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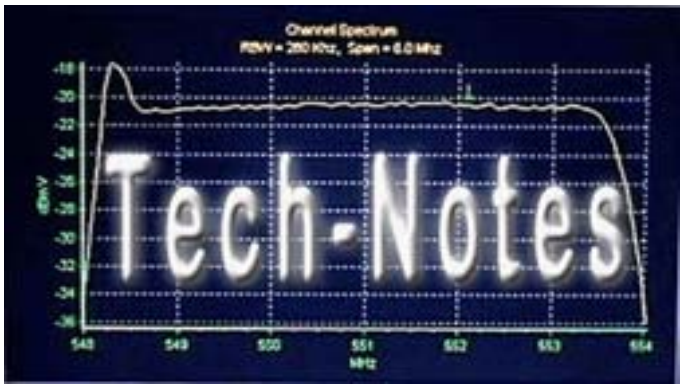
It will provide you with navigation features to this edition.



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Our purpose, mission statement, this current edition, archived editions and other relative information is posted on our website.

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Editor's Comments

LARCAN-USA/Tech-Notes Seminar Up date

By Larry Bloomfield

The response to the LARCAN-USA/Tech-Notes Seminar has really been impressive. We've got folks flying in from the San Francisco Bay Area, Albuquerque, NM and Anchorage, Alaska. As of today, we have a total of 50 registered for all three venues. It is the same seminar in three different venues; Portland, OR, Eugene, OR and Medford, OR on November 4th, 5th and 6th and it is **FREE**. Its open anyone interested and it's not too late to register. (We need a head count for both food and chairs – yes, we're going to feed you.) All interested parties should RSVP by Friday, October 31, 2003. For maps to venues, visit: www.Tech-Notes.TV - Select Educational Opportunities. Registrations forms are there also in PDF. If you have trouble doing the PDF thing, download it, fill it in and Fax it to: (503) 217-0712. You can also e-mail a filled in copy to Seminar@Tech-Notes.TV.

The subject matter will be LPTV, Digital Translators, Analog Translators, LPFM, FM Translators and Trick of the Trade. The scheduled presenters are David Hale, VP LARCAN-USA, Dr. Byron St. Clair, St. Clair Consulting, Kent Parson, DTV Utah Translator guru and one or two others yet to be scheduled.

As we mentioned in our last edition, this same LARCAN-USA/Tech-Notes seminar is in the works for other locations, but the times, dates and places have not been confirmed with the various presenters as yet and are dependent on their schedules. For questions about this and future seminars, call or e-mail Tech-Notes. (541 + 902-2424 or Seminar@Tech-Notes.TV).

Letters to the Editor

From: Stu Casteel stu@pacific.net
Re: Tech-Notes #117

Timely Tech Notes - I've been playing the "8VSB DX'ing game" for the local translator (we took a RCA STB to the local translator TX site (39 7' 12" N by 123 5'22.2" W at 3080' - the Rx site is one hill top away) and with just the UHF portion of a larger array were able to get 8 VSB reception on a few - see http://www.sassenrath.com/channels.html - under far from optimal antenna positioning and the adjacent TX's.

They're getting a newer Zenith (4th gen) and a better antenna set up and we'll go back up in a few weeks - hope it get PBS as it's one we have difficulty with, eventually we want to do 8VSB on freq - this digital stuff just might work - but I can't see the translator site from my home anyway...

(To the above, we responded) Don't confuse on channel with the PSIP carrying the original channel numbering on through the translator. On channel is not successful in those places where it has been tried. Larcan says the only on channel is that which is fed via satellite, microwave, fiber or cable, but over the air is a bust. Some work was done in College park PA, but it really hasn't gone very far.

(To this, Stu Casteel responded) Love it, on channel and reflectors - that was one of the ATSC "promises" - wait until the power bill comes in when they go full power and find they have - at best - most of their analog A contour and some B? and far worse in hilly or buildings - we're seeing some ducting on the SF stations as it is

I'm aware of many arcane bits in PSIP, got the scars to prove it - explaining it to non tech folks on the other hand...

News

L.A. Stations Violate Radiation Limits

By Larry Bloomfield

Several months ago we reported a story where in, after reducing power so tower folks could safely do their job up on Mt. Wilson, a GM had a tizzy and ordered they return to full power, despite the work that continued. Well it appears, be it related or not, that the FCC is not fooling around when it comes to RF radiation limits and exposure issues.

According to several sources, Telemundo Communications Group Inc.'s KWHY-TV Clear Channel Communications Inc.'s KBIG, Radio One Inc.'s KKBT and Infinity Broadcasting Corp.'s KRTH all face fines of $10,000 each for jointly operating a transmitter site that violates limits on radio-frequency radiation.

Despite the fact that the power-density levels produced by each station are within acceptable limits, the FCC inspectors found that the cumulative radiation exceeded the maximum permissible exposure limits by 60.5%. If that weren't enough, they also discovered that the stations failed to take sufficient steps to prevent the public from accessing areas that exceeded the limits. Since the public access issue was brought to the stations' attention, steps have been taken to correct this issue.

As to the fairness of the fines, we are each exposed daily to the dangers when management does not do what is necessary to protect us. If the management gets hit in the pocketbook to such a small amount, i.e. about what three or four remotes bring in for that market, they still might notice. While not a fanatic on the subject, I still think we need to work in a safe environment.

I worked for CBS at what was then the KNXT transmitter site (now KCBS-TV). We were told that Mt. Wilson had, and probably still has, the highest density of RF radiation anywhere in the US. I just got finished reading the NALF, and the Commission's primary concern was exposure to the general public, not to workers at the site. It should really be both. As I recall, there is a US post office atop the mountain, as well as an observatory and park, and in areas to which the general public has access. Measured exposure levels were well in excess of legal limits. The NALF also noted failure to properly restrict access to the close-in areas near the towers, which is one of the FCC's more serious on going concerns. From what I understood in reading the NALF, agents could access the sites from three sides without restriction.

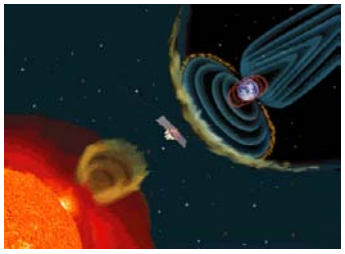
During the first inspection (a two-day affair), one of the transmitter engineers repaired a chain across the road to the transmitter buildings, but upon re-inspection more than a year later the chain was off its latch again. Even so, the measuring points were outside the area that was chained off.

My recollection of the initial inspection (7/11 and 7/12, 2002) was that some of the GM's and CE's balked at turning off their transmitters without prior arrangement, so the FCC agents called all 21 stations after the 7/11 inspection to arrange for shutdowns on 7/12 so that proper measurements could be taken. I don't imagine that refusing a field agent's request to turn off transmitters went down to well at the FCC.

I believe there aren't too many engineers who'd argue with the idea of those fines being even higher, considering the total lack of concern for engineering personal, tower crews, not to mention the general public. For the non technical readers, "Cooked to the Bone" is not a new punk-rock group; it's an engineer who is required to work under these conditions.

Solar Storm

By Larry Bloomfield



Scientists tell us of a different type of storm that hit earth Friday (Oct. 24th). It was a geo-magnetic storm emitted from the sun and reached earth around noon PDT. The storm -- which is believed to be the most powerful to reach the earth since 1859 -- could impact satellites, electrical grids, cellular phones and pagers. It was first detected two days prior (Wednesday Oct. 22nd.)

CNN.com reported that satellites are the most likely to be impacted by the event. If you are interested, you can read more at:
www.cnn.com/2003/TECH/space/10/23/solar.forecast/index.html.

Channel Master Files for Bankruptcy

(from a press release)

Channel Master filed for voluntary Chapter 11 bankruptcy. The bankruptcy filing was done in order to complete a "going concern" sale of the company's assets and continue as an ongoing business, Channel Master said.

The company, based in North Carolina, said immediately prior to the bankruptcy filing it entered into an asset purchase agreement with an unnamed traded strategic buyer which - subject to bankruptcy court approval - will purchase the company's assets.

The bankruptcy filing will allow Channel Master to transfer its core businesses to the buyer while preserving existing customer, vendor and employee relationships. The company said it does not expect an adverse impact on day-to-day operations due to the filing, and will continue to provide service to customers.

Bill Currer, president and CEO at Channel Master, said, "The Chapter 11 filing brings us one step closer to completing the sale of this organization which has exceptional people and operations that historically has generated strong operating income. Unfortunately, an industry-wide slowdown has placed the company in a position where it could no longer support current debt levels."

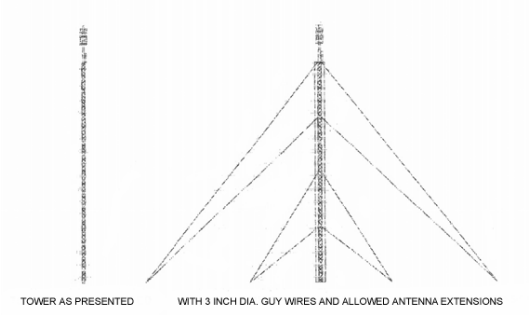
Denver DTV Tower Battle Not Over

By Larry Bloomfield

As Yogi Barra has been quoted as saying: “it isn’t over until it’s over!” So also is the seemingly never ending novella about the TV and FM towers on Lookout Mountain just west of Denver.

Basically it’s a story about a transmitter sit that was developed over 50 years ago by the Denver area television broadcast community. Roads were built, towers and transmitter buildings were erected and time passed. Money hungry real estate maggots discovered this was a very nice area that the TV and broadcast community had developed and seeing that they could cash in on the land, sold it as Colorado’s version of Shangri-la. The people who bought into this real estate hype turned out to be like those folks who buy houses at then end of airport runway strips, and then bitch about the planes flying over head, except in this case they took issue with the silent monoliths that provide television and FM entertainment to the greater Denver area.

Despite the fact that after much wrangling, the local county finally approved a compromise plan. Did this placate these pains in the unmentionable parts of the midriff? No! This didn’t make the sore losers any the happier. In speaking with some of them during the initial debate, I heard more whining from them than from all six of my grandchildren put together and, as I recall, none of them made much of a case for themselves.



Now, recently the Denver Post reports that these same snivelers have filed a lawsuit to block construction of the 730-foot high

compromise TV tower on Lookout Mountain in Jefferson County by the Lake Cedar Group, as the broadcasters are known. The lawsuit was filed by Canyon Area Residents for the Environment (CARE) representing a group of homeowners' associations near the tower site. The Denver Post article by Ann Schrader, entitled: “Golden joins in suit to block TV tower,” said the city of Golden has joined “CARE” in the lawsuit after citizens attending the Sept. 11 city council meeting asked the council to help them fight the Jefferson County decision allowing rezoning for the tower.

The article said the Jefferson County decision said that legally, the lawsuit was "inconsequential." Construction of the tower is expected to begin in January with completion within a year.

There is probably nothing worse on this planet than a bunch of NIMBY’s when they link up with the liberal environmentalists movement.

FCC raids San Francisco pirate FM radio station

By Fred Lawrence

Freedom without regulation is anarchy, so it is said; and this is particularly true of those who view the airwaves as something they can broadcast on at will. In the middle of a neighborhood that is know for it’s residences flamboyant life style and amidst rainbow colored flags (possible misspelling), federal marshals and representatives of the Federal Communications Commission recently raided a residence on a quiet block in San Francisco's Castro District, confiscating equipment used to operate an unlicensed, low-power FM radio station.

According to volunteers at San Francisco Liberation Radio, which has reportably been on the air for some 10 years, the agents removed an antenna from the roof and seized computers, tape and CD players, turntables, a mixing board and other equipment.

The illegal FM station broadcast what, for lack of a more kind way of describing it, “radical progressive” political views and independent music programs and despite its low power on 93.7 FM, the illegal operation reached listeners as far away as the East Bay.

According to an article in the San Francisco Chronicle, supervisor and mayoral candidate Matt Gonzales drafted a resolution supporting the illegal station’s alternative viewpoints.

This isn’t the first time the FCC has paid them a visit. In July, FCC investigators showed up at the station's doorstep, asking to inspect the equipment. When they were turned

away, the agents warned of a potential $17,000 fine, so this time they brought a search warrant and more than a dozen federal marshals.

As of this writing, no charges have been filed against anyone associated with the station as yet, but there is nothing to suspect that the full force of the law will won't be brought against those who broken the law.

According to the pirate station's attorney, Mark Vermeulen, who arrived at the station site shortly after the agents did, explained to the marshals that the station had applied to the FCC for a license in 2000 and had never been officially told it had been denied. If that was three years ago and the station has been operating for ten years, what about the prior seven years? It might not be a bad idea for these folks to get an attorney who knows FCC law a little better than that.

On the other hand, all they have to do is get a valid license and our parent company, Bloomfield Enterprises, LLC will sell them a "legal" transmitter.

DTV Transition Scoreboard

From an NAB and an FCC Press Releases along with our comments

The National Association of Broadcasters recently announced that even more stations have joined the list of television stations broadcasting in digital, bringing the total number of DTV stations on air to 1,037 in 202 markets that serve 99.35% of U.S. TV Households.

In addition, 81.41% of the more than 106 million U.S. TV households are in markets with five or more broadcasters airing DTV and 55.83% are in markets with eight or more broadcasters sending digital signals.

On the other side of the coin, the FCC says that more than 80% of commercial DTV stations are on the air. Our figures say there are only slightly more than 77% of the commercial stations with DTV plants operational. The question is, are they all at full power, or just enough the keep the FCC out of their hair?

Speaking of the FCC being in their hair over the DTV transition, the FCC has taken action regarding 141 stations that filed a request for a third extension of time to construct their DTV facilities. Of these, the FCC granted 104 stations with an additional six months to begin broadcasting in DTV. Seven stations were denied extensions and issued letters of admonishment while the remaining cases are yet to be decided. In this same press release, as we mentioned in the previous paragraph,

conspicuously absent was any mention of how many authorized DTV stations are operating at reduced power. Hello out there!

Seven stations, including NBC-owned WJAR-covering Southern New England from Providence, R.I.-were denied extensions and issued letters of admonishment.

The commission said the seven stations failed to adequately justify further extension of their DTV deadline. The admonished stations were given six months to complete construction of their DTV facilities or face financial sanctions. The stations, in addition to WJAR are: WVUE in New Orleans, LA; WICZ in Binghamton, NY; WKBW in Buffalo, NY; KMVU in Medford, OR; WSJU in San Juan, Puerto Rico; and WDWL in Bayamon, Puerto Rico. During this six-month period, these stations will be subject to periodic reporting requirements to ensure that construction is progressing.

“Admonishment is a serious thing,” said Ken Ferree, the FCC media bureau chief. He said that any of the cited stations that fail to launch DTV operations within six months will face fines, and if the delay reaches a year the station could lose its DTV construction permit. The difference is that the seven have now been put in the "penalty phase," as Ferree put it.

Of these, 30 stations are classified “satellite” stations, which are full-power terrestrial broadcast stations that are authorized to retransmit all or part of the programming of a parent station that typically is commonly owned. The issue of whether to permit satellites to turn in their digital authorization and “flash cut” to DTV transmission at the end of the transition period is currently under consideration, and the FCC deferred the construction deadlines for those stations until that issue is resolved.

FCC chairman Michael Powell emphasized that the commission wanted to be "tough but fair." In that spirit, the "stragglers" got the same six months as did the 104 stations that convinced the FCC that their delays were either unforeseeable or beyond the commission’s control. The commissioners were unanimous in their support of the agency’s action, although Democratic commissioners Michael Copps and Jonathan Adelstein took the opportunity to push for resolving what new public-interest obligations -- if any -- should adhere in the digital world.

An FCC spokesperson said: “currently 1,061, or 81 percent of all licensed commercial and public stations, are currently on the air with a DTV signal.” These numbers don’t exactly match our numbers, which are also from the FCC. In the FCC’s 2nd quarter 2003 report, there are 1,726 Full power TV stations on the air – both commercial and non commercial. (See next story below for link to this info.) 1061/1726 equals just over 61 percent by our calculations.

For more NAB info, visit www.nab.org and for the FCC on this subject, visit:
http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-240048A1.doc

Broadcast Station Totals

From The FCC Database

The FCC has not released 3rd quarter stats as yet. If you are interested in a look back to see just what has been going on over the years, visit:
http://www.fcc.gov/mb/audio/totals/index.html

A sad reminder

From Rich Petschke

It's a sad reminder to those using remote trucks with masts MUST make absolutely sure the mast is properly stowed before driving off.

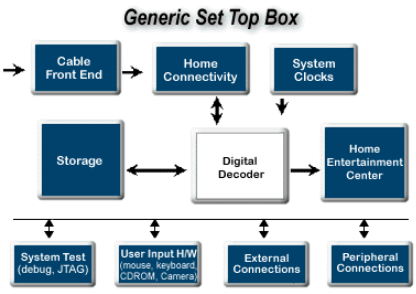
We're sorry to have to report the death of CHIN/Toronto, ON radio engineer Amarjit Dhanjal, who was crushed to death Saturday as he left a remote appearance at a Toronto car dealership. The Toronto Sun reports that Dhanjal failed to lower the mast on the remote truck, which hit a concrete overpass on the Gardiner Expressway west of Parliament Street, detached from the floor of the van and pinned Dhanjal to the windshield.

Dhanjal was 31, a ten-year veteran of CHIN who leaves behind a wife and three children.

Editor' note: *This is an ongoing issue and not enough can be said in efforts to prevent these kinds of serious accidents from happening. To see the kinds of things that can happen to radio and TV remote/ENG vehicles, visit:*
http://www.engsafety.com/safetypg2/Picture-Gallery/
It's a sober reminder. There are devices available that will not permit the vehicle to be moved with the mast extended. Why haven't stations invested in these safety precautions?

It's about Space & Time

By Larry Bloomfield



It's about time! Cable television provider Cablevision Systems Corp. has announced they will offer a U.S. satellite service broadcasting high-definition television, pitching it against well-entrenched rivals.

Ever notice the cable TV ads and how they put-down satellite services? Guess how most of these

very same cable companies have been getting their program material? No prizes for the correct answer.

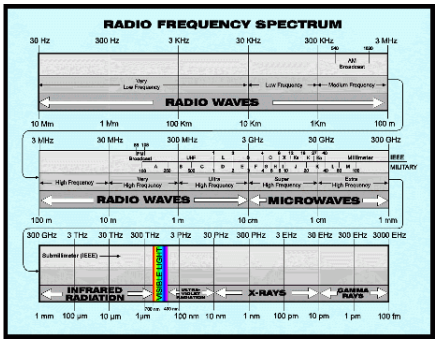
But this is not the issue here. Now begins the fight for the most valuable piece of real estate in America: the top of your TV set. So, now I have to buy and find a place for yet another set top box and maybe yet another component router to handle the new signal?

Bringing sunshine and joy into your otherwise dreary and dull lives, Cablevision said its satellite division, Rainbow DBS, is now offering 39 HDTV channels and some popular cable channels as part of a service it launched on Oct. 15. We were unable to find out how much they charge for the service or when one could get the extra box to see all this rainbow of DBS services.

This all brings up several questions. Will Dale Cripps carry this schedule in his HDTV newsletter? (WWW.ILOVEHDTV.COM) When will we see ONE STB that can receive OTA analog/digital, DirecTV/Dish/Cablevision with a 160 gig plus hard drive and, oh yeah, plug into that fabled slot in the back of the big TV?

One final note and disclaimer to clear up any confusion: the rainbow service here has nothing to do with the rainbow flags you'll see and the flag just mentioned, has nothing to do with the one the motion picture industry is pushing the FCC to require. And yes, we did spell flag correctly, rainbow or not. There is yet a far way to go before reaching a unified solution on any of this.

FCC Opens 70, 80, AND 90 GHz Spectrum Bands for Deployment and More
By Charlie Nullia



In an effort to promote the development of an additional "competitive broadband deployment platform," the FCC has adopted service rules for the commercial use of spectrum in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. These bands are touted to be "well-suited" for licensees to offer a broad range of innovative products and services, including high-speed, point-to-point wireless local area networks and broadband Internet access. If fog plays hell with 23 GHz, you can only imagine the fun and games the new spectrum will bring with it. Stand by, light is next.

For more info, visit: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-239368A1.doc

In addition to this and at a much lower frequency, the FCC is also making available 90 MHz of spectrum for third generation broadband and advanced wireless services for the 1710 -1755 MHz and 2110-2155 MHz spectrum bands with allocations going to the highest bidders. For additional info on this, visit:
http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-240030A1.doc

DISH Network First to Reach TV Industry Milestone: 1 Million Digital Video Recorders

From: BUSINESS WIRE

EchoStar Communications Corporation recently announced that its DISH Network, has sold its 1 millionth digital video recorder (DVR). DISH Network's DISH Player Digital Video Recorder Skips Recorded TV Commercials and Pauses Live TV

For more info: http://finance.lycos.com/home/news/story.asp?story=35786435

Test your computer's exposure to online security threats

From Symantec

Test your computer's exposure to online security threats and learn how to make your computer more secure.

http://security.symantec.com/sscv6/default.asp?langid=ie&venid=sym

Disney's Pirate Fight

From: Aliya Sternstein

Movie piracy has scared the mouse house into beaming video rentals through the air. This week, The Walt Disney Co. launches MovieBeam, a new on-demand movie-rental service that transmits videos to the home television via a digital wireless signal and the existing broadcast spectrum. The technology streams new releases and classics from most major studios, minus Paramount, to the TV, independent of cable service. Current fare, such as Phone Booth and Gangs of New York, cost $4, plus a $7 monthly service fee and $30 activation fee in some markets.

MovieBeam works like a malleable pay-per-view service. Subscribers choose from among 100 selections, hit play, get charged and then have 24 hours to stop, rewind, pause and fast-forward as much as they like. The movies are stored on a 160-gigabyte hard drive, which connects to the back of the TV and phone line. Present plans call for the limited service to reach homes in Jacksonville, Fla., Salt Lake City, and Spokane, Wash. A Disney representative says new markets will open by early 2004. MovieBeam is operated by Buena Vista Datacasting, a wholly owned Disney subsidiary.

For more info: http://finance.lycos.com/home/news/story.asp?story=35849615

FCC Protects Condo Rooftop Dish

By Larry Bloomfield

The Federal Communications Commission has recently reaffirmed that a community association **cannot** prevent the installation of a direct-broadcast satellite dish on a condo owner's roof. Roofs or exterior walls may be restricted only when tenants are not granted exclusive or permanent possession. A 1996 FCC rule gives property owners and tenants the right to install DBS dishes on balconies, walls and other property within their exclusive use or control.

The case in point is the Woodmere Townhome Association in Darien, Ill., arguing that it had authority to forbid Philip Wojcikewicz from installing a dish on the roof of his home, an interior unit of a four-townhouse block.

The association maintained that because other residents have rights to access his roof and because the roofs are maintained and insured by the association, the top of his building was therefore a common area bound by the group's antenna-placement restrictions.

The FCC said, however, in this case the property Wojcikewicz owned included the roof. The FCC also said its previous rulings also debunk the notion that access rights of neighbors or other third parties nullify owners' usage rights.

SBE's Petition To Delay The New Aux Broadcast Coordination Rules Is Denied

From an FCC Press Release

"By this Order, we deny a Request for Extension of Temporary Stay (Request) filed by the Society of Broadcast Engineers, Inc., (SBE) to delay, by an

additional six months, the effective date of coordination procedures adopted by the Report and Order in the above-captioned proceeding for most fixed point-to-point Aural and TV Broadcast Auxiliary Service (BAS) stations. As a result of this action, the coordination rules become effective on October 16, 2003." - FCC.
See: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-03-3215A1.doc

As usual, there is more to the story. Those interested are directed to this MO&O:
http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-246A1.doc

MPAA's Broadcast Flag & More!

By Fred Lawrence

The Senate Commerce Committee took up the issue of digital copyright and protection of digital media Wednesday 9-17-03. And - as expected - Hollywood was represented at a hearing focusing on the topic.

Jack Valenti, chairman and CEO of the Motion Picture Association of America (MPAA), told lawmakers that piracy of digital content is a national issue, especially since intellectual property is a big part of the U.S. economy.

"Intellectual property - movies, TV programs, home video, books, music, and computer software - is an awesome engine of growth which nourishes the national economy," Valenti said. "Not only is intellectual property America's largest trade export, bringing in more international revenues than agriculture, aircraft, automobiles and auto parts, but it is creating new jobs at three times the rate of the rest of the economy."

Others told lawmakers that Hollywood's attempt to prevent redistribution of digital content would not work, and impede innovation by consumer electronics makers.

Lawrence Blanford, president and CEO of Philips Consumer Electronics, told the Senate committee that his company is committed to protecting digital content. But attempts by content creators to limit redistribution of programming would force consumers to replace - and the FCC to regulate - "virtually every single device in the home network," he said.

It also would severely restrict consumers' "fair use" of content, Blanford said.

Some day, they'll get it right! Never in the history of humankind has any governmental agency **ever** been able to legislate morality!

Hollywood is at it again, trying to control the design of new digital technologies. If the motion picture studios have their way, the FCC will force all future televisions to include Hollywood-approved "content protection" technologies. Fair use, innovation and competition will suffer. What's more, the "broadcast flag" technology that the Motion Picture Association of America (MPAA) has proposed is so weak that it will do nothing to stem Internet redistribution of television programs. In fact, the only people hurt by this are legitimate consumers, innovators and researchers.

To sum up this whole issue in one word, it is a matter of “greed” on Hollywood’s part. They make bazillions of dollars every year and the few dollars they “think” they are loosing from the illegal pirating of movies is such an inconsequential amount when compared to what they bring in on most of their fair that it is ridiculous. When we say “think,” there is no accurate way of knowing how much they loose from pirating.

There is no honest person alive who would condone the illegal copying of movies or anything else, for that matter, but the extremes that some go to, to enforce the protection of material, is often times mind boggling. If Hollywood were to give to medical research the money they’ve spend, or will spend on this issue, we’d probably have a cure for cancer and perhaps many other healthy innovations.

The FCC has promised a ruling before the end of October. We need you to tell the FCC that we don't need "broadcast flag" regulations that hurt competition, consumers and innovators. Send telegrams, letters, e-mails, and smoke-signals, what ever it takes, but JUST SAY NO!.

Microsoft Tests TV Over Bell Canada Wire

Microsoft and Bell Canada said they are collaborating on the testing and deployment of a TV service based on new Internet Protocol television (IPTV) technology, a developing wired-based service that will utilize Bell ExpressVu digital programming.

The companies said they will jointly explore delivery of TV programming over Bell Canada's broadband network through the use of the Microsoft TV IPTV technology. Eugene Roman, group president of systems and technology at Bell Canada, said the effort is part of an overall video strategy "to find more ways to deliver Bell ExpressVu digital programming services to customers on their terms, whether through satellite or wireline."

Microsoft TV said its planned IPTV solution will use video compression technology, enabling Bell Canada to deliver broadcast-quality video to a variety of devices over its broadband network. The IPTV solution is designed to support standard and high-def

channels, on-demand programming and interactive program guides, as well as future service offerings that leverage two-way, interactive platforms, the company said.

Bell ExpressVu is the satellite TV unit of Bell Canada, serving more than 1 million Canadian customers.

Must NOT Carry?

By Charlie Nulla

In the recent past, many have expressed their concerns about the Analog Cutoff rules; specifically about cable coverage of stations and how it impacts the "85%" rule. Perhaps a recent story that appeared in ***TV Technology*** is a ray of hope that the FCC and Congress can bring some reason to the cutoff rule when it comes to markets such as the NYC and Utah DMAs where it is impossible for any cable company to carry ALL stations in the "market."

The story is entitled: “Time Warner System Wins Must-Not Carry” Basically the Time Warner Cable system in Los Angeles won the right to deny full “must-carry” to a broadcast station in the area. KHIZ Ch. 64 in Barstow, Calif., a town some distance from downtown LA was attempting to make Time Warner carry its fair. Well the FCC didn’t think so.

For the full story, visit: http://www.tvtechnology.com/dailynews/one.php?id=1486

FCC’s TELEMARKETING RULES APPROVED BY OMB

From an FCC Press Release

DA 03-2994 -- CG Docket No. 02-278

The Office of Management and Budget (OMB) has approved for three years the information collections associated with the telemarketing rules adopted in the Commission’s Report and Order, Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991, CG Docket No. 02-278, FCC 03-153 (rel. July 3, 2003). OMB is continuing its review of the information collections associated with the fax advertising rules. A summary of the Report and Order was published in the Federal Register at 68 FR 44144 (July 25, 2003). The information collections contained in section 64.1200 were approved by OMB on September 29, 2003. OMB Control No.

3060-0519. As stated in the Report and Order, the Commission will publish a document in the Federal Register announcing the effective date of these rules. However, as noted in the Report and Order, the national do-not-call rules at 64.1200(c)(2) and the call abandonment rules at 64.1200(a)(5) and (a)(6) will become effective on October 1, 2003, and the caller ID requirements at 64.1601(e) will go into effect on January 29, 2004.

Under 5 C.F.R. Section 1320, an agency may not conduct or sponsor a collection of information unless it displays a current valid OMB Control Number. No person shall be subject to any penalty for failing to comply with a collection of information subject to the Paperwork Reduction Act (PRA) that does not display a valid OMB Control Number. The OMB Control Number is 3060-0519.

-FCC-

Remote Power: Can PVRs Kill TV Spots?

From a story by Robyn Greenspan

Television commercials may become the casualty of personal video recorder (PVR) penetration, the Yankee Group finds, but the ad's demise may not come until mid-to-late 2005 when more than 10 million subscribe to the digital technology. Often, viewers eliminate TV commercials with a touch of a button, and ReplayTV, a PVR vendor, has created an "ad-skip" feature on their remote controls.

For the complete story, visit:
http://cyberatlas.internet.com/markets/advertising/article/0,,5941_3080851,00.html

U.S. Plans Own Arab-Language TV Network

By GEORGE GEDDA, Associated Press Writer

In an attempt to compete with al-Jazeera and other Arab news channels, the Bush administration expects to start its own round-the-clock Arab-language satellite television network before year's end.

An official announcement Thursday said the network will broadcast "accurate, timely and relevant news and information" about the Arab world and the United States.

The plan was outlined at a news conference and in the announcement from the Broadcasting Board of Governors, which supervises U.S. government broadcast operations overseas.

The network is part of a broader effort to bring balanced reporting on international issues to an area of the world where one-sided coverage is the norm and there is scant support for U.S. policies, officials said.

Administration officials have criticized Qatari-based al-Jazeera, contending the network has given terrorists a platform. One of its star reporters was recently accused of being an al-Qaida member.

The network also has come under fire from Arab governments, which are unaccustomed to having their points of view challenged.

The tentative name for the U.S. station is The Middle East Television Network but officials expect to have a new name before broadcasts begin.

"The network will target Arabic speakers across the Middle East, where satellite television is the most important source of news and information and where the market is dominated by stations like al-Jazeera," according to the announcement.

Congress has approved $32 million for the network, and President Bush (news - web sites) has asked for an additional $30 million in the budget year that begins Wednesday. In March 2002, the administration launched Radio Sawa, a station tailored for listeners in Arab countries.

The broadcasting board released a report Thursday by ACNielsen, the market research company, asserting that Radio Sawa is now the leading international broadcaster in Middle East countries surveyed by the company.

The survey was conducted in Egypt, Jordan, Qatar, the United Arab Emirates and Kuwait. The station's format features music, news and commentary.

Norman Pattiz, who holds a seat on the broadcasting board, said at a news conference that it is not clear whether Arab listeners are reassessing their views about U.S. policy as a result of Radio Sawa.

But, he said, "It's very clear that we are having an impact."

Is The Internet As We Know It Dying?

Commissioner Michael J. Copps, in a recent speech at the New America Foundation, warned that: “The Internet as we know it is at risk. Entrenched interests are positioning themselves to control the network’s chokepoints and they are lobbying the FCC to aid and abet them. The Internet was designed to prevent government or a corporation or anyone

else from controlling it. But this original vision of the Internet may soon be lost. In its place a warped view that opens networks should be replaced by closed networks and that accessibility can be superceded by a new power to discriminate is emerging."

Copps continued: "Our ill-advised Internet policy is only one piece of a tectonic shift across the whole range of FCC issues. From media to telecom to the Internet, we appear to be rushing toward breathtaking regulatory alterations. The Commission is permitting, even encouraging, competition to wither in the face of centralization. It is short changing its responsibility to protect the public interest."

The FCC may soon implement fundamental regulatory changes that would have deep and lasting effects on consumers, innovators, and business users. Copps: "Until now the big corporations that control Internet bottlenecks have been unable fully to capitalize on this power. But now we face scenarios wherein those with bottleneck control will be able to discriminate against both users and content providers that they don't have commercial relationships with, don't share the same politics with, or just don't want to offer access to for any reason at all. From the not so distant shadows of the past, old attitudes favoring industry consolidation and limited access are again seeking to reestablish themselves."

At issue are upcoming decisions at the FCC that will determine how much control companies will have over Internet access and their ability to discriminate against users, data, websites, or technologies. In the dial-up world, current protections require these companies to treat everyone equally. This equal treatment has contributed to enormous growth and innovation on the Internet. These decisions come on the heels of the FCC eliminating related media concentration protections. A federal court has stayed that decision, and Congress is now debating reversing it. In addition, on Monday, another federal court overturned aspects of the FCC's cable broadband policy.

Noncoms Get First Crack at New FMs

By Fred Lawrence

Noncommercial broadcasters have until Nov. 21 to apply for almost 500 FM allotments the Federal Communications Commission put up for grabs recently. But is it fair?

The allotments are outside of the channel band normally reserved for noncommercial operators. Not all of the allotments will necessarily go to noncommercial operators, however. With a good attorney, applicants should be able to demonstrate that no reserved channels are available in their markets and that granting a noncommercial license would provide the first or second noncommercial radio service to at least 10% of the population covered by the station's proposed coverage area. This is all that is required for eligibility. Licenses not granted to noncommercial operators will, however, be auctioned for commercial stations.

NPR Suggests Trial of LPFM Allocations; Seeks to Protect Reading Services

NPR believes the federal government should try allowing low-power FM stations on third-adjacent channels, subject to certain safeguards.

"We believe that the best way for policymakers to implement LPFM is to begin with a measured trial period of interim LPFM service introduction," NPR stated. "We believe such a trial period would be important in documenting the successful strategies of interference remediation and avoidance where it counts - in the real world."

As reported earlier, NAB says the recent Mitre report to the FCC on the subject is so riddled with errors that it must not be used to allow LPFMs on third-adjacent channels.

NPR, too, says some of the testing methodology in the report is flawed, pointing to tests using receivers for radio reading services. Because of those impairments, NPR states, there can be no conclusion that 100-watt LPFMs could be authorized on third-adjacent channels to stations carrying radio reading services "without materially impairing the reading service."

NPR wants Congress to retain current protections for stations providing reading services.

New Products & Test Equipment

Delta's new DVB transmitter/receiver PCI bus cards

From Delta

The DELTA-asi board provides broadcast developers with a very high-performance and low-cost DVB transmitter/receiver solution for PCI bus computers. The board meets all the specifications for DVB ASI equipment with all the typical features to help the real-time processing of MPEG-2 streams on the host computer. The DELTA-asi uses advanced DMA burst-mode transfers to move data from its on-board FIFO to host memory and back again. The drivers can use Scatter/Gather DMA for efficient host memory management. This architecture preserves the maximum of CPU power for use in real-time stream processing.

The DELTA-asi is designed for easy integration with customer applications. A comprehensive software development kit (SDK) includes device drivers for standard server platforms, a range of MPEG-2 stream processing services and an easy-to-use

programming interface for controlling the reception, transmission and processing of full-speed MPEG-2 streams.

Receiver features include unlimited PID filtering and modification, synchronization of incoming transport stream packets, auto size detection and FEC code stripping. The DVB transmitter features include fine rate tuning control, hardware-assisted stuffing packet insertion, a software selectable option to add 16 stuffing byte per packet and an external transmit clock input. The DELTA-asi SDK also allows the real-time multiplexing of single program transport streams (SPTS) into multiple program transport streams (MPTS). This opens the door for an infinity of video server and data encapsulation applications.

The integration of 2 transmitters and 2 receivers on the same board gives a highly cost and space-effective solution for DVB processing applications. Two input MPEG-2 streams can be received, processed and re-transmitted in real-time by the host system.

Driver software is available for Windows XP®/Windows 2000® and supports multiple boards in a system.

For more information, visit: www.deltacast.tv

ReplayTV Inventors Aim at Living Rooms

By MAY WONG AP Technology Writer

PALO ALTO, Calif. (AP) -- They have no receptionist and only paper name signs taped to their office doors, but the 20 employees working out of a nondescript building on a leafy, quiet street here are ready to challenge tech giants in the digital media market.

Led by the man who helped spark a revolution in television by creating ReplayTV, the first digital video recorder, the startup Roku is developing products to make the living room, and not the PC, the showcase for all digital content, from photos to music. Roku founder and chief executive Anthony Wood knows big-name companies, such as Microsoft Corp. and Hewlett-Packard Co., are already attempting to do the same with so-called media servers or media receivers devices that allow users to take content stored on their computers and play it on their televisions or stereos.

None of those kinds of products have taken off yet, and the ambitious but soft-spoken 37-year-old serial entrepreneur thinks his latest company can do better.

After a year in secret development, Roku unveils its business and launches its first product Monday, the Roku HD1000.

It's the first digital media player to be designed for high-definition televisions, which are gaining in popularity as prices drop.

For more info, visit: http://finance.lycos.com/home/news/story.asp?story=35760741

Features & Opinions

My observations

By: Burt I. Weiner biwa@earthlink.net

One computer - Many stations.

There seems to be a lot of the "putting many eggs in one basket" syndrome going on everywhere I look. With my clients I recommend that they have a separate computer for each transmitter site. In many cases this has allowed the "other" transmitter sites to operate normally when one computer has a problem. It just seems to me that considering the investment made into each station that having them all sitting on one computer controller is penny wise and pound foolish. Is this a case of "The state of the art exceeding the state of the need"? What am I missing here? Burt, K6OQK

Commentary

Editors Note: *What follows is a commentary on DTV replacing analog NTSC TV and is in response to a recent comment made by a fellow engineer: "Unless the digital TV system is improved massively (the power of the transmitters increased by a large factor) the digital TV system fails miserably in one area, namely reception by small portable receivers when a connection to a rooftop aerial is not available.*

From: Frank Eory Frank.Eory@motorola.com

Ahh, shades of my distant past and all those ATSC task force debates. The problem is the relative magnitude of "massively." The link budget for reception by small portables,

especially indoors, can fall short by large numbers of dBs. And we "only" need to double the transmitter power for every additional 3 dB we need. Besides the economic and environmental issues, there would be tremendous interference issues that would prove unsolvable, at least during the simulcast phase.

Back to step 1 -- Requirements. Some of us believed early on that the system was intended to deliver wireless HDTV, primarily using rooftop antennas. Others say "but it's the replacement for NTSC, so it must provide all the service that NTSC provides." The response to that is simply "no, sorry you were misinformed." It is NOT a replacement for NTSC and never can be. You can lower the digital cliff, add modes that offer multiple digital cliffs, etc., but you can never exactly duplicate NTSC service with any sort of DTV service.

Portable indoor reception of watchable but degraded video was one of the NTSC services sacrificed -- at least for some viewers -- in exchange for HDTV reception by rooftop antennas. You can argue that this was not intentional, but it is the reality of how the system was DESIGNED. And I don't mean only the ATSC transmission system, but the FCC DTV Planning Factors in particular.

SFNs (or OCRs, if you prefer) offer some amelioration, but to implement SFNs on a national or even regional level would require a whole new set of DTV Planning Factors. Even then, digital service will never duplicate analog service. There will always be those who get perfect DTV reception where they used to get terrible NTSC reception, and those who get no DTV reception where they used to get NTSC reception that they considered watchable.

Consumers will have to make adjustments -- a better antenna, moving the bedroom TV set (sometimes a couple feet makes all the difference), finding a way to distribute a rooftop antenna feed to those bedroom TV sets, etc. There is no easy way around the physics. No doubt many of them who aren't already cable or satellite subscribers will decide that it's time to sign up, depending on their tolerance for the hassle of making free OTA DTV work in their particular circumstances.

Frank Eory

WHAT EVER HAPPENED TO CHANNEL 1?

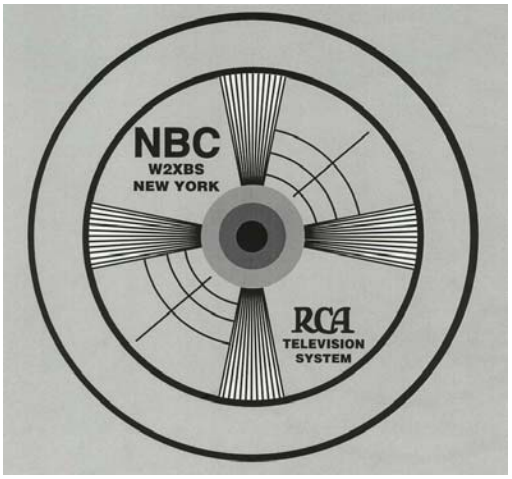
Based on a March 1982 issue of Radio Electronics Magazine.

Edited and expanded by J. W. Reiser, FCC International Bureau

Ever wonder why your television dial starts with Channel 2? Find out why in this brief look at the early days of television and how it all began.

WHEN A TELEVISION RECEIVER IS PURCHASED in the United States, you can take it anywhere in the country, plug it in, pull up the “rabbit ears,” and tune in a station.

That is possible because we have national broadcasting standards that are common throughout the country. Yet, one time commercial television was going to be introduced to the American public without standards. Fortunately, that "experiment" ended before it even started. But let's not get ahead of the story!



UP TO 1937

During the first few months of 1933, the Radio Corporation of America (RCA) demonstrated the first successful all-electronic television system. Broadcasts were made from the RCA experimental television transmitter, W2XBS, located at the top of the Empire State Building in New York City. The characteristics of that early all-electronic television system were modest:

Lines:	240
Frames:	24 per second
Scanning:	Sequential (no interlacing)
Bandwidth:	2 MHz
Video carrier:	AM modulated, full sideband
Audio carrier:	AM modulated, full sideband

Yet, the results were far better than any mechanical television system had ever accomplished. For those experiments, the video carrier was approximately 45 MHz.

It may be hard for us to appreciate fully what RCA had accomplished in 1933. But to give you an idea: Many of the experimental television broadcasts were still using frequencies in the 2 to 3 MHz range, and bandwidths of 100 kHz. In addition, the earlier systems were mechanical using gears, motors, mirrors, etc. As television advanced, each step pointed towards non-mechanical systems, and higher bandwidths and carrier frequencies.

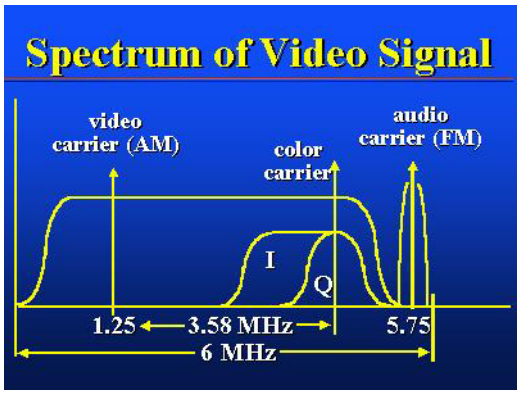
The Federal Communications Commission (FCC) was established by an act of Congress on June 22, 1934. It was about that time that a portion of the VHF radio spectrum was allocated to television for the first time (see Table 1). Previously, any frequencies above 30 MHz was available to experimenters. Those experiments included a number of pioneering amateur radio operators; there were also experimental stations that included television. In 1934, the experimenters were moved to the frequencies above 100 MHz, while television was allocated to bands, 42-46 and 60-86 MHz. There were no channels associated with the allocations, but it was a beginning: television was making its first move.

1934-1938

Progress was slow for television during those years. The depression was at its worst and even mighty RCA lost money. But advances were made in RCA's all-electronic system. In June 1936, RCA announced the start of a massive field test. A total of 100 experimental-television receivers were distributed to RCA employees for placement in their homes and offices. RCA began regular television broadcasts from W2XBS, using their new Radio City television studios. Those studios were linked to the Empire State Building transmitter by an experimental 177 MHz radio link and a coaxial cable. The composition of the television signal used for that test was as follows:

Lines:	343
Frames:	30 per second
Scanning:	Interlaced (2:1)
Bandwidth:	5.75 MHz
Video carrier:	AM modulated, full sideband
Audio carrier:	AM modulated, full sideband

On June 15, 1936, the FCC began informal hearings concerning the radio spectrum above 30 MHz. There was an increasing demand for those frequencies and a new word began to be heard at the FCC; that word was standards. The Radio Manufacturers Association (RMA), the trade association for the radio and television equipment manufacturers, had formed a sub-committee on television. It attended the June 1936 hearings because of its interest in the possible future commercialization of television. In addition to urging definite channel allocations, the RMA had a set of television standards to present. Although those standards were incomplete in some respects, one important recommendation that the RMA made to the FCC was that the bandwidth of a television channel should be 6 MHz -- the same bandwidth that is used today. The RMA television standards were:



Lines:	441
Frames:	30 per second
Scanning:	Sequential (no interlacing)
Bandwidth:	6 MHz
Video carrier:	AM modulated, full sideband
Audio carrier:	AM modulated, full sideband

It is interesting to note that the proposed 441-line standard was beyond the capabilities of any system that had been demonstrated up to that point. It wasn't until eight moths later, on February 11, 1937; that a manufacturer (Philco) gave a convincing demonstration of a television system that completely met the RMA standards.

The FCC hearings that had started on June 15, 1936 resulted in the allocation of 19 television channels, each with a bandwidth of 6 MHz. The new allocations, which are shown in Table 1, became effective October 13, 1938. The RMA revised and completed its set of television standards, which were essential the same as the 1936 standards except for one important difference: the video carrier would not be transmitted with a full upper sideband and only a partial lower sideband. That vestigial sideband system was eventually adopted by the FCC and is used today.

Television now had allocations and channel numbers. Our mysterious Channel 1 was assigned to the 44 to 50 MHz band as shown in Table 1. RCA's experimental station quickly received a permit for one of those new television allocations and selected Channel 1.

1938-1940

The television industry was generally pleased with the FCC allocation of 19 TV channels. They were hoping for a continuous band of frequencies to simplify tuner design, and were somewhat disappointed that 10 of the 19 channels were above 150 MHz. Those frequencies were virtually unused, and thought to be useful only for television relay networks. But the seven channels between 44 and 108 MHz were enough to begin plans for commercial television operation. By then it was believed that the FCC would adopt the RMA standards and commercialization could begin; but not everybody agreed with the RMA standards, and the FCC wasn't about to approve any standard unless the television industry was in almost total agreement.

On October 20, 1938, just one week after the allocations because effective, RCA announced that regular television programming would begin as a "public service" on April 30, 1939. That date coincided with the opening of the 1939 New York World's Fair. A number of manufacturers began producing television receivers, and by the opening of the fair they were in the stores and ready for sale. The opening ceremonies by RCA's W2XBS, featured the President of the United States. After that event, broadcasts were scheduled on a regular basis.

By the end of May 1939, large department stores, such as Macy's in New York, offered as many as nine different models for sale, supplied by three manufacturers (Andrea, DuMont, and RCA). Screen sizes for those television sets ranged from 5 to 14 inches and prices ranged from $189.50 to $600.00. Most of the early sets were complete receivers, but one, the Model TT-5 from RCA had no audio section. If audio was desired, it had to be connected to a compatible RCA receiver. Unfortunately, sales of those early television sets were not very good, and by the end of 1939 fewer than 400 had been sold in the New York area.

All of the major television broadcasters (incidentally, the stations were still considered experimental) had adopted the RMA standards by the end of 1939. That included the stations in New York City, Chicago, Los Angeles, and Schenectady. The FCC was urged to adopt the RMA standards so that commercialization could begin. The FCC responded to the pressure from the television industry by publishing rules on December 22, 1939, for limited commercialization. It was a kind of Christmas present for the television industry.

This table shows the frequency (in Megahertz) allocation of VHF channels

Channel	1938-1940	1940-1946	1946-1948	1948-2003
1	44-50	50-56	44-50	
2	50-56	60-66	54-60	54-60
3	66-72	66-72	60-66	60-66
4	78-84	78-84	66-72	66-72
5	84-90	84-90	76-82	76-82
6	96-102	96-102	82-88	82-88
7	102-108	102-108	174-180	174-180
8	156-162	156-162	180-186	180-186
9	162-168	162-168	186-192	186-192
10	180-186	186-192	192-198	192-198
11	186-192	204-210	198-204	198-204
12	204-210	210-216	204-210	204-210
13	210-216	230-236	210-216	210-216
14	234-240	236-242		470-476*
15	240-246	258-264		476-482*
16	258-264	264-270		482-488*
17	264-270	282-288		488-494*
18	282-288	288-294		494-500*
19	288-294			500-506*

*FCC approves UHF TV channels in 1952

Table 1

HOW THE TELEVISION ALLOCATIONS have changed over the years.

At the time those rules were published, the FCC also announced that hearings would be held in January, before establishing a date for limited commercialization. At those hearings, it was made clear to the FCC that many of the broadcasters did not agree that the RMA standards were the best. Philco urged the FCC to adopt their system of television with 605 lines and 24 frames-per-second. DuMont wanted standards that included 625 lines and 15 frames-per-second. In addition, there was some vague talk about something-called color television. Nevertheless, in an order issued on February 29, 1940, the FCC rules that limited commercialization could begin on September 1st but warned that nothing should be done to encourage a large public investment in television receivers. It refused to adopt any standards, with the implication that each of the

broadcasters could use whatever standards they liked best, with the public deciding who had the best system.

RCA responded to the authorization for limited commercialization with full-page newspaper ads in early March announcing the "arrival of television," and ordered the immediate production of 25,000 television receivers. The FCC realized that limited commercialization wasn't going to work, as the sale of thousands of television sets would, in effect, "freeze" the standards, making a change to other standards almost impossible. Within a few days of the RCA newspaper ads, the FCC's permission for limited commercialization was withdrawn.

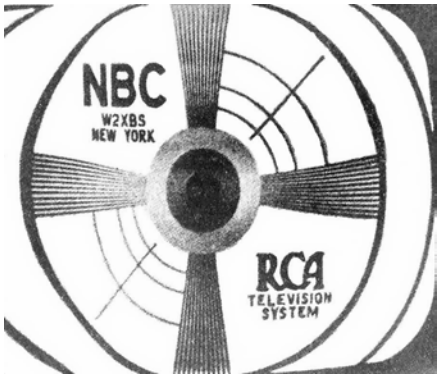
Television was also about to undergo some more changes. Major Edwin H. Armstrong had introduced his development of frequency modulation (FM), in 1935. Shortly after its introduction, five experimental frequencies between 42.6 and 43.4 MHz were allocated for FM. By 1940, the FCC had 150 applications for experimental FM stations on file that could not be processed because of lack of frequencies. As a result of hearings held on March 18, 1940, the FCC assigned FM a continuous band of frequencies (done to simplify tuner design), and expanded the FM allocation to include the frequencies from 42 to 50 MHz. The new allocation included the 44 to 50 MHz band that had previously been assigned to Channel 1.

But that is not what happened to Channel 1! The television channels were renumbered with Channel 1 now assigned to the 50-56 MHz band and the remaining channels were shifted around the spectrum. But when the smoke cleared, the television industry had lone one channel, leaving it with 18 allocations.

The new FM channels and the changes in the television allocations became effective on June 20, 1940. Commercial FM broadcasting was authorized to begin on January 1, 1941.

1940-1946

When the revised 18-channel television allocations went into effect, the television industry was unhappy, to say the least. The limited commercialization plan was suspended, the FCC continued its refusal to set television standards, and a television channel was lost to FM. Because of the changes in the allocations, many of the experimental television broadcasters had to go off the air to complete extensive transmitter changes. For example, the RCA experimental transmitter W2XBS, operating on the old Channel 1 (44-50 MHz) was forced to switch to the new Channel 1 (50-56 MHz) because of the changes.



However, soon after that things began to look up. A member of the RMA had met with the FCC to ask just what the television industry could do to win approval of a set of

standards. The FCC replied that if the industry could agree on one set of standards, it would be approved without delay. Quickly, the RMA organized the National Television System Committee (NTSC). The NTSC was open to all major interests in the television field whether they were associated with the RMA or not. Eventually, over 160 individuals became associated with the NTSC. On July 31, 1940, under the RMA's sponsorship and with the FCC's blessing, the NTSC held its first meeting.

With the opportunity to propose a set of standards to the FCC, you might have expected that the NRSC would simply have endorsed the existing RMA standards, but that is not what happened. Every aspect of the television standards question was examined and discussed at length. On January 27, 1941, the NTSC met with the FCC and presented a progress report. The preliminary NTSC standard presented to the FCC at that meeting closely paralleled the RMA standards. That seemed to indicate that the RMA standards were essentially correct. There was one important difference, however. The audio carrier was to be FM. The FCC had one reservation about the proposed standard -- it felt that the 441-line standard recommended by the NTSC was too low. That standard went way back to the first RMA standards of 1936, when both video sidebands were transmitted. It was common knowledge that the vestigial sideband system in use since 1938 allowed a much higher line count and, accordingly, a better television picture. The NTSC agreed to re-examine that question and said that it would present more information at the hearings that were to be held in March 1941.

Those hearings were held on March 20, 1941. The NTSC standards that was presented at the hearing was almost identical to the one proposed earlier except that the number of lines was increased to 525 lines. (Although the selected number of scanning lines seemed to be arbitrary, it was not. The line count had to be an odd number and to be related to few multiples of odd numbers, such as 3x3x7x7 = 441 or 3x5x5x7=525, for example. That was necessary for generation of the synchronizing pulse.) The new standards was as follows:

Lines:	525
Frames:	30 per second
Scanning:	interlaced (2:1)
Bandwidth:	6 MHz
Video carrier:	AM modulated, vestigial sideband
Audio carrier:	FM modulated, +/- 75 kHz deviation (later +/- 25 kHz deviation)

Virtually all of the participants in the hearings (they went on for four days) agreed that the NTSC Standards were correct and should be adopted quickly. The FCC was convinced that the industry had finally agreed and the NTSC Standards were adopted as the national standard in April 1941. The effective date was July 1, 1941. Commercial television could finally begin!

When that "Opening Day" for commercial television finally arrived, only two television stations were licensed and ready for operation; WNBT (NBC, old W2XBS) transmitting on Channel 1 and WCBW (CBS, old W2SAS) transmitting on Channel 2. Both of these stations were in New York City. Soon after WPTZ in Philadelphia started transmitting September 1, 1941, using on Channel 3By the spring of 1942, a total of four commercial stations were in full operation and 10,000 television receivers had been sold.

World War II halted television's growth, when the Defense Communications Board ordered construction of new radio and television stations to end. Television programming was reduced to just four hours per week for the broadcasters already in operation (all devoted to war-related activities).

As the end of the war approached, the FCC was faced with a monumental task. The war effort had brought about an extraordinary leap in communications technology. Frequencies that had been thought to be useless were now in tremendous demand. The entire spectrum had to be re-examined, with new allocations made and old ones revised. The FCC began holding hearings on September 28, 1944. It was promptly overwhelmed. The 18-channel television allocations in effect since 1940 were attacked by one group as being wasteful of the valuable VHF spectrum, yet another group urged in increase to 26 channels. Others urged the FCC to immediately move all television allocations to UHF frequencies. But the television industry argued that television had waited long enough and should develop now, using the existing allocations.

After hearings that were held on February 14, 1945, it became clear that no group was going to get everything it wanted. In the FCC's final decision, released on June 27, 1945, television's allocation was reduced to 13 channels and FM was moved from the 42-50 MHz slot to 88-106 MHz, later extended to 108 MHz. The television interests were very unhappy that they had been left with only 13 channels, but the FM interest suffered a major blow because all of the existing stations had to go off the air and switch to new frequencies. In addition, 500,000 home FM receivers were now obsolete.

The reduction to 13 television channels was accompanied by new and reorganized frequency allocations (see Table 1). Again broadcasters had to go off the air to switch frequencies.

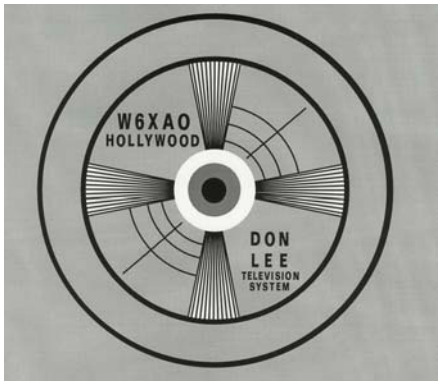
Our Channel 1 was still around, but it was moved back to the 44-50 MHz band that it had occupied from 1938 to 1940. In addition, there was a restriction on assigning Channel 1: It could only be used as a community channel, and power limited to 1,000 watts. Other television channels were for metropolitan stations, with a maximum power of 50,000 watts permitted. All channels, except Channel 6, were shared with fixed and mobile

services -- a fact that left the television interest concerned about interference. The changes became effective March 1, 1946.

1946-1948

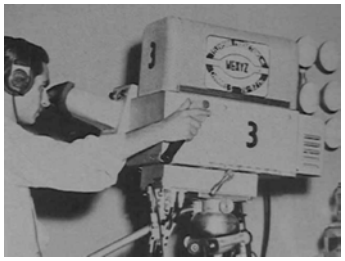
Even with the reduced number of channels, the boom was on. Manufacturers quickly began producing television receivers, transmitters, antennas, etc. New television stations were built all over the United States. The FCC had identified the top 140 metropolitan cities and assigned each at least one channel; a total of 400 were to be allotted. The FCC received many more applications than it had available channels. In an effort to provide with as many channels as possible, the FCC routinely threw away the "safety factor" of mileage between licensed transmitters. Television receiver sales were doing very well, with 175,000 sold by the end of 1947. Manufacturers were selling television sets as fast as they could be made, even though they were rather expensive. (A typical set with a 10-inch screen sold for $375.)

But problems began to appear. Propagation theories at that time predicted that television signals would not be received over the horizon -- but they were, quite readily. So, even with just 50 stations on the air, interference problems were beginning to appear. Meanwhile, the FCC had reduced the minimum distance between stations using the same channel to just 80 miles. An engineering study released by the FCC warned of interference problems if immediate action wasn't taken. That lead to an FCC report issued on may 5, 1949, that rules that television could no longer share its frequencies with fixed and mobile services, and that the 72 to 76 MHz band could be used for fixed radio services only.



But where could the mobile services be located if they could no longer share the television allocations, and could no longer be used for use the 72 to 76 MHz band? There was only one place to go -- the television industry would have to give up another television channel. But which channel would that be? The American Radio Relay League (an association of amateur radio operators) urged that Channel 2 be deleted so that the second harmonics of the 28-29.7 MHz amateur radio band would not interfere with television reception. The television industry, although not pleased about loosing yet another television channel, agreed that 12 clear channels were preferable to 12 shared channels. If they had to loose a channel, they preferred that it be Channel 1, because its absence would have the least impact on commercial television.

The FCC went along with the television industry's position, and on June 14, 1948, Channel 1 was deleted from the allocation plan. Channel 1's frequencies were assigned to the land and mobile services. At the same time, the FCC decided not to renumber the channels -- that is what happened to Channel 1.



Editor' Note: *KTSL in Los Angeles had the C.P. for channel 1 (50-56 MHz.) and later moved to channel 2. KTLA, which is now on Channel 5 in Los Angeles had an initial application for a C.P., dated 11/19/45 that was for channel 4 (66-72 MHz). On 12/20/46 they were granted a C.P. for channel 5 (76-82 MHz.).*

According to the FCC microfiche files, there were a number of extensions to the completion date. They were first licensed as a commercial broadcast TV station on 2/9/53. However, on 1/9/47 they were granted an STA to operate experimental television station W6XYZ on a commercial basis under the rules for commercial television stations pending completion of construction under the C.P.

It was the predecessor to KNXT The first Television station licensed to Los Angeles was W6XAO, later to become KTLS, KNXT and now KCBS-TV (Channel 2). The second TV station was W6XYZ, later to become and remain KTLA (Channel 5). KTLA and KTTV (CH 11) are the only two VHF television stations in Los Angeles to retain their original 4 letter calls.

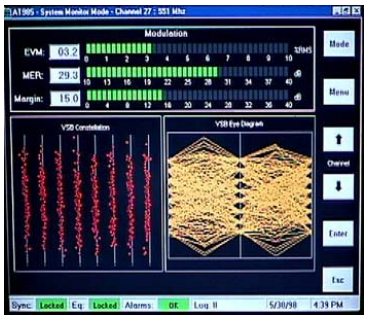
Los Angeles is one of the few markets to have all its original VHF stations licensed for commercial operation. Channel 4 (NBC) began as KNBH then KRCA and now KNBC. Channel 7 began as KECA-TV and changed to KABC-TV. Channel 9 started as KFI-TV, then KHJ-TV and now KCAL. Finally KLAC-TV became KCOP-TV many moons ago. I guess the one thing in life we can be certain of is change.

The first UHF in Los Angeles was a station started by John Pool up on Signal Hill just north of Long Beach. It evolved into what was KPOL-TV and moved slightly to today's Channel 22. Those letters are long gone now – Today it's KWHY-TV.

(Had to add this DuMont color TP)

Cable & VSB

From: John Willkie jmwillkie@cts.com



The mind just boggles as to the implications and extrapolations that one can read into and take from the FCC footnote about VSB-based digital cable systems not being subject to the plug and play rules.

First off, a bit about the use of footnotes in FCC documents. There are people who not only know the law and the FCC regulations and case law, but also "practice and procedure." Much of the latter comes from reading

correspondence that the FCC sends to stations. These letters establish precedent but are not generally a place that most novices know about.

What happens is that as a precedent becomes established and known in the "inside" community of lawyers and legal/engineering researchers before the commission, the staff takes note of how many insiders and how few outsiders know of the precedent. After a while, the staff finds a place to make the precedent more widely known, often without referring to the original letter or letters. Usually, this comes in the form of a footnote is an (at least nominally related) document that is widely distributed to the public: like a report and order.

I don't know if that is what happened here, without calling my D.C. communications counsel, but I suspect that is part of the backstory here.

You see, it's always been curious that Time-Warner, apparently alone among the major cable firms, chose to use 8-VSB as their transport for DTV stations. Makes a whole lot of sense, if by doing so, at least a portion of Time-Warner's digital cable channels would not be subject to some portion of the FCC's cable television regulations.

8-vsb and 16-vsb cable transport for DTV stations (regardless for the transport for non-broadcast digital cable channels) just seems to be a significant no-brainer to me, unless it's only about "being a gatekeeper" for the cable system.

Let's see, you presumably wouldn't even need to demodulate the signal and remodulate it, they could refer any signal oddities directly to the TV station (most often without lying) and due to their market share, plug and play Digital Cable would have to be a feature of virtually every set.

I can see all sorts of profitable "mischief" that one might be able to make with this precedent, and I suspect that "plug and play" is not the only "onerous" cable regulations that 8/16 VSB cable systems (or channels)_ would not be subject to, were one to carefully research all the precedents.

Point – Counterpoint

Statement: Reception issues are way down on the list of reasons why consumers aren't buying into OTA DTV today.

Point: I would not be surprised to learn that reception issues are very near the top of the list of reasons why the CEA, the NAB, and local broadcasters aren't promoting the bejesus out of OTA DTV. We are still waiting for "E-VSB" to be codified in a standard, aren't we?

John Shutt shuttj@yahoo.com

Counterpoint: The reason broadcasters "aren't promoting the bejesus out of OTA DTV" is that it is NOT core to the business with only 0.65% penetration. It has nothing to do with reception and everything to do with competition for the real mass audience. There is no strategic advantage for a broadcaster use valuable promotion inventory to promote DTV. There is every reason for CE folks to do so. They actually have a product with a visible return to sell.

As for reception, of the roughly 7,000 (0.65%) OTA DTV potential viewers in the local market none are known to have absolute failure receiving the DTV stations with a properly installed antenna. And, believe me, they are not shy about calling when they cannot receive my or even a competitor's signal. (And, no, I don't believe that they would be content receiving Monday Night Football and ER and NOT receiving CSI too.)

Lee Wood lwood@koin.com
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SPAM, German Style

From: David P. Reaves, III, RRSounds@aol.com
Recklinghausen, Germany

Interestingly, the German word for SPAM is "e-müll." German Internet users adopted the American word "email" and since "müll" is German for "garbage," the wordplay is fitting.

Please Touch That Dial

Editor's Note: *This commentary exemplifies some of the reasons why conservatives are getting on board the movement opposing media consolidation.*

By Ron Marr, CNSNews.com Commentary

Common sense tells us that knowledge is power. No one knows this better than the media conglomerates that determine what we read in print and view on the flickering tube.

Those who reside in the boardrooms of the news and entertainment biz (and the line between the two has been non-existent for a long time) realize that controlling the portals of information is essential to their long-term self- interest. They need the most broad customer base possible, not only so that they may enjoy a healthy bottom line via advertising dollars (convincing us to buy the "right" brand of cereal) but as well the

attainment of their own social and ideological agenda (blatant support for potential senators or presidents).

You rarely receive balance from the major networks or the giants of print. What you do receive is a subjective diatribe leaning heavily toward left or right. Usually the tilt goes to the former, and it was a dissatisfaction with such one-sided reporting that led to the success of more conservative outlets such as Fox News and the Washington Times.

The liberal press pushed their desire to con the public just a bit too far - believing as they do that people are incapable of independent thought. When the support of issues and candidates by the leftist media became ridiculously biased, citizens hungry for "truth" rose up in a sort of passive revolt. In short...they picked up the remote and clicked the channel buttons with reckless abandon. They logged on to the internet and began a search for presentations and explanations more real and plausible than the monotonous gruel of CNN, CBS or the New York Times.

But neither side is pure in their motives. Objectivity, that much heralded attribute which journalists claim to be the bedrock of their professional philosophy, is at best a bald-faced lie. From the CEO of a broadcasting giant to the most lowly features writer, it is impossible to report fairly on a topic if it is in direct opposition to one's personal beliefs. That's just human nature.

So I wasn't surprised when, in the face of consumer alienation, traditional media mega-stores pressured the FCC to relax long-standing rules that prevented them from enjoying a total information monopoly. Last June, with the support of the Bush administration, the FCC declared that networks could now own local stations reaching 45 percent of the national audience. The FCC also declared that media Goliaths could not only own a TV station, but as well a newspaper and several radio stations in the same market.

It was a sham, nothing but an attempt to put small media out of business, enhance advertising bucks and offer a stilted view of issues and events. Of course, big media offered a different reason. Gee whiz boys and girls...they only wanted to give better service. And...oh me oh my...these monster companies that already were allowed to promote their views to 35 percent of America just might not make it if they didn't have a bigger piece of the pie.

Even Chicken Little did a reverse flip with a quadruple twist when he heard that one... the network's interpretation of a falling sky. Behemoths like Viacom actually had the nerve to say they needed more local stations in order to compete against cable, satellite TV and the internet. I'm amazed they didn't ask for food stamps.

The reality, is that network honchos are enraged that people no longer view their talking heads as the voice of indisputable fact. People have gone to the net, cable, and satellite out of the suspicion that modern news presentations are little better than a late night infomercial. And they are right.

The monopoly almost happened; it still might. Luckily though, Congress for once did something right. The Senate recently approved, 55-40, a resolution that would roll back the new, FCC rules which effectively forbid diverse opinions and interpretations. However, The House is still in favor of permitting complete control to the multi-national firms who would tell us how to think, as is President Bush (he's threatened to veto the bill if it reaches his desk).

Big media should be forced to play by the same rules as small media; if you want viewers then provide a quality product. Provide news that is as objective as possible. Attempt to inform, rather than indoctrinate. Quit trying to appeal to the lowest common denominator, and instead offer information and entertainment that challenges the collective IQ and inspires viewers and readers to question, to seek and to learn for themselves.

Fat chance of the networks embracing that premise. When people started thinking for themselves one of their first moves is to flip off the TV.

(Ron Marr is the founder of The Trout Wrapper, the official magazine of Montana's Tobacco Root Mountains. The publication believes in "big guns, big dogs and big bar tabs." Founded in 1994, The Trout Wrapper says it is "dedicated to hunting down and publicly tormenting the humor impaired," and it espouses the "wholesale abuse of all things politically correct.")

PSIP and DVB-SI

From: John Willkie jmwillkie@cts.com

The DVB "equivalent" of PSIP is DVB-SI (or system information) on top of MPEG-SI. Even though DVB-SI is not useful in the United States, more than a few ATSC TV stations have effectively reserved the packets used by DVB-SI.

This comes about because effectively there is little difference between the encoders used in DVB and ATSC systems: both take in MPEG-2 video and digital audio streams, each with a unique packet identifier in the range of 0-8181, and combine those signals into a unified stream that is passed on to the system-specific (ATSC or DVB) exciter.

Many of the DTV encoders are made offshore, and are set to work, by default, in the DVB mode. The major difference between DVB and ATSC encoders, at least from my viewpoint (never having seen one working in situ) is whether packet identifiers 32 to 36 decimal are reserved for, or employed in, transmitting DVB-SI.

To reserve these packet identifiers in ATSC, a station is only slightly cramped: for stations following the ATSC program paradigm, it simply means that the station cannot employ on program number one, effectively reducing the potential universe of audio/video program streams from 255 to 254.

None of this would ever matter to viewers.

I have encountered more than a few chief engineers who, usually on the basis of advice from an employee of their offshore encoder vendor, do not employ program number 0 to reserve the possibility of transmitting DVB-SI.

This is by way of introduction to a few things I have been thinking of as I (it appears) am finalizing the data objects used in the EtherGuide Prophecy system, and I was wondering if others might have a viewpoint on a simple question or two:

1. Is there any rational reason to transmit DVB-SI over ATSC TV stations?

2. Is there any rational reason for reserving, in ATSC data transports, the packet identifiers used by DVB-SI?

3. If an ATSC TV station were to transmit DVB-SI at some time in the future, isn't it a snap to change program stream numbers, on say, a three-hour headway?

Thanks, John Willkie
EtherGuide Systems\

In my Opinion

From: Doug McDonald mcdonald@scs.edu

The slow adoption of OTS DTV is because so many stations are either not on the air, transmitting at very low power so few can get them (WICD and WICS, in my area), not transmitting HDTV even if the network provides it or providing a screwed up PSIP (WICD) so that the station does not show up on a channel scan.

OTA DTV would be far more advanced now if all the stations were on the air, at full antenna height and power, and transmitting HDTV.

A big jump start would happen if, for example, the FCC declared that any station not at full power and height, and not at least passing through network HDTV, would lose, forever, all claims to exclusivity (i.e. network) and cable carriage, and REQUIRE that cable carry the full DTV stream nearest station that was fully compliant. This, of course, applies to analog too ... the stations should lose their analog exclusivity too.

New 2003-2008 H/DTV Migration Reports

FROM: Des Chaskelson, Research Director, SCRI International (www.scri.com)

SCRI is in the process of tabulating the thousands of responses received from television stations and production and post facilities responding to SCRI's 2003-2008 H/DTV Migration. Reports are due out in early November 2003. For table of contents, see online at: 2003 - 2008 H/DTV Migration Trends Report - TV Stations http://www.scri.com/sc_hdtv_2003trends.html

2003 - 2008 H/DTV Migration Trends Report - Production / Post - http://www.scri.com/sc_hdtv_2003trendsnb.html

Parting Shots

By Larry Bloomfield

When I worked at the Peacock factory in Burbank, we had somewhere in the neighborhood of 475 full-time engineers/technicians on staff. Mr. Wright and company bought RCA – NBC and all that went with it and the axes started falling. I'm told by some of the survivors (Boy do they qualify for the Order of the Iron Test Pattern!), that it is doubtful there are 75 full-timers remaining on staff.

The business of dividing, conquering, merging, consolidation and whatever the MBAs would have us call it, tends to be a bit scary. You ever notice that none of them ever loose their jobs.

I remember doing a story about hub or central-casting that NBC had embarked on and how their O&O is the south were being all fed out of Miami. The GM of the Birmingham, AL station was so proud of how he was able to cut, cut, and cut until he got cut.

As both former craft and management, I can look at all this in two lights. From the craft stand point, I hate to see good engineers fill the ranks of the unemployed, but from the management point of view, it is a good way to get rid of deadwood. In addition to this, we engineers have also nearly automated our selves out of jobs, and the reliability factor of the equipment has so improved, that we are not in as high a demand as we once were.

I recall one GM in Hollywood telling me that he agreed with a magazine article that said "engineers are a necessary evil." I feel sorry for that poor bastard! (You had to know him to understand why I couldn't fine a kinder term to describe him.) If it weren't for the engineers, he and others in higher management who hold the same view wouldn't have had a job.

Where I'm going with all this is that as these consolidations and mergers happen, many times the baby gets thrown out with the bath water and there isn't much anyone can do. The unions, once a very powerful labor tool, are all but worthless any more. They have little or no power and I've yet to see any of them come up with anything meaningful in any of the more recent contract negotiations for their membership. There was a time when, if one union had to resort to going out on strike, the other locals respected the picket line and negations would rapidly resume.

Earlier this month, I read any number of stories of the wedding that is to take place between NBC and Universal Studios and the media powerhouse that would be created through NBC's proposed takeover of Vivendi – Universal's U.S. entertainment assets.

Earlier this month they signed a final deal to combine their empires, creating a $43 billion company. The NBC Universal deal is set to close in the first or second quarter of 2004.

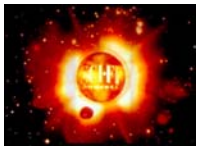
Here's a quick look at the proposed NBC Universal:
Ownership -- General Electric: 80% - Vivendi: 20%

Leadership: Bob Wright, vice chairman of GE, chairman and CEO of NBC

Financials - Based on pro forma 2003 figures
Revenue: $13 billion Ebitda*: $3 billion – (Earnings before interest, taxation, depreciation and amortization.)

What Vivendi Universal and GE's NBC unit bring to the table:

Vivendi: Owns Universal Pictures film studio, which last year had a 9.3% market share in the U.S. Also owns cable channels such as USA Network and Sci Fi Channel, and Universal Television production outfit.



NBC: Owns or co-owns several cable networks, such as Bravo, CNBC and MSNBC; Spanish-language network Telemundo; more than 14 TV stations.

In case you are unaware, Universal Television Group is a major producer and distributor of television programming worldwide. Current in their stable are Universal Television's Law & Order franchise (the long-running series Law & Order and its spin-offs, Law & Order: Special Victims Unit and Law & Order: Criminal Intent) as well as networks series such as The Agency, The District and Dragnet. Other titles include the talk shows

and reality shows Maury, The Jerry Springer Show, The Fifth Wheel and Crossing Over With John Edward. Major Cable TV hits in 2002 include Monk (aired on USA Network), Tremors (aired on Sci Fi) and the mini-series Steven Spielberg Presents: Taken (aired on Sci Fi).

operates four cable television networks in the U.S.: USA Network, a general entertainment network reaching approximately 87 million households; Sci Fi Channel which features science fiction, paranormal, and fantasy programming, available in approximately 80 million households; Trio, popular arts television reaching 15 million households and Newsworld International, a 24-hour news channel available in 14 million households. VUE also operates a network of television channels in 25 countries outside the U.S.: 13th Street –The Action & Suspense Channel, Studio Universal, The Sci-Fi Channel and USA Network.

A combined NBC and Universal Television would make TV shows for all six broadcast networks, as well as its own cable networks, with repurposing on all of the NBC-owned cable properties to be expected, NBC Entertainment president Jeff Zucker said at the Hollywood Radio & Television Society's annual luncheon recently with the broadcast networks' six entertainment presidents.

The fate of Universal's theme-park business -- its park in Universal City, Calif., as well as stakes in operations in Orlando, Fla.; Osaka, Japan; and Spain -- is far less clear. According to people familiar with the matter, the talks with NBC have focused only lightly on the parks and how they might serve as promotional platforms for the NBC networks.

Like Viacom Inc. and Walt Disney Co. before, NBC Universal bets that combining film and television studios with broadcast and cable network distribution will yield a company greater than the sum of its parts.

If you really want to be impressed with the size of this merger, check out the various companies, sub-companies and all the subsidiaries on the web. It was a very impressive and exhausting experience.

I have no particular love for NBC's Mr. Wright. He's the one that caused all those technical jobs to go away, but when it comes to all this merger business, if he needs a reminder of the risks of media mergers that try to predict the future, all he has to do is walk out of the revolving doors of NBC headquarters at 30 Rockefeller Center and glance left. That's where the "AOL" on the headquarters of AOL Time Warner will shortly be coming down.

Judging form all the interviews and comments he's made, Wright appears to be confident that NBC's first move into Hollywood will be able to adapt and thrive. "We're very complementary businesses," he says.

That all said, one cannot wonder how many jobs will be lost while they stuff their corporate bank accounts.

For additional information see:
http://www.vivendiuniversal.com/vu/en/press_2003/20030902_Vivendi_Universal_and_General_Electric_intend_to_merge_NBC_and_Vivendi_Universal_Entertainment.cfm
or
http://www.ge.com/en/company/news/vivendi_wsj.htm

Ever wonder what we broadcast engineers do in our time off? Wonder no more! Here's my co-publisher deep into being another kind of engineer – or is it conductor?

Say hi to Uncle Jim Mendrala (or is it Chu-chu Jim?)

Larry@Tech-Notes.TV

Stay tuned.

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