get that imagery back to the United States."

Return to Government Control?

The GAO report explains why commercial satellite security needs to be reviewed and upgraded. One of the biggest issues is that control of satellites is performed through unencrypted channels.

Called TT&C (Telemetry Tracking and Control), these commands can be spoofed by an attacker uplinking commands.

The GAO report suggests commercial satellite companies scramble their control signals or spread them across different spectrums to make uplinking a spoofed instruction set more difficult.

The overall recommendation from the GAO is to put the control of commercial satellites under the regulatory control of the U.S. government.

TOSHIBA & **NEC** vs. The rest

Subject: **Video Record/Playback Format Wars -- Déjà Vu**
By Larry Bloomfield

Reminiscent of the early days of video tape, it appears there will be multiple standards in the future world of the Digital Versatile Disk or DVD, for short. NEC Corp. and Toshiba Corp. recently and jointly proposed to the DVD Forum a format that uses a 405-nanometer blue-violet laser, but is based on a disk with a 0.6-mm substrate, the same as in today's DVDs. The proposal stands in sharp opposition to the Blu-ray Disc format being promulgated by nine DVD Forum member companies.

Since the Blu-ray announcement in February, Toshiba, the chair company of the DVD Forum, has insisted that the next-generation disk system should be discussed within the forum. But the Blu-ray Disc founders have not formally proposed their format to the DVD Forum, said a spokesman for a Sony Corp., a Blu-ray backer. Now Toshiba is working with NEC to establish a DVD-friendly format as the next-generation choice.

It is interesting to note that neither of these formats consider any of the high capacity formats that have been under development here in the United States. A New York based company, 3CD, has proposed a DVD that uses a color based approach to record as much as 100 Gbts, or so we have been told. Inphase Technologies, a Lucent spin-off is working on a holographic type disk that starts at 100 Gbts and has promise for possible more. Perhaps our off shore electronics giants are a bit premature.

For more on this story, visit: <http://www.eetimes.com/story/OEG20020829S0062>

Subject: **Video On Demand or VOD**

From a story by Susan Karlin in the New York Times

Susan says that Video on Demand is ready, but the Market isn't.

By pushing a few buttons on the remote control, a viewer would be able to order a movie and then sit back and watch as it unfolded immediately on the screen, pausing, rewinding or fast-forwarding at will. Movie-watching would be on the schedule set by the viewer, not the broadcaster or cable company. No need even to get up from the couch to insert a tape or DVD.

The service is still very much in its infancy, and economic factors are largely to blame. Viewers want and demand better program, like current movie features, but copyright and piracy have been issues with Hollywood that seems to be holding up the whole process. For more on this story, visit: <http://www.nytimes.com/2002/10/10/technology/10howw.html>



Subject: **More 8VSB Seminars**

From: Gary Sgrignoli, Staff Consulting Engineer -- Zenith Electronics Corporation

Well, here we are at World Series time since Major League baseball players wisely chose not to strike, and it's once again time for more VSB seminars !

Here's another update on our continuing VSB Seminar activities as the DTV transition continues and the FCC's on-air commercial broadcaster date (May 2002) has passed. At the moment, there are at least 509 DTV stations on the air covering 147 markets and about 91% of the TV households (45% of households have 4 or more DTV signals available to them). The FCC has mandated all TV sets to have DTV tuners included in them (on a phased-in schedule) and the

fall season has more HD programming than ever and more models of DTV sets with digital tuners have appeared on the market (even before the mandate kicks in). The transition is certainly moving ahead !

As you may recall, Zenith Electronics Corporation has been offering all-day digital VSB transmission seminars (including an integrated hardware demo using 2400+ lbs of commercial & consumer equipment) for the last several years. We concluded a seminar in Minneapolis (9/12/02), and are planning another seminar in the next month. Some of the other cities across this country that have hosted such seminars in the past have been Chicago, Seattle, San Jose, Oakland, Dallas, Baltimore, Salt Lake City, Champaign (Illinois), Washington DC, Milwaukee, Los Angeles, Columbia, Reno, Des Moines, Denver, Portland, Albuquerque, Atlanta, and Orlando.

The next broadcaster VSB seminar is scheduled for Tuesday October 29, 2002 in Philadelphia from 8:30 am to 5:30 pm, hosted by the local SMPTE and SBE groups in Philadelphia and WHYI in conjunction with LARCAN, Novus Automation, Motorola, Rhode & Schwartz, Triveni, and Z-Technology. As always, the modest registration fees for these seminars include an updated 1" thick seminar notebook for attendees to take home.

We often get local broadcasters, SBE chapters, SMPTE sections, and other broadcast groups/societies to co-host the all-day broadcast seminars, along with commercial sponsors (consultants, equipment manufacturers, etc.) covering lunch & break refreshments. Very modest attendance fees (often between \$30 - \$70 per person, depending on the travel/shipping logistics for each city) help the hosts to cover the travel and shipping expenses while hopefully attracting the largest number of broadcast engineers. We've been getting between 60 - 90 broadcast-related people in attendance in recent seminars. We hope to hold seminars in various cities across the country every several weeks, with possibilities in Houston, Lincoln NE, St. Louis, Boston, Indianapolis, Greenville, and Salt Lake City (to name a few).

Tech-Notes has posted our flyer for the Philadelphia seminar for your reference, as well as some pictures of our demo equipment setup on the website under **Educational Opportunities**. Contact & general information for the Philadelphia seminar is included on this flyer and on the website.

In the last couple of years, we have expanded the seminar significantly (more material, more equipment, thicker seminar notes). If you know of anyone wanting to attend such a seminar (e.g. any of your local station engineers or clients in the area), or know of any broadcast-related groups that would want to co-host or co-sponsor any VSB seminars in their cities, please let me know or contact Zenith's ATSC Promotion Manager Mike Gianneschi (847-941-8043, mike.gianneschi@zenith.com). We are currently planning our winter and spring schedule, and will keep you posted. You can also check on these seminars on our Zenith website:

<http://www.zenith.com/digitalbroadcast/tradeshows.html>)

We believe this educational seminar is well worth the time and money to attend. As the DTV

transition continues, we hope to see continued great progress throughout the rest of 2002.



Subject: **Panasonic Signs POD Agreement with CableLabs**

From a story by Matt Stump of Multichannel News with our own comments

Cable Television Laboratories Inc. announced that Panasonic Consumer Electronics is the first major television manufacturer to sign a POD-Host Interface License Agreement (PHILA) with the cable industry.

The deal means Panasonic can build digital televisions for consumers to directly receive high-definition-TV and digital-cable programming, without the need for a set-top box.

The POD-host interface provides for a standardized and secure communications link between an individually addressable point-of-deployment security module and a digital-TV set. Encryption-protected programming is authorized by inserting a 'card' into a POD slot on a set-top or TV.

The POD is part of CableLabs' OpenCable project. Companies that sign the PHILA receive a license to deploy proprietary technology contained in the POD-host interface.

This is all interesting news, considering the number of naysayers who insist that OpenCable is going nowhere. While Mr. Shapiro and friends at CEA continue the mantra call for a "national plug-and-play digital cable standard", some companies realize that we already have one -- companies that would rather make money building cable-ready DTV sets and digital cable STBs than sit around pretending that we don't yet have a standard.



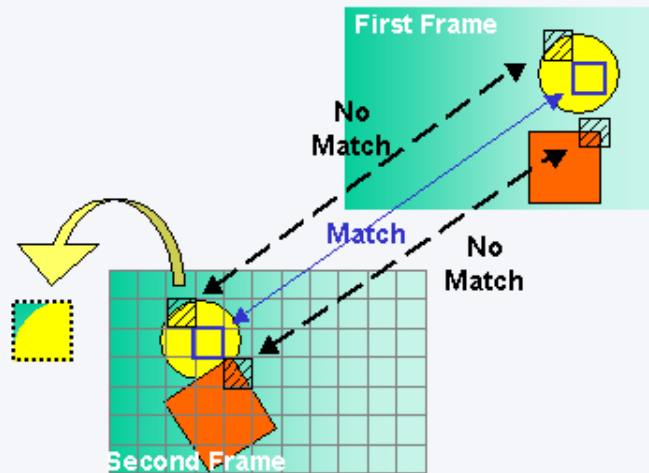
Subject: **Pulsent Object Compression**
From: A news report

Pulsent has developed a radical new approach to the compression of broadcast quality video. Instead of dividing the image into arbitrary blocks like MPEG, Pulsent segments the picture into objects based on the visual specifics of the image (see Figure). After the objects are extracted from the image, their motion is efficiently and accurately modeled using Pulsent's patent-pending predictive techniques.

Because Pulsent tracks each object as a single entity, movement from frame to frame can be predicted more accurately than with other methods. Efficient modeling of common movement patterns such as size changes, object rotation, occlusions, blurring and sharpening, lighting changes and fades results in highly effective modeling of the next frame at very low bit cost. As a result, modeled objects match previous frame objects more often than do block-based approaches. With currently available compression technology, use of arbitrary blocks to model changes from frame to frame makes it difficult to track the movement of a large proportion of blocks that lie on object boundaries; this is particularly true of the most difficult-to-encode content, which tends to have a lot of object-edges engaged in large amount of complex motion. In block-based schemes, this leads to gross errors that are expensive to correct with what is called "residue coding", leading to higher bandwidth requirements, a breakdown in picture quality, or both. In object encoding, on the other hand, such content is handled naturally.

Block Based Approach

- MPEG - 1, 2, 4
- H.26X
- Microsoft
- Real



Use of arbitrary blocks makes it impossible to track:

- Blocks that lie on top of boundaries of objects
- Common movements such as size changes, rotation, occlusions, lighting changes and fades

... Resulting in poor modeling of the next frame

Block-Based Compression

Most lossy compression techniques used in today's commercial products are block-based. Moving pictures are broken up into a series of still pictures or frames. For example, a 35 mm film movie camera typically shoots movies at 24 frames per second. When transforming film into digital video, each frame is converted to digital data and then compressed to reduce its size. With compression technologies such as MPEG, each frame is broken down into many small 16 X 16 pixel blocks used for processing (see Figure). Mathematical algorithms then try to find blocks from previous frames that match blocks in the current frame. The location of the matched block in the previous frame is sent, reducing the need to send exact data for each pixel in the block. In this manner, video information that has not changed is reused from the previous frames. Once all the blocks have been processed for possible matches, the remaining data (residue) needed to accurately represent the new frame is encoded in a lossy manner to a desired level of

The first block-based compression techniques were developed in the late 1970s and early 1980s. The MPEG (Moving Picture Experts Group) organization was formed in 1988 to standardize these concepts. MPEG-1 was released in 1993, achieving quality levels similar to VHS tape. During 1990, the MPEG committee recognized the need for a second, related standard for coding video for broadcast. Drafts of the MPEG-2 specification were completed in 1993 and approved in 1994. Since then, MPEG-2 has been commercialized in satellite TV, cable TV, and DVD applications. MPEG-4 is yet another video standard with compression techniques heavily based on MPEG-2. "MPEG-4" is generally taken to mean "MPEG-4 part 2"; there is a second variant (MPEG-2 part 10, also known as H.26L or H.264) which offers further improvements on MPEG-4 part 2. MPEG-4 part 10 (H.264) silicon codecs are expected to become available in 2004 and represent the anticipated state-of-the-art for block-based video encoding. MPEG-4 more efficiently compresses lower resolution video, implements improved error handling and has defined standards for combining multiple images in a single video stream. The original concepts of block-based video compression are now over 20 years old, having been fully explored by both industry and academia. Current block-based research suggests that this paradigm for compression has reached the point of diminishing returns.

Pulsent has engaged numerous recognized digital video experts to evaluate its compression technology. Their conclusions are consistent: Pulsent's breakthrough video compression technologies are scientifically sound.



(example only)

Subject: Safety Rules for ENG Trucks & Other TV News Vans

From a story that appeared in the Los Angeles time by Bob Pool

The nation's first safety rules for television news crews were approved this past week by California state officials, two years after an accident severely burned and paralyzed a Los Angeles TV reporter.

Regulations enacted by the California Occupational and Health Standards Board are designed to prevent TV crews from accidentally raising microwave antennas into overhead power lines at the scene of news events.

News vans will be required to have a "constant pressure" switch that will force broadcast

workers to stand where they can see the antenna as they press the mast's lift button.

The trucks also must be equipped with nighttime mast lights, warning signs and an audible alarm that sounds if the van is driven with the mast extended.

Five Los Angeles-area television unions pressed for the regulations after KABC-TV reporter Adrienne Alpert



was injured when her news van's antenna was raised into a 19,980-volt electric line along Santa Monica Boulevard in May 2000.

The new rules will take effect 30 days after final review by lawyers, officials said.

They also will mandate training for news crews and supervisors, something that may make "management more sensitive to the time pressures and dangers news crews face every day," said Gena Stinnett, a KABC-TV videotape editor and president of the local branch of the National Assn. of Broadcast Employees and Technicians.

About 1,000 microwave vans in California will be covered by the regulations.

"We want to do everything possible to prevent what happened to Adrienne from ever happening again," said Leslie Simon, a representative of the American Federation of Television and Radio Artists.



Subject: **H/DTV-related Engineering Emmy awards**

These H/DTV-related Engineering Emmy awards were given out by the National Academy of Television Arts & Sciences in Wednesday night:

- Panasonic for the Varicam
- Donald Bitzer, Gene Slottow, Robert Willson, and Fujitsu for plasma
- Philips and Thomson for 16:9
- Motorola and Thomson for digital set-top boxes

For more on this, go to: <http://www.emonline.com/news/web100302.html#natas>



Subject: **TeraLogic Unveils Generation9**

From a press release

TeraLogic, a developer of integrated circuits, platforms and software for digital TV, recently introduced the Generation9 "System-On-a-Chip" (SOC) architecture. Generation9 combines the functionality of multiple chips into a single chip, bringing together TeraLogic's TL8xx chipset, a CPU, Media DSP, copy protection, and other features. TeraLogic also said that With Generation9, consumer electronics companies will be able to accelerate support of worldwide DTV initiatives, including recent FCC mandates to integrate digital capabilities into future televisions.



Subject: FCC Watch

By Larry Bloomfield & Fred Lawrence

According to an article in Broadcasting & Cable, The FCC appears to be deadlocked on digital-cable carriage rights. It was only recently that the Commission was bent on a rulemaking that rejected any dual analog/digital carriage during the digital-TV transition period, but in what seems to be a bit of vacillation, they've "tentatively" come to the conclusion that TV stations are entitled to carriage of any free material they may generate and or broadcast. This would include all free channels, program guides and some other services they can fit into their 6-megahertz channel allocation.



Industry observers say commissioners Michael Capps and Kevin



Martin, who favor imposing full carriage rights now, are up against



Michael Powell and Kathleen Abernathy, who oppose any mandate until the constitutionality of such a move is clear.

In the interim the lagging further delays the acceptance and visibility that digital TV needs to get further off the ground.

FCC Studies Seem To Favor Weaker Rules While Insiders Oppose Public Hearings

Todd Shields at Mediaweek says there is a study that indicates the FCC seems to favor weaker rules and insiders oppose public hearings. Now that's what we need; our government keeping our business behind closed doors.

of news programming, and radio consolidation helps drive down advertising rates. One cannot help but ask the question: What was wrong in the "good old days" when the fiduciary responsibility of a broadcast facility lay in the local hands of local people who responded to local needs?

Anyhow, these were among the conclusions of studies released last week by the Federal Communications Commission, which is considering whether to weaken restrictions on media ownership. Predictably, critics said the FCC stacked the results to make it easier for the agency to deregulate, while media companies said the studies buttress the case for looser rules.

The FCC hopes the 12 studies -- mostly conducted by agency staffers -- help meet judicial demands that regulators develop factual underpinnings for its rules. FCC chairman Michael Powell called the studies "an unprecedented data-gathering effort" aimed at developing "sound public policy." This is tantamount to studies of henhouse security conducted by the fox and his den.

The studies could help networks undo the rule that limits them to owning stations serving 35% of national TV homes. Networks say increased choices for news and other programming should allay concerns that one voice could dominate. One of last week's studies cited dramatic boosts in broadcast outlets, cable services, and direct broadcast satellite since 1960. And there is nothing wrong with good old Yankee competition. Perhaps we have too many high paid lawyers trying to figure out how to do away with it.

Another study concluded that consumers are prone to switch between TV, newspapers, and the Internet and said, "we can reject the view that various media are entirely distinct." Taken together, such findings could imply that broadcast is not so special as to merit extraordinary restrictions. Critics said such a conclusion mistakenly assigns similar weight to powerful network-owned stations and minor outlets like little-watched cable channels.

Those fighting the ban on common ownership of a daily newspaper and a nearby broadcast station liked a study that found no predictable effect on news coverage where exceptions to the ban exist. "They demonstrate everything we've been trying to say all along ... editorial judgements are being made locally," said Shaun Sheehan, vice president for Tribune Co., which is keen to preserve its cross-owned combinations in several markets.

There is nothing wrong with a local TV station being owned by a local newspaper. This kind of thing has gone on for many years. The problem lies in several TV stations being owned by the same company or the same newspaper in the same market. Where does the different editorial view come from? Competition is the key to the American way and it is beyond comprehension how and why there is a move to remove it.

Labor unions noted the study examined just 10 cross-ownership cities, and called for more study. "Ownership consolidation has severely reduced diversity of voices," said Greg Hessinger, national executive director for the American Federation of Television and Radio Artists (AFTRA).

AFTRA, the AFL-CIO, and other unions endorsed a call for public hearings by the FCC's lone Democratic commissioner, Michael Copps. In a speech last month during a broadcast policy forum, Copps said he was concerned that "we are on the verge of dramatically altering our nation's media landscape without the kind of national dialogue and debate these issues so clearly merit."

But his call for hearings may go unheeded. Powell has said he "wouldn't commit to it." And FCC Media Bureau Chief Ken Ferree in a private meeting held late last month derided hearings as an opportunity for "foot stomping" and little else. That could leave the battle over ownership rules to take place inside the Beltway. The FCC wants written comments from both sides of the issue by December and expects to vote in the spring.

Here's an interesting thought: Why not try to do things at the FCC that have the best interests of the public at heart and not the political ambitions and agendas of Washington bureaucrats and the large corporations they represent? Now wouldn't that be novel?

In a previous Tech-Note we talked about a TV station that wanted to abandon their analog transmission in favor of digital service. Well the FCC has authorized WWAC in Atlantic City to do just that. Its digital allocation is channel 44, the same as WNYW-DT in New York. Atlantic City is in the adjacent Philadelphia market, and WWAC-DT has already knocked out WNYW-DT for at least one viewer: http://www.fcc.gov/Daily_Releases/Daily_Business/2002/db1003/DA-02-2478A1.txt

Why will they want to shut down analog? Their digital transmitter is much closer to Philadelphia, which, under one-channel must-carry rules, could mean cable carriage there, possibly bringing them 1.8 million subscribers instead of just 575,000, according to a story in Multichannel News: http://www.tvinsite.com/multichannelnews/index.asp?layout=story&doc_id=104018&display=breakingNews



Subject: **8th Annual Technology Retreat**
From: Mark Schubin

The Hollywood Post Alliance is sponsoring the 8th annual Technology Retreat, February 6-8,

2003 at the Palm Springs Marquis, with an all-day joint HPA/ATSC seminar on datacasting and DASE the day before (February 5). As usual, the idea of the retreat is fun and informal exchange of information on the latest technologies, and, as usual, there will be a stellar cast of presenters.

Thus far, ABC, CBS, NBC, PBS, and WB have all committed to the Broadcasters Panel (and Fox, which has participated in recent years, is expected to be there, too). Brad Hunt, chief technology officer of the Motion Picture Association, will be doing a presentation on digital content protection. Charles Swartz, executive director of the Entertainment Technology Center at the University of Southern California, will be moderating a panel on digital cinema.

That barely scratches the surface. There will be presentations and panels on MPEG-7 and MPEG-21, advanced compression technologies (JVT), logarithmic RGB vs. video, professional uses of D-VHS, interactive television, high-definition consumer disks, advanced display technologies (including GLV), military imaging and metadata, and more. Participants will be able to learn anything from what's going on in Congress and the FCC to what cable to choose for high-speed data. No matter what aspect of television technology anyone is interested in, someone will be there who knows about it.



Empire State Building

Subject: **Will New York get a new TV antenna?**

By: Larry Bloomfield from a story by Martha T. Moore that appeared in USA TODAY

“There’s nothing like having a 5,000 foot tower to put your television transmitting antenna on,” said a Los Angeles TV engineer, “and New York would love to have our Mt. Wilson, but they don’t!” There is little question that height when transmitting in the VHF and UHF frequency bands is more important than power, when it comes to coverage.

With the loss of their transmitting site as the result of the World Trade Center disaster of September 11, 2001, the New York broadcast community has done a stellar job of coming back on line at any of a number of sites including their old venue, the Empire State Building. But making do has never been a trait typical of New Yorkers. So as the debate over what to build on

the World Trade Center site continues to unfold, a structure even taller than the twin towers is already being planned: a 2,000-foot television antenna.

The new tower, which would replace the antennas lost when the Trade Center collapsed and finally find a permanent home for the temporary locations, would inescapably be part of the New York City skyline. All that's needed is a place to put it.

When completed, the new television tower would soar nearly 300 feet taller than the tip of the antenna that was on top the World Trade Center. It would be the tallest free-standing structure in the world: taller than the Canadian National Tower in Toronto and taller than the world's tallest occupied buildings, the Petronas Towers in Kuala Lumpur, Malaysia.

Eleven TV stations used the antenna that was atop the Trade Center's north tower, which reached 1,728 feet. Now the broadcasters have formed a consortium to build a \$200 million replacement. They are looking for six acres and a willing landlord.

NIMBY is the name of the game – Not in my back yard. "Everyone agrees there should be a tower, but no one wants it in their neighborhood," says Ed Grebow, president of the Metropolitan Television Association, the consortium of broadcasters. "While I think towers are beautiful, not everyone agrees."

New York City Mayor Michael Bloomberg has said no to sites in Queens and on Governors Island, a mothballed Coast Guard station in New York Harbor. But then Bloomberg is never in town long enough to watch television, so why would he care?.

City economic development spokesman Michael Sherman says New York still wants the TV antenna to be built in the city, but the broadcasters' proposals so far "haven't thrilled anyone."

But as often happens when potential tax revenue is at stake, neighboring New Jersey is trying to seize an opportunity. Bayonne and Jersey City, just across the harbor from Lower Manhattan, have both offered sites for the TV tower.

To some the new tower seems ludicrous. Only a minority of television viewers still rely on over-the-air broadcasts. According to Nielsen Media Research, 87% of the households in the New York City area — 6.4 million homes out of 7.3 million — have cable or satellite service. Broadcasters say the 700,000 households in the area that don't have cable or satellite still get fuzzy reception on one or more television stations. While the Empire State Building is once again the tallest building in the city, other skyscrapers cause "shadows" that interfere with television signals. Very low powered UHF translator have been used to fill in some of these shadowed areas, but these are few and far between, not like in the mountainous areas of the west where translators rule.

Due to the conversion from analog to digital, there just isn't enough room left in or on the Empire State Building and power is very inadequate. And cable companies, which are required by law to carry broadcast channels using analog signals, aren't currently required to carry digital signals.

Some proposals for redeveloping the Trade Center site include a TV antenna. As planned, the tower would be the tallest freestanding structure in the world.

"It's going to dominate the New York skyline," Grebow says.



Architecture critic Paul Goldberger, writing in The New Yorker magazine, said a broadcast tower at Ground Zero "would heal the skyline in a more poetic way than half a dozen blocky office buildings."

But that idea has also raised fears that a towering structure would be a target for another act of terrorism.

"There are people who are concerned about tall towers for a variety of reasons," Grebow says. "But this is really essential to the welfare and security — and entertainment — of New Yorkers."

San Francisco is just one of many cities across the country that has a common transmitter site and their antenna has dominated their skyline for years. Many locals say that an earthquake would be devastating to them, but structural engineers assure them that any earthquake that would take down the Sutro Tower would have leveled most everything else around it first. Belaying the concerns of the naysayers for a tower in the New York area, the same safety concerns would be taken into consideration for a well built tower in or around the big apple. Over the air broadcasting has always been the most reliable form of communications in most all circumstances, only with rare exception. Just ask any ham radio operator the kind of service they give in emergencies and there are not cables attached between their stations.

See the original article by Martha T. Moore at: http://www.usatoday.com/news/nation/2002-10-17-tvtower_x.htm



Letters to the Editor

From: Burt I. Weiner biwa@earthlink.net
RE: The New Tech Notes

By the "weigh," I am enjoying the newsletter more now-a-days. Not because of my ramblings but because it is relating to the real world and not quite as deep technically. Technical is good but I don't fall off the pot. It is easier to read and more fun. I've passed on the subscription info to a few friends who have asked about it.

From: **Marc Convents, Project Manager, Outside Broadcast** marc@outside-broadcast.be

We have recently invested in Hi Definition, we are the second company in Europe to built a Hi-Definition OB Truck and the first one with Sony Equipment.

As we have not done many performances with HD we are looking for some footage from sport-games because we have done only concerts at this moment. Is it possible to give us some contacts in the States were we can find these kind of images. We are attending IBC Amsterdam and therefore we are looking for some extra images.

Do you know also which facility companies are working with Sony HD equipment?

Thanks in advance and hope to hear from you soon.

Kind regards, <http://www.outside-broadcast.be>



From: **James Y. Jun, Director of Marketing, KTech Telecommunications, Inc.**

jjun@ktechtelecom.com

Thank you very much for periodically sending me the tech-notes. They have been a great source of information and I think you definitely have something good going on your newsletter and the website.

Regards,

www.ktechtelecom.com

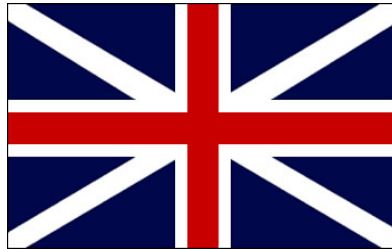
Features



Subject: **Some of My Observations**

By: Burt I. Weiner biwa@earthlink.net

Such an Observation I have that you've not heard. or read! But not for this edition. See ya next time.



Subject: **UK DTT reconstruction**
From: Dermot Nolan

Although ITVDigital faded to black on 01 May 2002 with a loss of nearly £2.0 billion (~US\$3.08584 billion) leaving an estimated 1.2 million subscribers high and dry, with many subsequently defecting to Sky's DBS system, the FTA broadcasters carried on broadcasting their FTA DTT services throughout the period, until the new BBC/BSkyB/CCI consortium begins its entirely FTA service, Freeview, October 30 2002. Many changes have taken place in the market since May 2002 at the consumer, economic and technical level whose full impact will shortly be played out.

There is now a rash of FTA DTT adapter boxes in the market from many vendors such as Pace, Panasonic, Hauppauge, Grundig, SETPAL, and Netgem with others to follow. These all weigh in at around £99.00 (~US\$152.70) and significantly outperform the old ITVDigital boxes as they have 100MIPS+ processors, up to 16+16MB memory configuration, and COFDM frontends based on 2002 designs rather than the time-warped ITVDigital boxes which were 20MIPs, 2+2MB configurations and based on 1997 designs. Its hardly surprising that the new boxes are very fast with the interactive services, have very quick channel change times, have vastly superior RF sensitivity and much improved impulse noise performance. Two vendors, Netgem and Novapal, now offer COFDM adapters which work down to 15.9dB with Gaussian channels in 64QAM COFDM mode (24.0 Mb/s in 8Mhz channels): on a par with 8VSB Gaussian channel performance and both have real-world multipath cancelling performance which 8VSB 'miracle chips' can only dream of.

Its all change on the transmission front too: the BBC and Freeview services are all switching to 16QAM modulation from the old 64QAM COFDM mode: a straight trade-off of capacity for receivability. This is considered a commercial must in the UK where DTV transmitters ERPs are limited to around 20.0kW. The switch to 16QAM (which means a data rate drop to 18Mb/s from 24Mb/s) combined with a straightforward doubling of ERPs improves the overall consumer DTV 'link budget' by up to 9dB. This has a major impact on receivability, resistance to interference,

such as ITV, Channel 4, and Channel 5 are currently holding onto the 64QAM mode until the New Year but whether this remains a commercially sustainable proposition remains to be seen. New playout centres and DVB-SI networks have also been installed and a seven day EPG is planned.

A major on-air campaign by the BBC on its analogue and DTV services is warning viewers with the old ITVDigital STBs that they must retune now to avoid losing channels, with D-DAY on October 17. Many of the newer converters don't need to retune as they do a band scan when switched to standby and pop-up with the new channels in their guides and EPGs. The old boxes do support all 120 DVB-T modes but can take up to seven seconds (e.g. the first Philips 6370STB and the Philips IDTV) to switch between DTV stations using different modes whereas the new adapters switch instantaneously between modes.

Test transmissions are now underway: the BBC began transferring some of its DTV services to 16QAM mode and, of course, BSkyB were first off the mark with a slick commercial promo on all three DTV channels which also plays out the channel numbers for the new Sky services. About 29 entirely free DTV services will launch on October 30 together with a string of digital radio services previously only available via DAB or DBS. This Freeview launch will be accompanied by the BBC's largest ever on-air marketing campaign. (See www.freeview.co.uk and www.bbc.co.uk/reception for more.)

So how does the QAM mode change manifest in practice? Many DTV newsgroup reports with a test market of at least 2.0 million legacy DTV receivers, tests carried out by the broadcasters, and confirmed by yours truly indicate massively improved DTV indoor antenna reception. I can receive the BSkyB and BBC 16QAM services deep within rooms with simple indoor antennas whereas the 64QAM broadcasts either do not work, must be put by the window or require critical antenna orientation. In any trade off between capacity and receivability it is receivability which wins hands down. BBC and Sky now have a major DTV reach advantage over other commercial broadcasters. A prediction: ITV, Channel 4 and Channel 5 will be forced to switch to 16QAM mode to be more widely received on indoor antennas.

There have also been tests of new diversity DTV receivers by DIBEG and others in the London area that confirm excellent mobile DTV reception with 16QAM as expected and, more surprisingly, 64QAM. These receivers will be available next year. Other developments include the imminent retail launch of interactive DTV browser boxes and the first DTT PVR box. And I also tested the first £100 (~US\$154.30) consumer DAB receiver: from out-and-out sceptic to messianic convert. Described by the other half as this 'beautiful digital radio'!

Just to let you know that BBC1 and BBC2 have now switched to 16QAM nationwide this afternoon with spectacular receivability results. Signal strengths have shot up from 70% to 90% on the Pace adapter box. You can see real world consumer feedback on www.digitalspy.co.uk , their terrestrial forum.

More soon.

Dermot
TBS



(This is a very old picture)

Subject: **Digital Cinema Update**
By: Jim Mendrala

(**EdNote:** Jim has been attending a plethora of meetings where he is a member of one committee or another that deal with the evolution of the standards that will govern Digital Cinema in the future. As such, he has not had the opportunity to file his story in time for this edition. He promises us faithfully that he will have it ready for the next one.)

Subject: **The Future of Engineering**
From: Robert W. Lucky

What will engineering be like in the future? Every now and then I think about how much it has changed over the course of my own career. If changes of a similar magnitude happen in the coming decades, what will the profession be like for today's college students?

When I studied engineering in college, I had little idea of what I was getting into. I suppose in retrospect that I was too busy taking courses and enjoying college life to think about what real engineers did. Maybe in the back of my mind I was Thomas Edison sitting at his desk in a big musty laboratory, surrounded by elaborate equipment as he wrote in his notebook of progress toward the great inventions that would change the way people lived. It's hard to remember now, but maybe that's what I signed up for when I selected engineering as a career.

How differently engineering is practiced now from any vision that could be extrapolated from that dream of Edison! I wonder what dreams today's engineering students have and how those dreams will be transformed by the reality of the future. I worry, too, about how those inevitable changes will affect the attractiveness of engineering as a profession.

Looking back on my naïve expectations, I ask myself: did it turn out better than I had envisioned? The answer is clearly yes. The information and computer power at my fingertips in my office and home are light years beyond that dream of Edison. Today we soar on the wings of computers and networking to heights where the minutiae of engineering lie indistinguishable on the ground far below. Sometimes I think of Archimedes' lever: "Give me a place to stand on, and I can move the earth." We've been given the lever and the place to stand upon, and I feel that the earth is ours to move.

That feeling of empowerment is exhilarating. My worry is the price that we have paid for soaring so far above the landscape. In our profession there is a growing distancing from reality. It is like the profound feeling of disconnection I have when I stare out the window of an airplane. Those aren't real houses down there, I think, and I'm not really sitting in an aluminum tube high in the sky with no visible means of support. Why does the pilot tell me that the outside temperature is -50 °C? This has no meaning to me, because the outside world is merely a diorama painted on my window. But as soon as these troubling thoughts intrude, the flight attendant's voice supervenes, telling me to lower my window shade so that I can better see the movie, substituting one form of unreality for another.

Engineering today feels like that window seat on the airplane. Those can't be real transistors and wires down there, can they? Watching the simulations on my computer monitor is like watching the movie on the airplane—an unreality wrapped in another unreality. I feel that I have lost touch with Edison's world of electricity—a world of black Bakelite meters, whirring motors, acrid chemical smells, and heated conductors. I miss Heathkits and the smell of molten solder and burning insulation—the sensual aspects of engineering that have been replaced for many of us by the antiseptic, ubiquitous, and impersonal CRTs.

I have a deeper worry that math itself is slipping away into the wispy clouds of software that surround us. I walk down the aisles of laboratories, and I see engineers staring vacantly into monitors, their desks piled high with anachronistic paper detritus. Is anyone doing math by hand any longer, I wonder? Do they miss the cerebral nourishment of solving equations? Perhaps math in the future will be the exclusive province of a cult of priests that embeds its capability in shrink-wrapped, encrypted software.

I can't believe that 20 years from now engineers will still stare into displays, run CAD tools, and archive their results in PowerPoint. But what will they do? My deepest fear is that the reality gap becomes so great that the best-selling software will be called Engineer-in-a-Box.



Subject: Digital Cinema -- Respond to Survey and Get Free Report!
From: Des Chaskelson, Research Director, SCRI des_chas@scri.com

SCRI International (<http://www.scri.com>), the premier research firm in broadcast and professional video/audio sectors, in conjunction with Digital Cinema Magazine, are pleased to announce that the 2002-2004 Digital Cinema survey is now online.

The survey is open to cinematographers, post houses, distributors and exhibitors of digital cinema engaged in one or more of the following phases of the digital cinema process: Acquisition; Postproduction; Distribution; Exhibition.

Eligible respondents receive one of the following 100 page+ technology reports -- Digital Cinema; HDTV, MPEG-4, Pro DVD -- \$125 value!

To respond to the survey, go now to: <http://domino-5.prominic.com/A558AC/dcs.nsf/dc>

For information on SCRI's other 2002 Broadcast/Pro Video Product Reports, go to: www.scri.com/sc_reprt.html or contact info@scri.com or Desmond Chaskelson (Des_chas@scri.com)

Parting Short
By Larry Bloomfield



Since we're a few hours beyond our deadline of getting this out this morning, I'll be brief (my wife says not to hold your breath).



HDTV Magazine

I have a neighbor up the road a piece in Alsea, Oregon: Dale Cripps. Cripps has been in and around the broadcast industry many years. What makes him unique is that he loves and believes in high definition television. Now that's something to say for a guy who lives, as do I, in the boondocks. What's even more interesting is that he offers an online service that is unique and very useful to HDTV viewing: HDTV Magazine.

With over 7000 subscribers, Cripps publishes a daily, online, newsletter informing his subscribers of the latest in the wonderful world of HDTV, giving them a schedule of who is broadcasting what and when. His page two is like other journals chocked with information, readers comments etc.

This is something most all of your HDTV viewers would find both helpful and informative. To see more about the HDTV Magazine, go to: <http://www.ilovehdtv.com> or send Dale an e-mail at hdtvnew@pioneer.net. Cripps says that his publication is endorsed by the Consumer Electronics Association. I tell him that there are times when that is not something to brag about.

When I was doing the Taste of NAB Road Show, I was exposed to the Dorrough Loudness meter. This clever little device shows sound in what I call three dimensions: First it shows average levels, like the common volume indicator or VU meter and it also shows peak levels, important to monitoring peak modulation levels so you don't over modulate or over deviate. The third dimension is: it will give you an idea of the amount of compression your audio signal has. Now this is not a pitch for Dorrough. Let me make my point after I explain what is going on.

Compression is the manipulation of the audio so that there is more energy in the total signal. It is the diminishing of the area between the average and peak audio levels, thus giving the listener the illusion that the sound is louder. It's NO illusion if you are listening to something uncompressed then are exposed to a commercial that has been compressed to the max: it's down right annoying.

Add to this the lack of monitoring, physically or automatically, of audio levels and one could begin to scream at the so called engineers who are putting out this garbage. I'm not complaining about differences in audio levels for the esthetic value of a performance, I'm complaining about the seeming lack of quality control at the networks, the local stations, the cable companies and the satellite purveyors.

I know you'll say: "Larry, you're on your Bully Pulpit again." You damned right I am! I mixed audio for CBS and a number of other organizations for many years. I took professional pride in my work. I expect no less when I'm on the receiving end.

Besides having reasonably good hearing, I have an excellent sound system that plays back any of the many sources I have available. Part of that system happens to be a pair of Dorrough Loudness meters and I cannot only hear the crap we're forced to listen to, but can see a visual picture of the horrid levels no one but us end users seem to care about.

What really frightens me is that this is a mix of both simple monophonic and dual channel stereophonic audio programming. Until they get this simple audio mix right, how in God's name does anyone expects polyphonic, that is multiple-channel sound – 5.1 channels or more, to be anything but putrid, is beyond me.

I propose that these high priced engineering managers who seem to forget that there is an audio component to their video product, be made to pay a very modest fine out of their salaries for only the most egregious lacks of audio craftsmanship. If that were the case, they probably would end up owing their employers rather than getting a paycheck.



I don't like to hound on one subject or another, but I've spend a lot of time building the website for the Ancient, Honored, Respected, etc., etc., etc., **Order of the Iron Test Pattern**, for the survivors of the television industry. I'm kind of proud of it and would like your input. Check it out at <http://www.OITP.org> It doesn't cost anything to join and you mustn't be dead and worked in some aspect of television for more than fifteen minutes. Should you happen to lie about either of these two things, it really doesn't matter. You can get a certificate showing your survival in the television industry to hang on your wall that is guaranteed to draw members of the opposite sex and sometimes flies. My connection with them other than that is that of their Sagacious Pixel. Don't even bother to ask, 'cause I don't know what it means either.

Well that's it for this time, let's go to press!

*The opinions expressed herein are those of the individual authors and do not necessarily reflect the opinions or positions of their friends, employers, associates or publishers of the **Tech-Notes**.*

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Thanks

