

Tech-Notes

<http://www.Tech-Notes.tv>

May 6, 2002

Tech-Note 102

Established May 18, 1997

Sponsored by: Bloomfield & Associates

+*+*+*+*+*+*+*+*+*+*+*+*+*+*+*+*

Our purpose, mission statement, this current edition, archived editions and other relative information is posted on our website. We've had over 19,800 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!*

+*+*+*+*+*+*+*+*+*+*+*+*+*+*+*+*

Reader comments

+*+*+*+*+*+*+*+*+*+*+*+*+*+*+*+*

Dear Larry,

Good to see you at the convention. I do not agree that engineers should not be involved in the business model. Had they been involved enough all along, the DTV fiasco could have been avoided. Now cable is king, telcos and broadcasters struggle. Consider the following:

Our market is 80% cable and unless we can overcome physics we cannot hope to get that many off- air. We would like to get some revenue from DTV. You and I are not supposed to know this so do not tell anyone, I sleuthed this for myself at the show. SJL (owners of KSBY) signed a letter of intent with Clear Channel Wireless to provide DeltaV service in member stations (9). The basic idea is good, their implementation is poor. Their claim of boosting Internet for 4000 subscribers on 5mbit of DTV stream are a decimal point too optimistic. Clear

Channel owns our competitor station in Santa Maria. They are on iBlast. Cynically, this could be a ploy of CCW to grab 25% or more of our digital spectrum.

The devil is in the details. If a business plan cannot be supported by engineering and the laws of God and physics, no one benefits. Careful collaboration is what is needed and has so long been neglected in broadcast circles. That is the major reason why the business is dying. The second major reason is that we have fooled ourselves with digital hype. Had we realistic notions of what we could deliver and what would be best for a delivery platform into the home, we'd be calling the shots.

Duane Engineer -- KSBY

Subject: **NAB2002 Attendance**
From: H. James "JD" Davis, Asst. Chief Engineer, Las Vegas

The floor looks a little baron compared to years previous. Definitely not as many folks tooling around. The evidence of that is in the ease of parking. I have NEVER been able to find a good parking space near the CC, but this year, I have found real good spots on all occasions. There are a lot more open spaces in the lot this year.

JD

Subject: **THX ANNOUNCES FIRST GENERATION DIGITAL CINEMA CERTIFICATION PROGRAM**
By Jim Mendrala

Lucasfilm THX announced on May 1, 2002, a first-generation certification program for digital cinema products, and also announced the first products to be certified under the new program. THX certification of these products will assure high quality digital presentations for future digital cinema releases.

Tim Schafbuch, Director, THX Digital Cinema, said "THX is committed to playing a leading role in digital cinema, and this new certification program is a helpful

step toward making digital cinema a market reality. These THX certified products will provide the industry with the assurance that digital cinema systems will deliver on their promised benefits, and at the same time assure the highest presentation quality."

The THX digital cinema program establishes performance and quality levels for digital systems as well as individual digital cinema components, including projectors and servers. The first products to be certified are the Avica FilmStore servers, the Barco D-Cine Premiere DLP Cinema projector, the Boeing ICE (In Cinema Equipment), and Technicolor Digital Cinema's Auditorium Management System .

What does all this mean? There are no standards yet for digital cinema. Even though SMPTE, EDCF and ITU are studying digital cinema it will be a few years before there will be any digital cinema standards that the Hollywood studios will stand behind.

A few weeks ago just before NAB it was announced that a new company was being formed by the seven major motion picture studios to set up standards for digital cinema . The company was originally called Newco but has since changed it's name to NDC. It hard to say what NDC stands for but it might be New Digital Cinema .

Now I ask the question, what criteria is THX certifying to? Digital cinema demonstrations to date have been nothing more than just that, demonstrations. In the digital cinema equipped theaters around the world, what is being projected is less than HDTV. Let me explain this a little. Films today are transferred on a conventional HDTV Telecine. The images are recorded at 24 fps using SMPTE 274M Television 1920 x 1080 Scanning and Analog and Parallel Digital Interfaces for Multiple Picture specifications. True, the images are not generally color corrected on a CRT display, but are traditionally observed using a DLP digital cinema projector. The projector engine was designed by Texas Instruments (TI) to the first HDTV standard, SMPTE 240M Television 1125-Line High-Definition Production Systems Signal Parameters.

The 1920 x 1080 HDTV images are being displayed on a projector that has only 1280 x 1024 pixels. Other companies such as Digital Projection and Christie also obtain their DLP light engines from TI. So what makes a Barco D-Cine Premiere

DLP Cinema projector unique? What set of specifications does THX certify to?

As for compression, today several compression systems are being used. The most popular is the QuVis QuBit which uses wavelet technology. It is followed by the Technicolor Digital Cinema's Qualcomm ABS compression system. Then there is Grass Valley with their MPEG Plus compression system that pushes MPEG 2 to so called higher limits. The original Lucasfilm Star Wars The Phantom Menace was displayed from a Pluto Digital Storage system using a D-5 type of compression system.

The desire of the major studios as stated at the Digital Cinema Summit, held on April 7th, is for digital cinema to meet or exceed 35mm Answer Print quality or better. With the equipment being used today, issues on resolution, colorimetry and compression have yet to be defined and resolved.

THX has certified the Avica FilmStore server. Again I have to ask the question, to what criteria, is a bit bucket certifiable?

THX has also certified Boeing's ICE (In Cinema Equipment). Now Boeing is in the data delivery system business. Digital cinema delivery is only a very small part of that business. Data is data, bits are bits, so how do you certify their bit delivery system and again to what criteria?

And what about THX's certification of Technicolor Digital Cinema's Auditorium Management System™? Does that mean that the popcorn is better? Again, what criteria is this certification being held to?

I think Lucasfilm has got a very interesting marketing thing going on here. In the past to have your theater THX certified, it had to meet a minimum set of standards, which were defined by SMPTE and/or other standards bodies. That's okay, at least you as a consumer knew that the THX logo meant that the theater met a minimum standard for performance. Some theaters opted not to pay the price for a THX certification and in many cases the theaters exceeded the minimum set of standards

With this announcement by Lucasfilm, it makes one wonder: how does one get a certification? Does THX really know something more than the motion picture

industry.

Dave Schnuelle, Director of Technology, THX Digital Cinema, said Digital Cinema is a complex technology with plenty of opportunities for image quality to be compromised. The overriding goal with the THX digital cinema certification program is to deliver the highest level of image and sound quality, and to do so consistently over a long period of time. Again I ask the question: does this mean that digital cinema image quality is already locked in? Will a theater that is certified today be out in the cold when some of the new future digital cinema standards become implemented?

Except for getting the THX logo up in front of an audience or on a piece of equipment, I don't see any real criteria for certification to a minimum standard.

Subj: House Leadership to introduce Delay Bill

By Fred Lawrence:

According to a recent article in Broadcasting & Cable, Reps. Billy Tauzin (R-La.), John Dingell (D-Mich.), Fred Upton (R-Mich.) and Ed Markey (D-Mass.) have introduced legislation to indefinitely delay the 700-megahertz auctions, according to Tauzin spokesman Ken Johnson.

"The FCC [Federal Communications Commission] is nowhere near ready to hold an auction," Johnson said. "They have no 3G [third-generation] wireless plan, they have no HDTV [high-definition television] plan and, most important, they have no complete spectrum-management plan. They need to slow down and think this through."

FCC chairman Michael Powell told a House Appropriations Subcommittee recently that the commission had no choice but to hold the auction because the law required it.

"In the past, we could legitimately say, 'Everybody wants a delay and no one will sue,' but that's not true this time," Powell said. "There are clear industry players

who want the auction to proceed."

In addition to all this, the Bush administration is pushing the FCC to delay auctions of the 700- megahertz spectrum that the agency has planned for June. "Until more certainty exists about the means for and timing of such spectrum clearing, an auction of the upper and lower 700-MHz bands would be premature and contrary to public interest," wrote Secretary of Commerce Donald Evans to FCC chairman Michael Powell.

The administration wants to shift auctions of television channels 60 through 69 (747 through 762 and 777 through 792 MHz) to 2004 and auctions of television channels 52 through 59 (698 through 746 MHz) to 2006.

Powell told a House Appropriations Subcommittee Tuesday that he intends to hold the 60-through- 69 auctions June 19 as scheduled, even though Rep. David Vitter (R-La.) indicated that he and other members of Congress would prefer a delay.

Subject: **Enhanced TV, Interactive TV and Broadband**

From: [SCRI](#)

Michael Toutonghi, vice president, Microsoft eHome Division explored how universal plug and play will revolutionize home computing and entertainment at the "Enhanced TV, Interactive TV and Broadband - Welcome to the Future" Super Session, April 9th at NAB2002.

Toutonghi leads Microsoft's eHome Division, a newly developed group within Microsoft. Its mission is to extend the PC's capabilities to deliver simple and affordable connected home experiences to everyday consumers.

Toutonghi examined the new technologies coming to market that will enable home networking and connectivity throughout the home, including the IEEE's 1394 standard that enables a single plug-and-play connection for connecting devices to PCs and how it will facilitate consumer adoption of home networking. He mapped out sample home network configurations that combined and distribute rich multimedia services along with telephony, gaming, web access,

information utility, and remote device control to every room in the home.

SCRI covered this and other key technology sessions at NAB 2002 -- stay tuned to Tech-Notes associate, www.SCRI.com

Subject: **Arizona Dish Tax Moves Forward**

By: Lorenzo Della Montana

A bill that would tax satellite TV services in Arizona squeaked out of the state's Senate chambers this week on a 16-13 vote.

Arizona Senate Bill 1062 would make DBS offerings subject to a 5 percent tax. Cable TV customers already pay a similar tax, and backers of the bill said taxing satellite TV would put both services on an equal footing.

Proceeds from the tax would go to Arizona's cities and towns, which would be prohibited from imposing their own tax on the service.

According to the Arizona Republic, the bill now goes to the House, where its prospects of passage are dim due to the House's Republican majority and its resistance to new taxes.

Subject: **Discovery Readies HDTV Channel**

By Larry Bloomfield

According to our associates at HDTV magazine, Discovery will launch Discovery HD Theater, a new 24-hour network that will transmit high-definition programming featuring some of its top content on June 27th.

Discovery said it has more than 115 HDTV titles ready for transmission and new productions have been commissioned to support the new service. The June debut coincides with the 17th anniversary of the Discovery Channel's first transmission in 1985.

Discovery HD Theater will be offered to cable systems, satellite providers and other multichannel distribution systems. It will reside on Satcom 4, Transponder 14. The HDTV digital signal will be delivered in 1080i high-definition resolution. We have yet to figure out why they did not choose 720P.

Subject: **Finally an intelligent approach to the 8VSB multipath issue**

By: Roy Trumbull

When the ATSC COFDM tests were done in Brazil, they came up with some profiles of really terrible multipath. Neither ATSC nor COFDM would work in some of those profiles. At NAB, Richard Cita, formerly with Zenith, demonstrated his "Linx" receiver. The Linx was tested at the CRC Labs in Ottawa by Dr. Yiyang Wu using the Brazilian profiles. I saw it and it works! The results are available at <http://www.crc.ca/dtv>.

In the Axcera booth during NAB, the receiver was used with a signal that had 5 deep notches in it. Cita is interested in licensing manufacturers to use his design.

Meanwhile, over at the Hilton, Zenith had a suite where they were demonstrating EVSB, which is an enhanced coding scheme. They showed it using new receivers as well as legacy receivers. There had been some concern that improvements would obsolete all existing receivers. This demo relieved that concern.

FCC Lets Spectrum Auction Proceed

Source: Reed Business Information - US Multichannel News:

Las Vegas-- An auction of occupied television spectrum will go forward on June 19, despite criticism that TV broadcaster Paxson Communications Corp. could reap hundreds of millions of dollars in the process, the Federal Communications Commission ruled last week.

The FCC considered a petition for delay by the Cellular Telecommunications &

Internet Association, which claimed that, among other things, wireless company bidders have not established business plans for the spectrum and that Paxson -- a major TV-station owner -- would be the real beneficiary of the auction.

The FCC rejected the CTIA's request last Thursday in a ruling handed down by Thomas J. Sugrue, chief of the FCC's Wireless Telecommunications Bureau.

Paxson issued a statement applauding Sugrue's decision.

The FCC plans to auction spectrum held by about 100 analog TV stations with assignments in channels 60 to 69. The broadcasters may continue to occupy the spectrum until 85 percent of TV households in a market have DTV-capable receivers. Paxson, the owner of dozens of TV stations, said its the largest single holder of spectrum in channels 60 through 69.

The FCC has been concerned that if TV stations can indefinitely remain in 60-69, then wireless companies that want the spectrum would not bid top dollar in the auction.

To address that problem, the FCC last year said wireless companies could pay Paxson and other broadcasters to vacate promptly.

Paxson CEO Lowell (Bud) Paxson once estimated that he'd get at least \$1 billion from the wireless companies for yielding his spectrum.

Association of Maximum Service Television (MSTV) president David Donovan said his group also filed a petition for delay. Sugrue did not address MSTV's request in his letter to the CTIA last week.

MSTV is a small organization with close ties to the National Association of Broadcasters. It serves as the NAB's technology adviser on the transition to digital television.

The auction plan, Donovan said, was flawed because dozens of analog TV stations that might vacate spectrum in channels 60 to 69 are planning to resume analog operations in the digital TV spectrum block (channels 2 to 52), and are therefore likely to interfere with incumbent digital TV stations in that band.

Paxson said it has filed 14 requests with the FCC to operate analog stations on its assignments in the 2-to-52 DTV band.

Before Sugrue's letter surfaced, Paxson said at the NAB's annual convention here last Tuesday that an auction delay would destroy the coalition of stations on channels 60 to 69 he had assembled to negotiate with wireless bidders.

Those stations, he said, needed to know whether they would be able to sell out to the wireless industry or make plans to broadcast on both their analog and digital channels.

"The alliance collapses if there is no auction," Paxson said.

The CTIA claimed that an auction delay was necessary because the FCC should not allow Paxson and the other 60-to-69 TV station owners to drive FCC spectrum policy.

"It is clear that to hold an auction in June would make the FCC the croupier collecting the ante for the real game: the subsequent private auction of spectrum the broadcasters received for free," CTIA president Tom Wheeler said in a statement.

Paxson and the other TV stations now appear to have the upper hand. If they are dissatisfied with the money offered by wireless carriers to vacate, they can remain in the 60-to-69 band until the 85-percent test is met -- an event not expected to occur for many years.

"This thing is sort of a mess. It's been a mess for a long time and, candidly, it's going to stay a mess for a long time, in some ways," FCC chairman Michael Powell said last Tuesday.

The FCC will hold the auction under a Congressional mandate, after postponing it five times.

Andy Levin, an aide to Rep. John Dingell (D-Mich.), said the FCC could dodge the whole problem by staging what he called a reserve-price auction.

The FCC would set the minimum price it would accept for the spectrum. If that

target were not reached, the FCC could cancel the auction while still meeting the law's requirements.

In his letter to the CTIA, Sugrue noted that his bureau has set a \$2.6 billion reserve price for the 60- 69 spectrum.

"Accordingly, if a high degree of uncertainty or other factors depress bidding for these licenses to a level below the reserve, the licenses will not be awarded and the auction will be rescheduled," Sugrue said.

Subject: **This and That** **PBS facts and notes about Dish**

From: Mark Schubin tvmark@earthlink.net

"There are currently more PBS-affiliated DTV stations than those of any other network -- and they're not due on the air until May 1, 2003."

Remember that PBS doesn't provide exclusivity, so some markets have more than one member station (the Indianapolis DMA has four!); also, some states' ETV networks (such as KET in Kentucky) have more transmitters than there are affiliates of any commercial network in the state, and I believe PBS counts each separately.

"EchoStar wants to be allowed to import distant signals. But, if they use spot-beam technology, that will be difficult:

<http://article.multichannel.com/UM/T.ASP?A6.9.1261.5.900428090> "

The big-four network stations from New York, Chicago, Atlanta, Dallas/Fort Worth, Denver and Los Angeles won't be on spot beams, so that they can be offered as distant signals (at present only to certain eligible customers, as well as many who just haven't been cut off yet).

"The company's two-dish plan for all local-into-local service was ruled discriminatory by the FCC. They could conceivably offer ALL local channels on the secondary dish (or try some other remedy):

http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-02-765A1.doc "

From my reading of that order, DISH could comply simply by not activating locals until after a customer has the second dish installed (or signs a waiver acknowledging that he won't be getting all the channels he could). One thing DISH has been criticized for is its policy of requiring a customer to identify which stations he wants to watch in order to qualify for the free second dish, which is exactly what smaller stations are afraid of (they want all customers to see their stations on the "dial" and, hopefully, sample them).

Subject: **Henry Kasperowicz, Pioneer in Color TV Technology, Dies at 84**
From: The New York Times

Henry J. Kasperowicz, whose work for Allen B. DuMont Laboratories in Passaic, N.J., resulted in one of the early patents for a color television tube, died on March 31 in his home in Vista, Calif. He was 84.

Mr. Kasperowicz was a young laboratory worker at DuMont when the patent on his invention was issued in 1950 to DuMont, which no longer exists. It was one of the companies developing color television technology in that period.

When the patent was issued, DuMont announced the invention of an all-color, all-electronic television tube that could "be applied to any existing color or black-and-white television system without obsolescence of existing receivers."

DuMont's director of research, Dr. Thomas T. Goldsmith, said at the time that the new cathode-ray tube would provide high-definition images of large size.

The patent was bought later by RCA.

Other technological contributions by Mr. Kasperowicz helped locate German submarines during World War II and made it possible to view radar screens clearly even in the sun-drenched cockpit of a fighter plane.

Subject: **Hitachi, Matsushita, Philips, Sony and Others to Define New Digital-Interface Spec**

From: The Wire services.

Hitachi, Matsushita, Philips, Silicon Image, Sony, Thomson and Toshiba announced the formation of a new working group to define a next-generation, digital-interface specification for advanced consumer electronics products.

The new High Definition Multimedia Interface (HDMI) specification combines high-definition video and multi-channel audio into one digital interface. The interface is geared for future products, such as digital televisions, DVD players, set-top boxes and others.

This interface builds on the existing DVI digital-interface specification and is backwards compatible with the technology.

But HDMI offers advantages over existing analog interfaces. Its uncompressed, digital format transports high-definition video and multi-channel audio without processing or degrading them. By combining audio with video on one cable, HDMI offers a convenient connection alternative to the maze of existing analog audio/visual cables.

Capitalizing on the interoperability standards created in CEA (EIA/CEA-861x), HDMI assures that the best video format is always sent from source to display. In addition, HDMI will support many capabilities of the AV.link interoperability protocol in Europe.

Subject: **8VSB**

By Frank Eory (Motorola Engineer)

Oh boy, where do I start. First, the latest miracle chip -- which is actually not a chip, but could be made into one. Very impressive static multipath results, approaching that of the other DTV transmission system. But I'm not the only one in the industry who has noticed that DYNAMIC multipath took a very large step backwards with this latest approach, compared to what 8-VSB chips were doing more than 2 years ago. As always, there are trade-offs. I'd hate to think that in order to tolerate 0 dB echoes, we've got to go back to the "nobody move near the

antenna" scenario. Or sacrifice portable and mobile reception.

Secondly, I'm thrilled to see that somebody has demonstrated the use of multipath as "free power" in an 8-VSB receiver. I'm referring, of course, to the LINX receiver performance on Brazil multipath ensemble C, where the threshold was 12.5 dB -- well below the Gaussian noise threshold of 15 dB. When this phenomenon -- multipath being used to advantage -- was demonstrated years ago in DVB-T tests, skeptics on this side of the Atlantic wrote it off. When it was observed in DVB-T field tests in NYC, where multipath was REQUIRED for successful reception at some locations, people still didn't believe it. Now that we've seen 8-VSB also use multipath to its advantage, there should be no doubt that this is both possible and necessary for robust reception.

By the way, thresholds that appear to be better than theoretical can only be seen in a laboratory. Of course you can't beat the theoretical limit. These low numbers in the CRC tests with Brazil ensemble C are due to the test procedure used to set C/N. The amount of noise added is based only on the power of the "main" signal -- the power in the echoes isn't counted. Since the echoes are also "signal", the C/N actually seen by the receiver is much higher than reported -- especially in a strong multipath scenario. This method of lab testing is what has been traditionally used for receiver lab tests, but it is difficult to correlate it to the real world. It's a pet peeve of mine, since the engineer in me is uncomfortable with test results that appear to violate the laws of information theory.

Third, a comment on the subject of less-than-compatible 8-VSB enhancements and the consumer issues of changing the standard. Ed Ellers' points about defrauding consumers who already own 8-VSB receivers, creating confusion in the marketplace, etc. are completely valid and serious ones. I find it interesting that Ed suggests that the FCC should reject any incompatible changes to the standard, but that is exactly what the FCC will be asked to approve if there is to be a "robust" mode for 8-VSB. The degree of functionality of existing receivers will vary from one DTV station to another, depending on how individual broadcasters choose to set the ratio of "robust" data to "normal" (fragile) data. In the extreme case of 100% robust data, existing receivers will have no more functionality than if the new transmissions were DVB-T instead of "enhanced" VSB.

This thread started with "Two Approaches to 8VSB Concerns", but I suggest we

discuss a third approach: LEAVE IT ALONE. We recognize that there are consumer and marketplace issues with making ANY kind of change to the standard. We further recognize that the kinds of "enhancements" we are prepared to make to our existing standard still fall short of the competing standard, and that even if we were willing to adopt the competing standard, there are major DTV spectrum planning issues that must be addressed if we ever hope to have ubiquitous wireless DTV service. We also understand that once NTSC transmissions cease, broadcasters will have DTV cable & satellite carriage and will be financially motivated to maximize their bit rate for cable & satellite -- at the expense of robust wireless reception of their broadcast signal. In short, once the DTV transition is completed, wireless DTV reception will be of little significance to either broadcasters or to more than a small minority of consumers.

Finally, a prediction on where 8-VSB receiver performance is headed -- into the dirt! Consider Powell's 'voluntary' plan to get integrated terrestrial DTV receivers into nearly all TV sets by the end of 2006. Consider that very few consumers will pay much of anything for a component they do not want and do not plan to use. Sure, there will be a niche market for high-performance, high-dollar DTV receivers that are more robust, better able to handle nasty multipath, etc., etc., for those few who really want OTA reception and are willing to pay big bucks for it. But the really sweet spot will be providing "dirt" VSB receivers at the lowest possible price. Just enough to meet the A/53 standard and just enough to be capable of receiving a signal under nearly ideal conditions. Just enough to pay lip service to the facade of the broadcast DTV transition.

Frank Eory

Subject: **Powell's proposal to speed up the DTV transition**

By: Larry Bloomfield

It is worth the time to look over FCC Chairman Powell's proposal to speed up the DTV transition. A .PDF version of the proposal is available on the FCC web site: http://www.fcc.gov/commissioners/powell/mkp_proposal_to_speed_dtv_transition.pdf

The proposal is for Voluntary Industry Actions to Speed the Digital Television

Transition. In summary, ABC, CBS, Fox and NBC, HBO, and Showtime will provide high-definition or other "value-added DTV programming" during at least 50% of their prime-time schedule, beginning with the 2002-03 season. Broadcast Licensees, by January 1, 2003, or as soon thereafter as they commence broadcasting, DTV affiliates of the top four networks in markets 1-100 will obtain and install the equipment necessary to pass through network DTV without degradation of signal quality (e.g., pass through HD programming, if that is what its network provides). Stations broadcasting DTV programming will inform viewers of their digital content through on-air promotional announcements over their analog broadcast facilities.

Cable systems with 750 MHz or higher channel capacity will, by January 1, 2003, will offer to carry, at no cost, the signals of up to five broadcast or other digital programming services that are providing value-added digital programming during at least 50% of their prime-time schedule.

They should also provide cable subscribers the option of leasing or purchasing a single set-top box that will allow the display of high definition programming. These devices will include digital connectors (e.g., 1394/5C and/or DWHDCP) at the request of the consumer, and more.

Direct Broadcast Satellite will, by January 1, 2003, carry the signals of up to five digital programming services that are providing value-added digital programming during at least 50% of their prime-time schedule.

The plot thickens when it comes to equipment manufacturers and retailers. They are being asked to commit to meeting the demand for cable set-top boxes that allow for the display of high definition programming. Market broadcast, cable and satellite DTV options at point-of-sale. Include over-the-air DTV tuners in new broadcast television receivers according to a schedule spelled out in the recommendation.

Nothing contained in this Proposal for Voluntary Industry Action is intended to prejudice any issue in pending or future Commission proceedings.

Two questions: Isn't this a little late in the making? And, why isn't this law instead of rhetoric if they truly want DTV to move forward?

Parting Shots

By Larry Bloomfield

Enough has been said about the lack of attendance at NAB this year; NAB's smoke and mirrors numbers and the reality of the situation will probably never be on the same page. Having been there and having talked to the folks who have provided services to visitors over the years, attendance was very poor and we'll just leave it at that. As I said in several issues back of this newsletter, "not sending at least one engineer to the only place in America where all the latest technology is on display is just plain stupid!"

Funny, the plane I was on had over ten gentlemen from Russia on who were coming to scope out what technology was available. Perhaps they know something that station and network managers (who budget for these kinds of things) don't know.

Our good friend and sometime contributor to the Tech-Notes, Roy Trumbull made mention earlier in this edition of the technology I thought should have gotten top billing in all the trades and gotten those poor souls who have invested so heavily in 8VSB's attention and that's the work done by LINX Chief Scientist Richard Citta. Citta not only presented a paper, entitled "Near Optimal Multipath Combining Receiver," but demonstrated his technology on the floors of the convention center.

My understanding of Citta's approach is instead of trying to cancel out the multipath signals, they try to line them up on top of each other and the main signal there by making the multipath signals indistinguishable from the main signal. In the demonstration, the decoder had no problem locking on to the signal and presented a very fine picture on the monitor. What's really neat is that this approach won't require any changes in the ATSC standard.

Like me, perhaps you've wondered why someone hasn't come up with a way to improve 8VSB receiving and speed up the conversion to DTV using the current ATSC technology, instead of waiting for enhancements to the transmission standard?

According to Douglas I. Sheer, CEO of LINX Electronics, Inc., "It has happened! The engineers and scientists of LINX Electronics, Inc. in Palatine, IL, many of

them formerly part of the original Zenith Electronics Corporation team that put together the United States ATSC System using 8VSB solutions for DTV, have invented a powerful chip-level ATSC-compliant receiver that makes great strides toward harmonizing and combining ghosts to deliver nearly optimal home reception."

The folks at the Linx demo said that the chip would not be available until sometime early next year as they had some further refining they wanted to do to it before it was released to the public.

As a nostalgic buff, I was truly impressed with Chuck Pharis' display of vintage video cameras and other devices at the end of the main Concourse of the Las Vegas convention Center. Present were everything from the legendary behemoth RCA TK-41C color camera down to an Ampex 600 reel- to-reel audio recorder. I was impressed by the working TK-1 monoscope. How many total airtime hours did those puppies have? The equipment was not only prominently displayed, but questions were answered by people who actually used the equipment years ago. One visiting engineer explained that when his station received a 3:1 zoom lens, the staff thought they had died and gone to heaven!

We posted pictures on the Tech-Notes website of some of the equipment www.Tech-Notes.TV click on the report dated 4/8. Pharis resides in Sylmar, CA and is looking for more relics. If you want to see more of what he's collected, go to Pharis' website: www.pharis-video.com.

The Tech-Notes Taste of NAB road show is moving right along. I'm writing these Parting Shots from Dallas, TX, where we will be doing our thing later today. Our local host here is The Whitlock, who despite their busy schedule has provided us with a place to share the technology we are toting around.

I'm happy to say that we've had great turn outs in San Francisco (BABES/SBE), Los Angeles (KCET and SBE) and Phoenix (AVR and SBE). I can't begin to thank the folks for their efforts and for making those venues such a great success.

We're now in our third week, with Houston (Wednesday 5/8/02) and New Orleans (Friday 5/10/02) later this week. Hope to see some of you there. There are still some venues where we've not been able to secure a place to pitch our tent, but I

believe that this will be resolved as the SBE and SMPTE folks in the up coming venues find out how successful and well received we've been.

In closing, and not very technical, I am truly impressed with the visible displays of patriotism I've not only seen but feel, as Carollee, my wife, and I travel across this great land of ours. I wouldn't give you two cents for anyone who'd dare to mess with these people and I'd be very surprised if those responsible for the horrors inflicted on this great nation ever get another good night's sleep. As I heard one person say along the journey: "It's up to God to judge these people. It's up to us to ensure that meeting takes place soon!"

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.

To SUBSCRIBE to the Tech-Notes mailing list, do so by sending an E-mail to: tech-notes-request@maillist.tech-notes.tv and put "SUBSCRIBE" in the subject box and body of the message. New subscriber will get a confirmation response.

To unsubscribe, send E-mail to: tech-notes-request@maillist.tech-notes.tv and put "UNSUBSCRIBE" in the subject box and body of the message. You'll get a confirmation response.

Please visit our web page to review our policies and to see any additional information. <http://www.Tech-Notes.tv>

Thanks

