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*Our purpose, mission statement, this current edition, archived editions and other relative information is posted on our website. We've had over 26,140 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!*



At the risk of saying the obvious, it's that time of year once again.

**What ever faith, philosophy or lifestyle you embrace, we wish you and yours the very best of the season and may you all live long and prosper.**

[Editor's  
Comments](#)

[News](#)

[Letters to the  
Editor](#)

[Features](#)

[Parting  
Shots](#)

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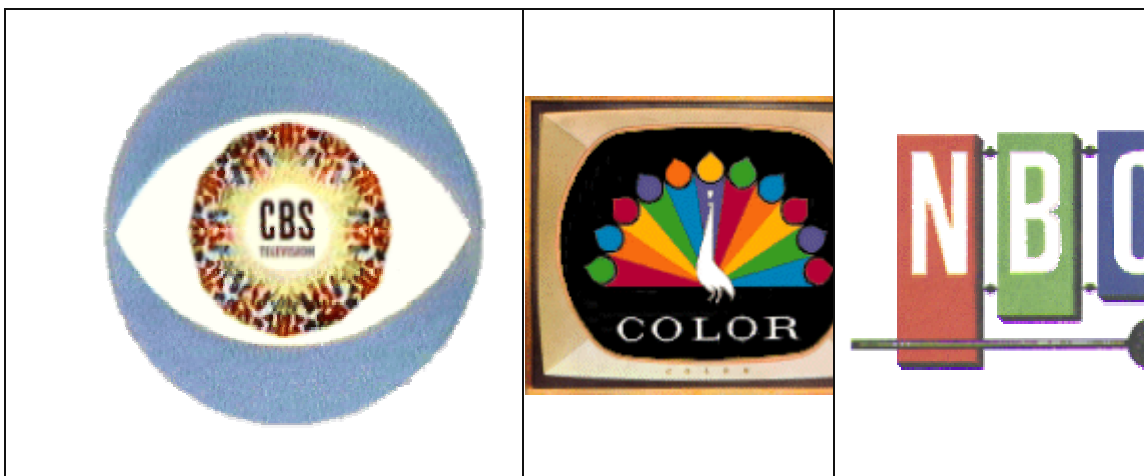
## Editor's Comments

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- This edition's Editor's feature - keeping history alive -- Color Television in the US.



The history of Color television here in the United States has been chronicled by Ed Reitan on his website. The home page opens with: "The Following Program is Brought to You in Living Color by Edwin Howard Reitan, Jr. [the web site for the history of early color television]" Reitan has an exciting tour of many of the early color facilities from the CBS color wheel to the RCA fully electronic system that we use today. Pay it a visit at: <http://www.novia.net/~ereitan/>

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## NEWS

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New feature. Click on the story title and it will take you there.

<a href="#"><u>Television Icon Dies</u></a>	<a href="#"><u>DTV Transition Score Board</u></a>	<a href="#"><u>New FCC Commissioner</u></a>	<a href="#"><u>Technology Retreat</u></a>	<a href="#"><u>Groups Charge FCC Copyright Proposal Assault On Public Rights</u></a>
<a href="#"><u>Satellite TV</u></a>	<a href="#"><u>ABC Asked To</u></a>	<a href="#"><u>HDTV</u></a>	<a href="#"><u>Azteca America</u></a>	<a href="#"><u>Dead Air</u></a>



<a href="#"><u>Merger Terminated</u></a>	<a href="#"><u>Reduce Prime Time</u></a>		<a href="#"><u>Network</u></a>	
<a href="#"><u>FCC Related Stories (5)</u></a>	<a href="#"><u>Hope for 8VSB with multi-path</u></a>	<a href="#"><u>On DTV Transition</u></a>	<a href="#"><u>HDTV Deployments Yet To Come Into Clear Focus</u></a>	<a href="#"><u>Heads UP</u></a>
<a href="#"><u>HD Picture Looking Good</u></a>	<a href="#"><u>MIT Getting Millions For Digital TV Deal</u></a>	<a href="#"><u>on the ropes</u></a>	<a href="#"><u>USC's ETC Named Official DC Test site</u></a>	<a href="#"><u>Ultra HD: Just two decades away</u></a>
<a href="#"><u>Be careful where you set your laptop!</u></a>				

Subject: **Television Icon Dies**

From a Press Release

ABC NEWS Chairman **Roone Arledge** Revolutionized Sports, News Coverage

NEW YORK, Dec. 5 — Television pioneer **Roone Arledge**, chairman and longtime president of ABC NEWS, died today in New York City of complications from cancer. He was 71.

In a long and distinguished career spanning four decades, **Arledge** played a key role in revolutionizing how news and sporting events are covered and watched around the world. When Life magazine asked historians, critics and scholars to select the "100 Most Important Americans of the 20th Century" in 1990, they put **Arledge** on that exclusive list. Sports Illustrated magazine ranked **Arledge** third — behind only Muhammad Ali and Michael Jordan — as one of the 40 individuals who have most significantly altered or elevated the world of sports in the last four decades.

"**Roone Arledge** revolutionized television and with it the way people see and understand the world," ABC NEWS President **David L. Westin** said. "A true creator, **Roone** invented many of television's most enduring and important programs, all the while fostering the brilliant careers of generations of the most talented men and women to work in front of or behind a television camera.

"His ability to broadcast the essential and unfolding drama in all human situations —

from the gridiron to the world's stage — transformed not only sports and news but all of us who watched. He was our leader and our friend and we will miss his passion and his will to make us all better than we were."

The list of Arledge's accomplishments speaks for itself. During his nearly two decades at the helm of ABC NEWS, Arledge created some of the most critically acclaimed news programs in television history.

Prior to his tenure at the news division, Arledge was credited with transforming sports broadcasting. While president of ABC Sports from 1968 to 1986, Arledge introduced virtually all state-of-the-art technologies to sports programming, including instant replays, slow motion, advanced graphics, as well as the introduction of journalistic values and personalization of athletes to sports broadcasting.

"Before Roone Arledge there were no replays. There were no slow-mo machines," said Dick Ebersol, Arledge's protégé who later became the president of NBC Sports. "There was absolutely no prime-time sports on any network."

[Back to News Index](#)



**Subject: DTV Transition Score Board**

By: Larry Bloomfield

DTV signals are now being transmitted in 171 markets that include more than 94% of U.S. TV households. In addition, 62% of U.S. TV households are in markets where local broadcasters are delivering five or more DTV signals.

According to NAB's most recent count (December 5th) there are now 665 full power television stations broadcasting digital. DTV signals in 171 markets; that include 94% of U.S. TV households.

As of June 30, 2002, the FCC says there are a total of 1712 full power television stations.

Do the math! this is only just under 39%. Again, this does not include any requirement for the (2647 UHF Translators and 2094 VHF Translators) 4741 translators/LPTV stations to do anything. Where are they all going in 2006? Keep in mind that there are ten states that have over 300 translators in them and many cable companies get their feeds from 3rd and 4th hops. When do we panic?

[Back to News Index](#)

**Subject: New FCC Commissioner**

From: An FCC Press Release



### **JONATHAN S. ADELSTEIN SWORN IN AS FCC COMMISSIONER**

Jonathan S. Adelstein was finally sworn in on December 3, 2002 as a member of the Federal Communications Commission.

Before joining the FCC, Adelstein served for fifteen years as a staff member in the United States Senate. For the past seven years, he has been a senior legislative aide to United States Senate Majority Leader Tom Daschle (D-SD), where he advised Senator Daschle on telecommunications, financial services, transportation and other key issues. Previously, he served as Professional Staff Member to Senate Special Committee on Aging Chairman David Pryor (D-AR), including an assignment as a special liaison to Senator Harry Reid (D-NV), and as a Legislative Assistant to Senator Donald W. Riegle, Jr. (D-MI).

Prior to his service in the Senate, Adelstein held a number of academic positions, including: Teaching Fellow in the Department of History, Harvard University; Teaching Assistant in the Department of History, Stanford University; and Communications Consultant to the Stanford University Graduate School of Business.

Adelstein received a B.A. with Distinction in Political Science from Stanford University, an M.A. in History from Stanford University, studied at the Kennedy School of Government at Harvard University and is a graduate of Phillips Academy in Andover, Massachusetts. He is a member of the National Academy of Social Insurance, the Phi Kappa Phi National Honor Society and the Pi Sigma Alpha Political Science Honor Society.

Adelstein, 40, was born and raised in Rapid City, South Dakota. He now lives in the Washington, D.C. area with his wife Karen and one and a half year-old son Adam.



On the occasion, Adelstein said: "I was honored to have Chairman Michael Powell administer the oath of office to start my term as a member of the Federal Communications Commission. The issues before this agency touch every American in the most basic ways - their phone services, television, radio, cable and Internet access.

"During my time on this Commission, I will work to ensure that Americans have the best possible communications services by enhancing competition, promoting universal access to all communications services, and efficiently managing the public spectrum."

Adelstein was sworn in for a term that expires June 30, 2003.

We're still waiting for an administration to have the smarts to nominate and get approved an engineer whose discipline includes broadcasting.

[Back to News Index](#)



Subject: **Technology Retreat**  
From: Mark Schubin

The complete schedule of The Technology Retreat is now posted. Check it out! Don't miss this important event.

<http://www.hpaonline.com/public/pages/index.cfm?pageid=132>

TTFN, Mark

[Back to News Index](#)



Subject: **Groups Charge FCC Copyright Proposal Assault On Public Rights**

From: Mark Cooper [mcooper@consumerfed.org](mailto:mcooper@consumerfed.org)

## **Consumer Federation of America**

A Federal Communications Commission (FCC) proposal to implant "broadcast flag" copyright protection technology in digital televisions represents an alarming and illegal reversal of consumer rights to record and watch television programming, according to more than a dozen consumer rights groups. What's more, the groups said in comments filed with the FCC today, the technology fails to correct the very problem it is intended to address: commercial piracy of digital content.

"This proposal is a dramatic attack on the consumer's right to use content that has been legally obtained while doing little to deter large-scale commercial piracy of digital content," said Mark Cooper, Director of Research, Consumer Federation of America and author of the comments.

The groups charge that the Commission has given in to an entertainment industry proposal to hardwire TV sets with digital copyright protection technology, under the guise of an effort to speed the transition to digital TV. However, the groups contend that the broadcast flag is unlikely to speed the digital transition because the digital transition is stymied by other factors such as: a lack of compelling content, intransigent cable operators who have refused to facilitate set-top box interoperability, cost barriers and weak consumer awareness.

"By reducing functionality, the broadcast flag is much more likely to slow the transition and leave the new digital media far less innovative and consumer-friendly than they could be," Cooper added. "A decade of analysis of the new digital media has shown that policies that expand consumer choice with increased options, enhance consumer control, and encourage consumer use speed adoption and stimulate innovation."

Ever since VCRs and portable tape recorders became available, consumers have had the legal right to make convenient and incidental copies of copyrighted works, without obtaining the prior consent of copyright owners. This principle of "fair use" allows consumers this right unless the content owner can show that the copyright is being

violated.

The groups argue that Hollywood and the broadcasters now want to radically alter this longstanding approach to fair use. Furthermore, they want to hardwire this ban into the equipment that records or plays the material.

"Hollywood would have the FCC maintain that all consumers are guilty until proven innocent," said Cooper. "They want to start from the assumption that all use, after the initial viewing, is illegal and then authorize only specific uses and devices."

In addition to the faulty policy basis, the comments argue that the proposal is beyond the FCC's legal authority and has evolved from private negotiations that lack procedural legitimacy.

The Commission's authority in this area pertains only to licenses to broadcast digital TV. Since the FCC issues no licenses to equipment manufacturers, it cannot order them to implement specific technologies.

Finally, the comments point out that the Broadcast Protection Discussion Group (BPDG) who negotiated this proposal did not include consumer advocates, independent artists, librarians, educators or free speech advocates. Instead, representatives from consumer electronics, information technology, motion picture, cable and broadcast industries took part in the group.

"Rather than kowtow to the demands of broadcasters and Hollywood, the Commission could use its authority to promote the public interest," said Cooper. "Forcing consumers to pay more for less, as the FCC proposal does, hardly seems to be the right thing to do."

Full text of the comments can be viewed online at:  
[www.consumerfed.org/flagcomments12.5.02.pdf](http://www.consumerfed.org/flagcomments12.5.02.pdf)

[Back to News Index](#)



**Subject: Satellite TV Merger Terminated**  
From: SkyReport





DirecTV and EchoStar announced December 10, 2002 that they had terminated their proposed merger. Under the terms of the settlement, EchoStar will pay a \$600 million break-up fee to Hughes and will not be required to purchase control of PanAm Sat. The Department of Justice, twenty-three states, the District of Columbia and Puerto Rico had all filed Court action to block the merger and the FCC had designated the merger application for a hearing on grounds that it would create an anti-competitive monopoly in much of the country, with huge consumer welfare losses. The settlement paves the way for Hughes to seek a new buyer for DirecTV.

For more information, go to:

[http://www.corporate-ir.net/ireye/ir\\_site.zhtml?ticker=dish&script=410&layout=-6&item\\_id=362779](http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=dish&script=410&layout=-6&item_id=362779)

[Back to News Index](#)



**Subject: ABC Asked To Reduce Prime Time**

**From: Via ShopTalk By Doug Halonen**



David Barrett, who heads the company that has the most ABC affiliates in the country, has a message for the network: Slash your prime-time schedule from 22 hours a week to 15 so his stations can make some decent money. Barrett is the president and CEO of

Hearst-Argyle Television. Barrett has already had discussions with ABC suggesting that it return to affiliates the 10 p.m.-to-11 p.m. prime-time hour. Hearst-Argyle has 12 ABC affiliates and would likely devote that hour to local news.

Hearst-Argyle not only has the greatest number of ABC affiliates but also, with 10 NBC stations, is that network's second-biggest group owner. ABC had no comment, but executives at CBS and NBC said they oppose the cutback on grounds that it's the more the merrier when it comes to airtime for developing hits.

The whole story is at: <http://www.emonline.com>

[Back to News Index](#)



Subject: **HDTV**

From: An introduction to a publication called The Bridge.

After Years of Discussion, HDTV Is Suenly Hot...

Why Now? It's not like high-definition television just sprang upon the scene. In the late 1980s, the Japanese had an analog system called "Muse." Much ballyhooed for its crystal clear pictures and sounds, it drew "oohs" and "aaahs" from journalists the world over. Unfortunately Muse required a lot of spectrum, and a lot of money. It never moved far from the laboratory shelves.

By the '90s, scientists had discovered that television could be digitized to transmit high-def pictures. That required less spectrum. And somewhat less money. Ever the innovator, HBO developed its own HDTV programming. By the summer of 1999, DIRECTV offered HBO HDTV, the first continuous high-definition broadcast available to consumers on a national basis. EchoStar's DISH Network also put HDTV into consumers' homes; manufacturers began churning out HDTV sets; and the broadcasters, cagey folks that they are, convinced Congress to give them an extra 6 MHz of spectrum to broadcast HDTV signals across the nation. (Well, the over-the-airheads would argue that they're going to "give back" their analog spectrum, but we'll believe that when we see it.)

Still, by mid-2002, less than 1 million U.S. households had high-def tuners for their HDTV capable sets. Now, suenly, HDTV seems to be everywhere. Consumer magazines are touting its advantages; trade shows are being built around its possibilities; programmers are aing high-def programming; sets are, if not flying, at least flowing off the retail shelves.

What happened?

A confluence of events, of course. Dropping prices, a rising mass of programming and cable industry's discovery of HDTV as a potential entre into retail stores are all driving

the surge of interest.

This issue of The BRIDGE is thus devoted to HDTV ... the realities, the potentials and the problems.

[Back to News Index](#)



**Subject: Azteca America Network Signs Affiliates Boosting Coverage to 53% of the U.S. Hispanic Market**

From: Bruno Rangel TV Azteca, S.A. de C.V. [jrangelk@tvazteca.com.mx](mailto:jrangelk@tvazteca.com.mx)



**New Affiliate Breaks the Fastest Growing Hispanic Network in the United States to National Network Level**

TV Azteca, S.A. de C.V., one of the two largest producers of Spanish language television programming in the world, announced today that Azteca America, the company's wholly owned broadcasting network focused on the U.S. Hispanic market, has signed a new affiliate in New York City, with no associated equity investment from TV Azteca.

With the aition of WXNY Channel 39 in New York City, Azteca America now reaches 53% of the U.S. Hispanic market. "With an antennae atop the Citicorp building in Manhattan, the Azteca America signal will reach more than 10 million viewers, more than 2.5 million of whom are Hispanics," said Luis J. Echarte, President and CEO of Azteca America. "Our engineers estimate that our coverage area includes the five boroughs of New York City, as well as neighboring communities of New Jersey, who will now be able to enjoy some of the finest Spanish-language programming," aed the executive.

According to the 2000 US Census, Hispanics comprise 27% of the total population of New York City.

"New York brings us to our goal of network coverage for 2002 with a month remaining in the year," said Pedro Padilla, TV Azteca's CEO. "We are now in a position to leverage our excellent Madison Ave. sales team for preseason sales."

Our New York affiliate is added to Azteca America's 17 existing markets, including Albuquerque, Austin, Bakersfield, Fresno-Visalia, Houston, Las Vegas, Los Angeles, Miami, Orlando, Palm Springs, Reno, Sacramento-Stockton- Modesto, Salt Lake City, San-Francisco-Oakland-San Jose, Santa Barbara, West Palm Beach-Ft. Pierce and Wichita.

TV Azteca is one of the two largest producers of Spanish language television programming in the world, operating two national television networks, Azteca 13 and Azteca 7, through more than 300 owned and operated stations across the country. TV Azteca affiliates include Azteca America Network, a new broadcast television network focused on the rapidly growing US Hispanic market; Unefon, a Mexican mobile telephony operator focused on the mass market; and Todito.com, an Internet portal for North American Spanish speakers.

Except for historical information, the matters discussed in this press release are forward-looking statements and are subject to certain risks and uncertainties that could cause actual results to differ materially from those projected. Risks that may affect TV Azteca are identified in its Form 20-F and other filings with the US Securities and Exchange Commission.

[Back to News Index](#)



Subject: **Dead Air**  
From: Scott Woolley,

**(Editor's Note:** There is a vast amount of "opposition information" out there and it is important to see what other factions are saying whether you disagree with them or not.)

Cell phones and the wireless industries of the future are snarled by a critical shortage of airwaves--the result of decades of wrongheaded, archaic regulations. A new band of wireless warriors is fighting to free the skies.

Vanu Bose gazes at blue skies over Boston and dreams of filling them with a fantastic array of wireless services. He is building new radio receivers not out of wires but in software--smart communicators that can be programmed to transmit any sort of signal.

Bose's gear could spot empty airwaves and use them to send crystal-clear cell calls or blast data to a laptop across town.

The technology to do all of this exists, as does the airspace--most of the aerial spectrum over Boston is essentially devoid of any signals. The one thing Vanu Bose lacks is the right to use the empty air. Over the past century the federal government has carved up the airwaves and given them away to private and special interests ranging from television broadcasters and power utilities to universities and the Catholic Church. The result is that one of America's most valuable natural resources sits paralyzed, consigned to uses that time and technology have long since passed by. Old technologies are swamped with excess airwaves they don't use; newer technologies gasp for airwaves they desperately need; and promising industries of the future are asphyxiated.

It is the bitter irony of America's skies: Open airwaves are everywhere, yet the people desperate to use them cannot.

Television broadcasters have controlled a huge swath of the airwaves (15% of the "prime" radio spectrum) for more than 40 years, yet today that big slice serves only 11 million U.S. homes; cable and satellite serve the other 88% and don't use any prime spectrum to do it. Cellular carriers are assigned only half as much prime space but must serve 137 million customers. So while the vast majority of TV airwaves goes unused, rampant cellular crowding causes blocked, dropped and tinny-sounding calls. A huge band of spectrum doled out in the 1960s sits almost entirely ie, used on occasion to distribute videos to schools and similar fare--yet is twice as wide as the slice of airwaves shared by 20 million users of Wi- Fi, the hottest new wireless industry. Other airwaves serve such arcane uses as the tracking of caribou, flying toy airplanes and accommodating radio emissions from doughnut fryers. For newcomers like Bose, there is nothing.

"There's no incentive to build new, flexible equipment because there is no flexibility in the rules," says Bose, founder of upstart Vanu Inc. "It's an egregious waste." Kevin Negus, a member of the Tri-County Telephone cooperative in Basin, Wyo., who wants to use new "cognitive radios" to shoot fast Internet access to his neighbors' ranches, as: "The spectrum is completely, overwhelmingly, unbelievably underutilized. Yet it is illegal for us to do the logical thing."

Such frustration has reached a boiling point in high tech, as today's unprecedented pace of wireless breakthroughs--if combined with access to abundant, affordable spectrum--may offer the best hope for reviving a devastated business. The promise of freer skies is tantalizing. Intel just discovered how to build entire radios in silicon chips and vows to send wireless communications costs plummeting at the same rate as the price of computing power. Other wireless technologies with names like "cognitive radio," "ultrawideband," "software-defined radio" and "mesh networks" show equally stunning potential.

"Wireless technologies only work if they have spectrum to run on, but most of the

spectrum is empty most of the time. It's absurd," says Dennis Roberson, Motorola's chief technology officer. Intel's top technology officer, Patrick Gelsinger, figures well over 90% of the airwaves goes unused at any time. "If any other natural resource was this underutilized, it would be considered a national travesty," he says.

America's paralysis of the airwaves may, at long last, be cured. A new breed of wireless warriors, backed by powerful allies in Silicon Valley and in the Bush Administration leads the fight. Many techies want to let the free market--not federal bureaucrats--decide how to use the spectrum. Another group crusades to create more of a public highway model, opening huge swaths of "unlicensed" airwaves to any and all users. This pincer movement may finally pry spectrum away from the powerful incumbents that grabbed it, free of charge, decades ago.

"It seems to me universally obvious that this current model will crumble," says FCC Chairman Michael Powell. "Market forces must replace a laborious process of government command and control." At his behest, an advisory panel is about to issue a policy paper recommending an overhaul of the entire antiquated system of regulating the airwaves.

Yet all this incipient innovation may get snuffed out by a government that prefers to use the spectrum's artificial scarcity to sell slivers of air at mind-boggling prices. In recent years companies--mostly cell phone carriers--have bid over \$30 billion for access to a mere 5% of the prime spectrum. It is a policy suitable to OPEC: Restrict output and try to run up the price.

[Back to News Index](#)



### **FCC Related Stories**

**Subject: FCC eyes cable-ownership cap**

By Bill McConnell of Broadcasting & Cable

Cable companies would be able to serve as many as 45 percent of subscription-TV households under a recommendation to Federal Communication Commission members drafted by the agency's Media Bureau.

The new ownership restriction would not be a rigid number, but it would vary between 30

percent and 45 percent depending on the company's ownership of cable-programming networks.

see the complete story at:

[http://www.broadcastingcable.com/index.asp?layout=story&doc\\_id=109448&display=breakingNews](http://www.broadcastingcable.com/index.asp?layout=story&doc_id=109448&display=breakingNews)

[Back to News Index](#)



In a move sure to make broadcasters nervous, the Federal Communications Commission raised the possibility that it would one day make portions of the TV broadcast band available for unlicensed devices that use tiny chunks of spectrum and operate at very low power.

Unlicensed devices on the market now range from coress phones to wireless broadband and are generally forbien from causing interference to licensed spectrum users.

For the rest of the story, visit:

[http://www.broadcastingcable.com/index.asp?layout=story&doc\\_id=109349&display=breakingNews](http://www.broadcastingcable.com/index.asp?layout=story&doc_id=109349&display=breakingNews)

[Back to News Index](#)



**Subject: FCC Launches Inquiry Into Using Spectrum For New Unlicensed Services**  
From: FCC Press release

The Federal Communications Commission launched an inquiry this week seeking comment on whether unlicensed devices should be permitted to operate in frequency bands currently allocated for broadcast services in the 3650-3700 MHz band. Unlicensed transmitters would operate under the provisions of Part 15 of the Commission's Rules and would share spectrum with authorized services at relatively low power levels. The inquiry explores ways to exploit existing spectrum resource more efficiently by allowing new unlicensed services to operate on a non-interfering basis. The inquiry also seeks feedback on the feasibility of allowing unlicensed devices to operate in bands at power levels higher than other unlicensed devices.

For further information, please go to:

[http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-229400A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-229400A1.doc)

[Back to News Index](#)



Subject: **Do It or Else!**  
By Larry Bloomfield

The FCC will begin to get financially serious with the 71 commercial TV station it admonished for failing to launch digital service. Earlier this year, the FCC took issue with the station for not justifying their failure to be on the air with digital as of the May 1, 2002, deadline. Another 772 of the 1,315 commercial stations got six-month extensions that have now expired. Second extensions have been requested by 507, with 62 so far given the additional half-year. The rest are under review.

The 71 admonished stations that didn't make the Dec. 1 digital deadline, can be issued notices of apparent liability for fines and required to meet a series of 30-day construction milestones. Any of those stations still without digital signals six months from now could have their construction permits yanked. That is not good should they wish to remain in the broadcast business.

[Back to News Index](#)



Subject: **Homeland Security: Protecting the Nation's Communications Network Against Attack**  
By Larry Bloomfield

Senior representatives from the telecommunications, cable, Internet and satellite industries considered a series of comprehensive recommendations to protect the nation's communications infrastructure – both physical and cyber – against attack. The proposals were presented at the Network Reliability and Interoperability Council (NRIC) VI quarterly meeting Friday, December 6, 2002.

FCC Chairman Michael K. Powell and Richard C. Notebaert, NRIC Chairman and Chairman and CEO of Qwest Communications chaired the meeting. Powell chartered NRIC VI January 7, 2002 to focus on homeland security by ensuring the security and sustainability of public telecommunications networks in the event of a terrorist attack or national disaster. Membership in NRIC was significantly expanded through NRIC VI to include corporate representatives from the cable, wireless, satellite and ISP industries. It also established four new working groups to address homeland security: Physical Security, Cyber Security, Disaster Recovery and Public Safety.

Real audio and streaming video access to the meeting may still be available at <http://www.fcc.gov>.

[Back to News Index](#)





**Subject: Hope for 8VSB with multi-path**

By Larry Bloomfield

Don't call it Casper!

What was being called Casper at NAB 2002 is still around and doing fine. Bob Rast, Linx Electric's President, told us Friday that they have been asked by the folks who own the "Casper the Frieny Ghost" name not to use Casper, but that has nothing to do with the great progress they are making in the development of the technology.

What took up part of a rack of equipment at the NAB show is now down to eight chips and is being refined to a single chip. We know this part of the technology can be accomplished, but what makes it all worth it is what this technology does.

As most of know, one of the major issues with 8VSB is multipath. Multipath tends to confuse the decoder and when that happens, nothing gets out and the result is no picture or sound. The spectrum analyzer, in this case, would show a number of spikes representing the multiple signals.

At the NAB demonstration, the Linx folks, with an STA, transmitted in side the Las Vegas Convention Center multiple signals that would replicate multipath, plus what was bouncing around the Convention Center structure. The Spectrum Analyzer displayed a forest of spikes. The Linx chip aressed this very smartly. It took the better parts of the various signals, reassembled them into a single bit stream that the decoder could cope with and --- picture with sound on the receiver.

This fall in Chicago, Tribune Broadcasting, Linx, Zenith and Samsung worked together, visited 125 test sites, all in door, to see if their chip sets worked in the real world. From the reports we've received, the tests went as smoothly as they had in the Canadian test labs prior to NAB and during the show.

Rast says that they have a lot of refining and fine tuning ahead before the single chip will be ready for the consumer market. He also reported that there is a series of test to be conducted in association with MSTV after the first of the year and they will report the results at NAB2003 this next spring.

Linx put on a "horse and pony show" this past week. The only first hand eyewitness that we know to have been there is Mark A. Aitken, Director, Advanced Technology for Sinclair Broadcast Group. Although we respect Aitken, and believe he'd be honest to a fault, we also know that he has been on a team that has not exactly been the strongest proponents of 8VSB. The following is Aitken's report of the event, unedited:

I will try to be level with my observations.

Chicago...

I was never "WOW"ed with what I saw, nor was I "Ho-Hum"ed. What I saw was interesting to the degree that what I saw somewhat approximated (in a very informal way) what we had done 3 years ago with COFDM vs. 8VSB to a very limited degree. The setup was "and in the left side of the ring we have LINX", a NTSC receiver in the mile (some would argue that this gave some intuitive notion of the multipath - and some of it WAS pretty ugly and unviewable stuff) and "in the right hand side of the ring" a VERY early receiver (what was termed a professional unit, but was revealed later to have been based on a manufacturers first generation chipset (does that make it a second generation??)).

There were ~ 10 stations (digital) to receive. NO direct line of site, but all from 1 of 2 fairly close (within ~ 1.5 miles) sites (Hancock and Sears). Antenna was (for most of the 'demo') a simple precision dipole 'cut' for a mid UHF channel. By and large, the LINX unit operated close to flawlessly with 8 out of the 10 channels. Meaning, no visible artifacts (there was no audio, which would have been a better indicator some might argue). The 2 other channels had visible blocking/freezing related artifacts.

The "REFERENCE" receiver (I tried and tried to get a definition of WHY this particular unit was chosen, the best explanation I got was that it was available to them) received 2 stations without issue (once again no audio to reference), difficult/problematic reception on a couple others, and nothing on most.

BIG difference between the two. However, not scientifically significant (to this observer) not knowing performance of the "REFERENCE" unit. The environment was challenging not only because of observable multipath spectrum impairments (there was a Z-Tech Spectrum analyzer being displayed), but also because of adjacent channel issues. It is not possible to state that the reasons for failure (in any of the cases) were simply multipath related. A few examples of the displayed spectrum WOULD have been a killer to most chipsets I have seen, but not all...so my conclusion is that there is (most likely) some improve performance.

Remember, this was LINX's "DOG AND PONY SHOW", and control in most every way except for the ability to view the response of receiver performance with a variety of antenna types/position (most of the time moving killed the receivers, but typically the LINX was able to re-acquire...NOT MOBILE clearly!) was the "DEMO".

Improvement? I would say "Yes, to SOME degree". How good? Impossible to know. More information needs to be imparted on this industry. To LINX's point, they are not claiming that there is a new "digital messiah", but rather a road of future improvements that are being laid out. Maybe the future will reflect those improvements.

To be honest, on reflection, my overall assessment IS "Ho-Hum"...but I have a tainted view having worked extensively with many receivers and many standards in many environments. I have seen this level of performance (AND MORE!) before...a long time

ago...who knows, maybe VSB is catching up.

I am sure that there are more questions...fire away. I hope that there are others who attended that can offer their response. After all, this report is anything but unbiased :-)

Regards, Mark A. Aitken, Director, Advanced Technology

We thank Aitken for his candid comments. It will be interesting, to say the least, the outcome of the tests with MSTV.

[Back to News Index](#)



**Subject: GAO Report On DTV Transition**

By: Fred

Lawrence

In a report issued on December 2, 2002, the General Accounting Office ("GAO") says that the transition was hampered by lack of consumer and retailer awareness of the issues involved. According to the survey of households conducted by GAO in connection with the report, viewers are generally oblivious to the DTV transition - 40% have never heard of DTV and fewer than 20% said they were "very aware" of it. Furthermore, the Report reveals that many retailers were generally uninformed about the availability of cable or satellite delivered DTV services and had little information about issues such as the ability to receive DTV over the air and the amount of high-definition content currently available.

The report recommended that the Federal Communications Commission: Explore options it could take to raise public awareness of the DTV transition; Direct relevant bureaus and offices to study costs and benefits of mandating that all new TV's be digital cable-ready and report actions the FCC or Congress should take; Direct the FCC's Media Bureau to study the advantages and disadvantages of a policy to set a "date-certain" switch by cable from full carriage of analog signals to full carriage of digital signals.

For further information, please go to : [www.gao.gov](http://www.gao.gov)



"I believe that the GAO's recommendations with respect to mandating cable tuners, as well as the notion of a switch-over to digital from analog must-carry rights, merit particular attention," Markey said in a prepared statement announcing the study's release

"I will be crafting legislative proposals in the coming weeks that contain the policy suggestions advanced by the GAO, as well as other initiatives, for consideration by my Subcommittee colleagues."

[Back to News Index](#)



**Subject: HDTV Deployments Yet To Come Into Clear Focus**

From: Source: Reed Business Information - US - Multichannel News -- 12/09/02, p. 63

While cable operators are apparently resolute about deploying high-definition television, how to deal with the myriad bandwidth, content and business issues remains a fuzzy picture at best, as attendees found out at the Cable and Telecommunications Association for Marketing luncheon at the Western Show here last week.

The session delved into the challenges that surround bringing HDTV to market, and there was no shortage of issues to address.

To start with, cable operators need to find ways to fit bandwidth-sapping HD channels into a digital-video plant that's already crowded with standard channels and video-on-demand offerings.

"We are going to have to be better at offering more efficient ways to manage that bandwidth," admitted Bill Geppert, vice president and general manager of Cox Communications Inc.'s San Diego division.

The MSO can gain back some bandwidth by converting analog channels to digital, but making the system more dynamically efficient by sending HD streams only to HD customers would make a big difference, according to BigBand Networks Inc. chief operating officer Jamie Howard.

The video-technology provider is working on a switched broadcast system that could do just that.

But if every local broadcaster and cable network makes the digital transition -- and also starts funneling multiple video streams through their single, 6-megahertz channel -- that still may not be easy. Not only would that require the content to keep up with the conversion, but it also has overload potential.

"How does that bandwidth get managed when you have four to five stations in your local market, plus the cable networks all demanding their share of digital bandwidth?" asked Tim Hanlon, vice president and director of emerging contacts for Starcom MediaVest

Group.

There also needs to be enough HD content to drive consumer interest. ESPN, which is within four months of launching its high-definition service, is banking on the fact that the sharp picture and wide-screen format is a natural for its sports audience.

"We're very optimistic about it and are charging forward," said Sean Bratches, executive vice president of affiliate sales and marketing for the sports programmer.

#### Consumer confusion

Consumer confusion has also degraded how HD is perceived, panelists agreed. As many as 27 percent of cable customers believe they already have HD, according to various reports, even though all but a handful have boxes and TV sets able to render the format.

The public also needs a better idea of what exactly HD's sharp picture and wider screen can do for them. That presents a huge opportunity for cable operators, content providers and retail electronics outlets to market HD and showcase its benefits, thus giving consumers a reason to buy HD sets, according to Frank Romeo, director of DTV strategy group for Samsung Electronics America Inc.

"A DTV set alone is not going to make the sale, and I think that is something the cable industry needs to look at," he said. But the current reality is that HD deployments will reach a relatively small cable audience. Cox recently deployed HD in San Diego, and so far, there have been about 1,000 service orders and 750 HD set-top boxes installed, according to Geppert.

Despite the attention given to these services, high-definition television isn't likely to become a big revenue provider going forward.

"I don't see high-definition being necessarily a huge contributor," Geppert said. "I think it is something we have to have, we need to have, to stay competitive."

[Back to News Index](#)



Subject: **Heads UP**

By: Jim Mendrala



For an interesting "History of Audio Processing" go to:  
<http://www.omniaudio.com/tech/retrospective.htm>

Jim

[Back to News Index](#)

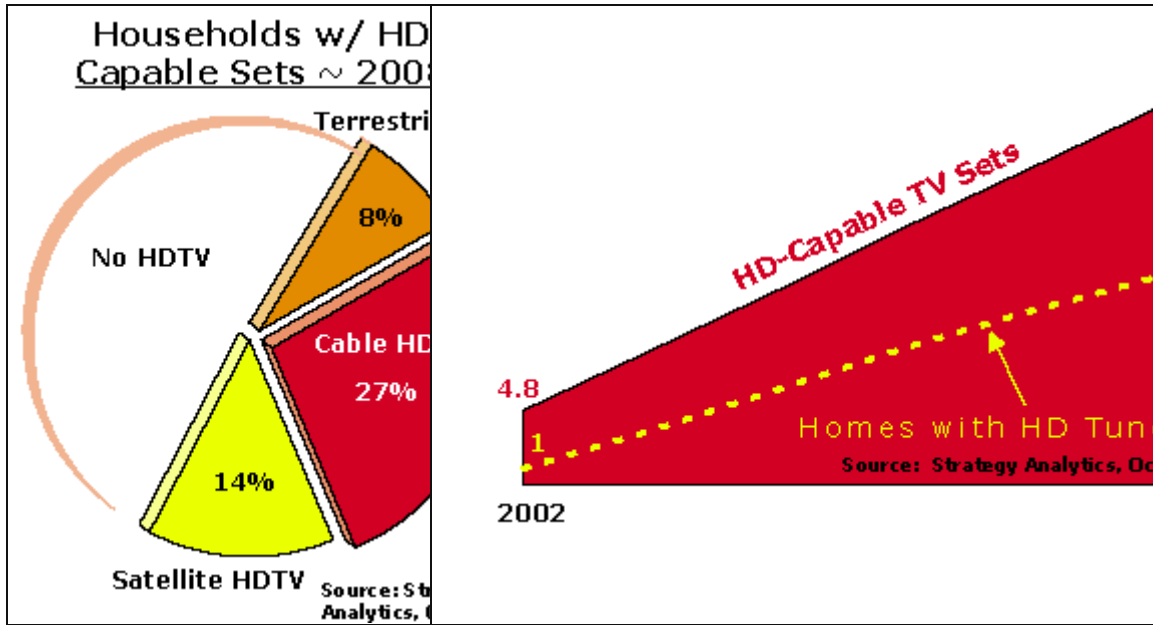


Subject: **HD Picture Looking Good**

If you saw a multi-billion dollar bandwagon passing by, wouldn't you jump on? Of course you would. And with research firms such as **Strategy Analytics** projecting sales of HD cable sets to pass the 10 million mark across the next few years, manufacturers, platform providers and programmers are all busy climbing aboard. At the moment, of course, HDTV is far from a slam dunk. And probably not even on the level of hula hoops as an American fad. While the FCC has mandated digital broadcast signals across the nation, the transition is going far slower than first decreed. And, of course, questions about whether consumers will really buy into the ultimate digital television that is high-definition have yet to be answered.

Still, Strategy Analytics sees a 29 million HDTV-capable universe by the end of 2008, with cable providers slated to capture the lion's share of the market.

Key questions over broadcast carriage, price and even desirability still revolve around HDTV, making it an uncertain albeit potentially very profitable prospect. •



[Back to News Index](#)



**Subject: MIT Getting Millions For Digital TV Deal**

By Keith J. Winstein

MIT will receive \$30 million from Dolby Laboratories, the result of Dolby's selection as the national standard for digital television audio in the U.S. and a subsequent lawsuit settlement.

A crucial vote cast in favor of Dolby by Jae S. Lim '74, an MIT professor of electrical engineering, helped select Dolby as the standard for digital television audio in the United States. Lim cast MIT's 1993 vote in favor of Dolby's technology in the television industry "Grand Alliance" to draft a unified recommendation to the Federal Communications Commission. He is expected to receive more than \$8 million from Dolby's payments to MIT, said Jack Turner, the associate director of the Technology Licensing Office.

<http://www-tech.mit.edu/V122/N54/54hdtv.54n.html>

[Back to News Index](#)



**Subject: Patent holders on the ropes**

By Paul Festa - Staff Writer, CNET News.com

A sea change in the views on patented technologies is affecting a broad range of high-tech standards organizations, forcing caps, thresholds and outright bans on royalties.

The news in recent weeks and months has not been good for patent-holding members of standards groups, as one industry consortium after another has put the brakes on licensing plans.

In aggregate, the news during the past year has put patent holders on the defensive as they fight to have their technologies adopted throughout the industry as a standard, while preserving the right to charge for the use of those technologies.

For the complete story, go to: [http://news.com.com/2100-1023-975587.html?tag=fd\\_top](http://news.com.com/2100-1023-975587.html?tag=fd_top)

[Back to News Index](#)



**Subject: USC's ETC Named Official DC Test site**



The Entertainment Technology Center at USC's Digital Cinema Laboratory was named by Digital Cinema Initiatives, LLC (DCI) as the official site to test digital cinema technologies, it was recently announced by Entertainment Technology Center executive director/CEO Charles S. Swartz.

A neutral research center funded by Hollywood studios and high tech companies and dedicated to evaluating new entertainment technologies, the Entertainment Technology Center will work with DCI, a joint venture of seven major studios, to establish uniform, open and voluntary standards for digital movie release that will be scalable into the future.

"To aid with the design and testing of digital cinema is among the highest purposes of the Digital Cinema Laboratory," said Swartz. "We are thrilled that DCI has shown its faith in



make digital cinema a reality for all."

"The Entertainment Technology Center has become the industry's de facto digital cinema test bed," according to DCI chief technology officer Walt Ordway. "There was no need for us to reinvent the wheel, because the Center provides a state-of-the-art facility, expertise and non-partisan stance we need to move our work forward."

Swartz and Digital Cinema Laboratory director Paul Miller will collaborate with Ordway, DCI chief executive officer Chuck Goldwater and DCI director of technology Howard Lukk to develop and implement procedures with which to evaluate digital cinema equipment and systems. They will focus on final mastering, distribution and exhibition to devise solutions that provide a perceivably higher quality image to audiences. Competing digital solutions will be compared to each other as well as to film solutions. The overall goal is to develop a global, interoperable digital cinema standard that will be the basis for suppliers to compete to provide equipment at a reasonable cost.

Founded in 1993, the Entertainment Technology Center at University of Southern California is a stand alone, neutral research organization devoted to identifying pivotal, emerging entertainment technologies and creating programs to analyze and test them. One of the Entertainment Technology Center's projects is the Digital Cinema Laboratory, a state-of-the-art screening facility at the historic Pacific Hollywood Theatre that examines digital moving image acquisition, distribution and exhibition. The Entertainment Technology Center's sponsors include most major Hollywood Studios (Disney, LucasFilm, Sony Pictures Entertainment, Twentieth Century Fox, Universal, Viacom/Paramount and Warner Bros.) and leading high tech companies and organizations (Laser Pacific Media Corporation, Panasonic, SBC/Pacific Bell and TRW).

Digital Cinema Initiatives (DCI), LLC is a limited liability company whose members include Disney, Fox, MGM, Paramount, Sony Pictures Entertainment, Universal and Warner Bros. The venture was formed in March 2002 and has its principal place of business in Hollywood, CA. The primary purpose of DCI is to establish and document an open architecture for digital cinema components that ensures a uniform and high level of technical performance, reliability and quality control.

[Back to News Index](#)



**Subject: Ultra HD: Just two decades away**

By Larry Bloomfield

Just when today's HD is beginning to be recognized by the US consumer, despite all the confusion and misinformation, NHK, the folks who first aired HD, say they will

demonstrate "Ultra HD," with 4,000 lines of resolution (compared with today's limit of 1080i [interlace]). But you'll have to make plans to visit the 2005 World Expo in Aichi, Japan to see it.

"The resolution is three or four times the resolution of 75mm [75-millimeter] film," said Katsuji Ebisawa, president of Japanese public broadcaster NHK, which is developing the technology. "Of course, it may take two decades or more to put it on the market, but at least we can put it on display at exhibitions."

What makes this interesting is the fact that Hollywood appears to be complacent with today's HDTV (just over 2 megapixels) despite the fact that Digital Cinema should be at least an 8-10 megapixel format. MPA has even lobbied to get broadcast television limited in the area of HD because broadcasters transmit pictures that are as good or better, in some cases, than what they are putting up on the screens. Perhaps this will be a wakeup call and will move Hollywood on to better technical achievements and stop musing the waters with other such nonsense as their incessant copy protection issues.

[Back to News Index](#)



Subject: **Be careful where you set your laptop!**

By Larry Bloomfield

For our final story for this news section of our Tech-Notes, I could not believe this story. You'll have to visit the website and see for yourself. A story from Reuters News service out of London, England reports that a 50-year-old scientist toasted his private parts from the heat generated by his laptop computer. He noticed a redness and irritation the following day but it was not until he was examined by a doctor that he realized how much damage had been done. Two days later, the blisters broke and the wounds became infected and then crusted but after about a week the unidentified scientist was "healing quite rapiy."

See the complete story at:

<http://www.cnn.com/2002/WORLD/europe/11/22/health.laptop.reut/index.html>

The scientist said: "This...story should be taken as a serious warning against use of a laptop in a literal sense!"

[Back to News Index](#)

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**Letters to the Editor**

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From: Joshua Kairoff

I am interested in getting feedback from your Tech-Notes readers on how they hane the transmission of 1035i signals from 1080i and 720p stations. I.E., if content comes in as 1035i, is it broadcast as 1080i / 720p with less active lines, or is it vertically stretched to fill the active area.

Any feedback your readers have would be extremely useful.

Take care and thanks. Joshua 310.952-3062 - Direct Line



From: Name withheld on request

And if you've ever wondered how Google works as well as it does? Wonder no more!  
Check this link out for the details:

<http://www.google.com/technology/pigeonrank.html>



From: Robert N. Vendelan

I had scanned your latest edition of Tech Notes when you first sent it, but I finally got to read it in detail tonight. I really like the way you've done it in Acrobat. Not only does it look good, but it is a joy to navigate using the thumbnails.

Robert N. Vendeland [\\_RNVendeland@cox.net](mailto:RNVendeland@cox.net)



Subject: **cool web site** (from a subscriber)

Great stuff for when your smart kids start asking questions and some of you will also find it interesting. Some very interesting stuff about light and optics, including perhaps the only page on the whole internet that shows what a cheeseburger looks like in a microscope.

The Powers of Ten demo is a Java adaptation of a classic movie that I first saw in Smithsonian Air and Space years ago. It shows that we live about in the mile of the immense scale of distances. Also, there are a few voids in the distance scale where nothing much seems to change. One is inside the atom and another is sub-galactic.

No ads, spam, or registration to fill out. <http://micro.magnet.fsu.edu>



From: **Mark Schubin**  
Subject: Re: Tech-Notes

A suggestion: How about a notification list? All you'd need to send is a URL. Then we can just go to the site and read the Tech-notes there.

If there is no notification list, then I must request to be removed from the list. I travel a lot and cannot afford the phone charges to download 1 MB at 1200 baud (which is sometimes the best speed I can get).

No hard feelings either way.

TTFN,  
Mark

*(Editor's Note: We've done this and have moved Schubin and several others over to the Notification List. You can do that yourself on the front page of our website. If you have any trouble, send us an e-mail at [Editor@Tech-Notes.TV](mailto:Editor@Tech-Notes.TV) )*

[Back to News Index](#)

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## Features

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Subject: **Some of My Observations**

By: Burt I. Weiner [biwa@earthlink.net](mailto:biwa@earthlink.net)

While a significant amount of spam originates from foreign servers or promotes websites hosted in China, the vast majority of what I get seems to promote products/"services" offered by Americans. Any legislation which not only prohibited spamming, but prohibited those under U.S. jurisdiction from hiring others to spam on your behalf would stand a chance of being effective.

I have not saved any of these, but I am constantly getting SPAM offering to have "my company and it's product" e-mailed to billions and billions of internet users. So I guess you could say I get SPAMMED inviting me to SPAM. Next time I'll look at the headers rather than just trashing it. I may miss it because I usually just delete this stuff without even opening it.

If you are getting telemarketing calls and telemarketing faxes go to this FCC site and fill out a complaint form. Be sure to tell the telemarketer you do not want to be called, AND be sure to get the name and phone number of his telemarketing company and fill out the complaint form and send it in.

<http://www.fcc.gov/cgb/complaints.html>

Burt Weiner



Subject: **THE E-MAIL SCANDAL**

From: Barry Mishkind - Tucson, AZ - <http://www.broadcast.net/~barry>

Brian Livingston writes for Infoworld. I think the message that follows is well worth your time to read and consider why many emails you send are not received. Don't hit your IT guy too hard. He's just following industry trends.

Also ... this explains why I almost always respond to incoming email with an ACK of some sort. (Much better than those annoying "Return receipt"s) Anyone with a real solution that can be implemented will become instantly famous and wealthy.

Brian tells us that A NEW STUDY shows that 11.7 percent of messages that were requested by an e-mail subscriber never reached the recipient's inbox. Six percent were incorrectly routed to a junk mail folder, and 5.7 percent never arrived in any form.

The problem is faulty spam filters put in place by major ISPs such as Earthlink, MSN, and AOL. In their attempts to reduce UBE (unsolicited bulk e-mail, or spam), these services appear to be whacking many messages people actually want.

The author of the study, George Billbrey, used a simple method. He obtained several e-mail accounts from each major ISP. He then subscribed to 20 companies' e-mail alerts and watched his inboxes for three months. The result? Almost one in eight messages didn't make it.

Of course, this study is small and a bit subjective... The findings lend weight to a growing scandal I've been investigating. You can no longer rely on e-mail delivery. With UBE nearing 50 percent of all e-mail traffic, crude spam filters are the rage. Online billing, order updates, and other messages crucial to business can't be counted on.

In the latest development, AOL's new 8.0 version provides a Report As Spam button. One legitimate e-mail service says 99 percent of its spam complaints now come from AOL.

That's because end-users have redefined spam to include "anything I signed up for that I no longer want." They've been told, "Never click Unsubscribe or you'll get more spam." This advice is dead wrong; spammers don't care who unsubscribes and don't value tiny opt-out lists. But users now think crying "spam" is unsubscribing.

I sympathize with people who are desperate to stop the flow. But spam filters put a Band-Aid on the wrong end of the problem. When a broken pipe is filling your basement with water, bailing away with a bucket does little good. The only solution is to find the intake valve and shut it off.

I wrote seven months ago that UBE was quadrupling annually. (See "<http://www.infoworld.com/articles/op/xml/02/04/15/020415opwinman.xml>".) In two years, 16 times more spam will hit your router. This spells griock.

Junk faxes and automated telemarketing calls are already against federal law. Aing "unsolicited bulk e-mail" to the act would be a big help. But it's strongly opposed by the Direct Marketing Association (DMA), a lobbying group for 4,700 companies.

"We don't think an opt-in regime has economic viability," says DMA Senior Vice President Jerry Cerasale. "If you go with optin, you foreclose the economic viability of this as a marketing channel."

It's insane for DMA members to send e-mail to people who didn't request it. Thanks to this lunacy, soon only HALF your e-mail will get through.

Brian Livingston is co-author of 10 Windows Secrets books. Fax tips to (206) 282-6312. Subscribe to Window Manager and E-Business Secrets at [www.iwsubscribe.com/newsletters](http://www.iwsubscribe.com/newsletters).

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Barry Mishkind hosts The Broadcast Archive <http://www.olderadio.com>

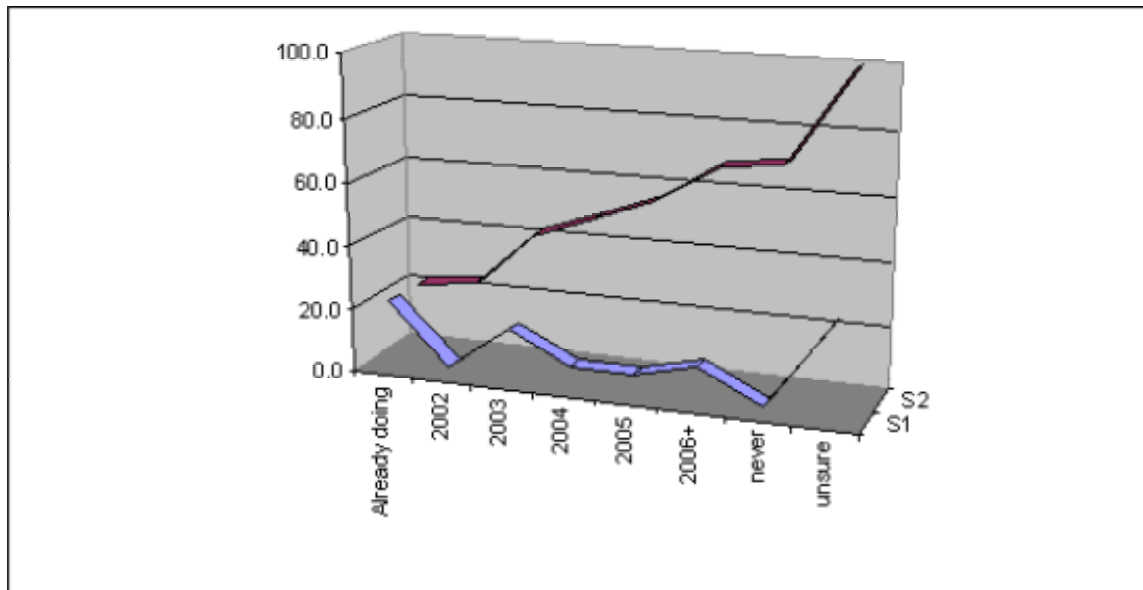


**Subject: TV Stations Converting SD to HD**

From: Des Chaskelson ( [des\\_chas@scri.com](mailto:des_chas@scri.com) ), SCRI International ( [www.SCRI.com](http://www.SCRI.com) )

According to SCRI's 2002-2006 H/DTV Migration Survey of US TV and Cable stations ( [http://www.scri.com/sc\\_reprt.html](http://www.scri.com/sc_reprt.html) ), almost one in four stations (24.4%) are up converting SD analog programming into one of the high definition formats. By the end of 2003, this will increase to over four in ten stations (41.5%), and by 2005, to over half of all stations (56.1%)

As the receiver and cable carriage issues are adressed and resolved, more stations and cable programming providers will be willing to up convert their SD analog programming into one of the HDTV formats, if not replace the SD analog programming with digitally originated programs in either SD or HDTV formats.



<b>Year</b>	<b>Percent</b>	<b>Cum.</b>
Already doing	22.0	22.0
<b>2002</b>	2.4	24.4
<b>2003</b>	17.1	41.5
<b>2004</b>	7.3	48.8
<b>2005</b>	7.3	56.1
<b>2006+</b>	12.2	68.3
<b>never</b>	2.4	70.7
<b>unsure</b>	29.3	100.0
<b>Total</b>	100	

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## Parting Shots



By Larry Bloomfield



In a Broadcasting & Cable Magazine story, it is reported, and has been confirmed elsewhere, that CBS is miffed, and that's putting it mildly, over the broadcast industry's preferred copy-protection method and is threatening to cease all high-definition programming during the 2003-2004 season.

[http://www.broadcastingcable.com/index.asp?layout=story&doc\\_id=109348&display=breakingNews](http://www.broadcastingcable.com/index.asp?layout=story&doc_id=109348&display=breakingNews)

CBS has been the leader in HDTV programming with 18 of its prime time comedies and dramas broadcast in the pristine format. This is not to mention the impressive lineup of sports programming that has included the 2001 Super Bowl, the NCAA Men's Final Four



and the Masters Golf tournament during the last three years. Perhaps this is their way to get someone's attention and pointing out how extremely ignorant executives will stoop in their misguided ambitions.

Will CBS go through with it? Chances are, with the increase in HD programming done by the more respectable network, ABC and NBC, not to mention The WB, we think it is a bit of saber rattling. You notice we didn't mention FOX. What FOX is doing is false advertising. Calling their wide screen digital anything but dusted off NTSC, is a disservice to the public in general and does nothing more than to continue the caldron of confusion that is rampant.

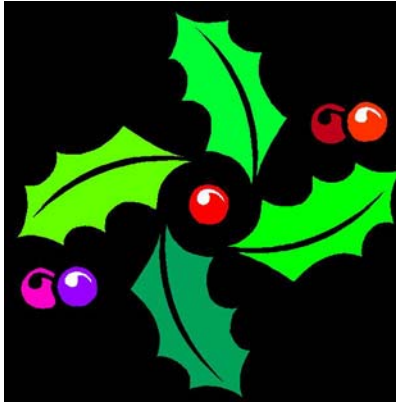
This whole issue of copy protection has been discussed in these Tech-Notes any number of times and most of our readers know that we think it is absolutely ludicrous. Why? Because it is! You tell any digitally gifted basement savant that a code or encryption system can't be broken and they'll prove the claimant wrong in an amazingly short period of time! Every time! And we're not alone. A number of Silicon Valley companies, who know the ins and outs of this kind of thing, have said that the so-called "broadcast flag" will not be effective in preventing unauthorized streaming of copied program content over the net and is NOT necessary for any of a variety of reasons, including the assurance that high-quality digital programming is protected over the air broadcasts.

Who will gain and who will suffer from all this? No one will gain anything, according to the digital experts, and the consumer, in the meantime, will face diminished home recording rights. Hollywood, however, said HD movies and other valuable programming will not be made available to stations unless the government imposes an effective copy-protection mechanism for over-the-air transmissions. All these measures will only continue to keep honest people honest, but it will never stop those who are determined to break the law.

We've never taken to advising anyone on financial investments, but this is one venture we'd highly recommend not putting a dime into unless you're into financial masturbation. If Hollywood is so bent on a copy protection system, then it should be up to them to come up with what they think will do the job. God only knows; Hollywood has the bucks and can throw good money after bad to fund such a thing, if such uncompromising protection is possible. Until that time, they should stop screwing with the public and let America's broadcasters continue to give the public the quality pictures we have a right to..



**What do you think about all of this? Have a very Happy Holiday!**



**Now, Let's go to press!**

Larry

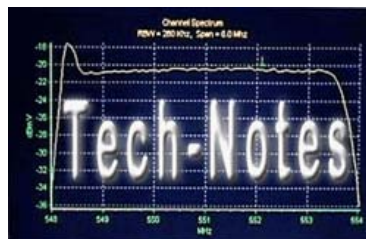


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