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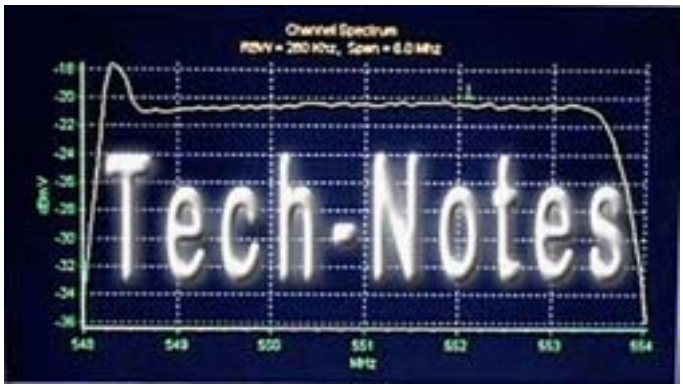

http://www.Tech-Notes.tv
August 18, 2003
Tech-Note – 117
Established May 18, 1997

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Editor's Comments

The 2003 Road Show is Finished!

With thirty-six venues and over 15,500 miles under our belts, the 2003 Road Show has had a very successful run. We did our last venue this past Wednesday (August 13th) in Eugene and have exceeded our wildest expectations. Check out these numbers.

	Last year -- 2002	This year -- 2003
Venues scheduled	33	35
Venues visited	31	36
Total attendees all venues	450	**1055**
Average attendance/venue	14.5	29.3
Approx. positive e-mails	?	38
Negative e-mails	0	0

Will there be a Road Show next year? YES. We'll be putting it together very soon. There will be more on that as we explore the possibilities. Why? Less than one fourth of this year's attendees made it to NAB and we'd like to help supplement their education in what little way we can. As we have stated many times before: There is no substitute to attending NAB and being exposed to the plethora of technology on display there. We are only a Taste!

To what do we attribute this year's success? First most all of our presentations were part of a Society of Broadcast Engineers (SBE) and/or a Society of Motion Picture and Television Engineers meeting. Then there were our local supporters who diligently notified everyone from the janitors to the GMs of most all broadcast related facilities in their area.

The subject matter we brought with us was also a significant contributing factor. We've had both national and local participation. Making it all possible were the national underwriters of this event: **AJA Video, ESE, Inc., Evertz Microsystems Ltd., Jampro Antennas Inc., Larcan – USA, Lightening Masters, Leader Instruments Corp., Quartz Sundance Digital, and Wohler Technologies, Inc**. We were joined by a number of folks at local venues across the country: Professional Video and Tape (eight venues) DL Creations (five venues), Cobalt Digital (three venues), Vernick Technology (two venues), McGrew and Associates, Digital Resources, HB Communications, Audio Video Resources and Performance Audio.

Also contributing to the success of the Road Show were those good folks who provided door prizes -- some at each local venue and others at the end of the Road Show*: Clark Wire & Cable - Crimp Tools, DSC Labs - Chip Charts and badges, Fluke - Model 189 multimeter* (~$400.00 value) and wire strippers, Sencore a PenPal - SDI portable digital signal generator* (~$1000.00 value), Jensen Tools - a tool box* (~$300-~$500 value), Wohler Technologies, Inc. PenPal - SDI portable digital signal generator* (~$1000.00 value), Maglites, and Pocket knives), Cooper tools - a Weller "WSL" Digital Soldering station* (~$300.00 value), Harris broadcast group - a Ward-Beck ABS-1 audio bit splitter, model number WA ABS-1* (Not sure of value, but believe it to be ~$500.00), Leader Instruments (Pocket Knives), Larcan (Notepads) and the Order of the Iron Test Pattern (Lapel Pins). The National drawing will take place soon and the winners will be posted on our website, with a notice sent out to all our subscribers and the winners themselves. Did we forget anyone? Probably, but not intentionally.

All we can say is thanks and hope to see you all again this next year with an even better Road Show -- A Taste of NAB 2004.

As you can see, we were packed. This is Lafayette, LA and shown are (l to r) Andy Suk, Pat O'Brian and Bill Rumsey of the KATC-TV3 Engineering staff. This is the only venue where the Road Show made it onto the local news (10 o'clock) for bringing technology to the broadcast engineers in the area. We even got a tape.

News

THE FCC FINALLY REMEMBERS THOSE WHO GET THEIR TV VIA TRANSLATORS AND LPTV TRANSMITTERS

By Larry Bloomfield

Here are some very revealing numbers: There are over 1700 full power television stations here in the United States, all of which have a mandate to make the transition from analog service to digital. Many of these full power stations "fill" their coverage area via Low Power (LPTV) and/or translator devices: some do it as a service; most do it because they must in order to cover their Designated Market Areas (DMA). (See DMA link below.)

Why is this important?

Until earlier this month (August 2003), the FCC has done **NOTHING** to address the issue of the transition of these LPTV and/or translators to digital. As of this writing, nearly 59% of all full power television stations have digital transmitters on the air and the rest are scurrying to comply. It won't be long until all full power stations will have to give up one of their two frequency allocations. So the question has been: what about those who get their TV via these LPTV and/or translators?

A recent count of the FCC records shows that there are a total of over 6800 LPTV and/or TV translators licensed in the US. But where are they? There are ten states with 300 hundred or more translators/LPTVs and only one of these states is east of the Mississippi. Of these ten states, three have over 600 hundred: Alaska, Colorado and Utah. Some rural communities are at the end of third and fourth translator hops and there are some cable companies who use these signals to feed their customers.

What is the difference between LPTV -- Translators and Boosters?

First, for those who don't know, or are not sure, LPTV stations and/or translators get their program material usually off the air, but some are fed via microwave, copper or fiber. There is a move afoot to feed some of these devices via satellite.

LPTV (low power television) stations: LPTV stations may rebroadcast TV signals and originate imported or locally-produced programming in any amount. Approximately 2,100 LPTV stations serve rural communities and discrete geographic communities in urban areas. Many provide the community's only local news, weather and public affairs programming.

TV translator stations: A TV translator station simultaneously rebroadcasts the programs of full-service TV broadcast stations without altering any characteristic of the

signal other than its frequency and amplitude. A translator station may locally originate emergency warnings and not more than 30-seconds per hour of public service announcements and messages related to its financial support. Translator stations typically serve communities that cannot receive the signals of free, over-the-air TV stations due to large geographic separations or intervening terrain. Most of the 4,700 licensed TV translator stations are in the western mountainous states.

TV booster stations: A television booster station simultaneously retransmits the programs of a TV broadcast station on that station's TV channel. Booster stations are licensed only to full-service TV broadcast stations for the purpose of providing signal coverage to terrain-shadowed portions of the station's service area.

With respect to booster stations, the NPRM seeks comment on whether the FCC should establish an on-channel digital booster station class in the LPTV service and, if so, what rules should govern such stations.

The action!

Finally waking up to the fact that this service is out there and needs to be addressed, the FCC issues a Notice of Proposed Rule Making (NPRM), the first step in bring the rest of the television community into the twentieth-first century. According to the FCC press release on this issue, "the FCC seeks a regulatory framework that will provide flexible and affordable opportunities for extending digital television opportunities to rural communities and to other communities served by stations in the LPTV Service.

In the NPRM, the FCC seeks comment on a wide range of legal, technical and policy issues related to the digital conversion and new authorization of stations in the LPTV Service, which includes the following types of stations:

The NPRM tentatively concludes that digital translator stations should be technically capable of retransmitting the complete signals of DTV broadcast stations for reception by the general public. It seeks comment on translator local message insertions and, more generally, the extent to which digital translators should be permitted to alter the content or video format of DTV signals. The NPRM tentatively concludes that digital LPTV stations must broadcast a video programming service at no charge to viewers having a video resolution at least comparable to that of an analog TV signal, but should be permitted to use the remaining digital channel capacity to provide ancillary and supplementary services.

There are some serious wrinkles to this proposed new service. Even though the NMPR proposes TV channels 2-13 and 14-59 (except channel 37, which is reserved for radio astronomy) to be made available for digital LPTV and TV translator stations, a significant number of current analog translators and LPTV stations operate on channel 52 and above, and will have to move. Keep in mind that the "lower" and "upper" 700 MHz spectrum comprising TV channels 52-59 and 60-69, respectively, has been reallocated for new primary services, including commercial wireless and public safety services thereby

limiting what is available to the translator/LPTV community. Despite this, the NPRM seeks comment on whether this spectrum should be made available for digital low power service when applicants can demonstrate the unavailability of other television channels. A lot of good that would do if TV set manufacturers take the stance that they'll not make TV sets that tune above channel 52 for obvious reasons.

One thing that will not change is the fact that all stations in the LPTV Service, including future digital stations, operate on a secondary basis to and must not interfere with TV and DTV broadcast stations, certain land mobile radio operations and other primary services. The NPRM does look into and seeks comment about the means of analyzing potential interference from digital low power stations to primary services and whether the current contour protection methodology used with analog LPTV stations should be replaced with the more flexible and accurate DTV interference prediction methodology. It proposes for digital LPTV and TV translator stations the protected signal contour values the FCC adopted for digital Class A TV stations. The NPRM also considers other issues related to digital low power equipment and station operations.

In an attempt to make everyone who has been ignored to date on this issue, the FCC says: "a high priority should be given to facilitating the digital transition of existing analog LPTV and TV translator service stations." With respect to new digital stations, the NPRM seeks comment on an initial digital-only application filing window with eligibility restricted to incumbent LPTV, TV translator and Class A TV licensees, to be followed by a separate filing procedure of ongoing "rolling one-day" filing windows – essentially a first come, first served filing system.

There are some digital translators operating in Utah on a Special Temporary Authority (STA) and the results have been stellar, improving signal quality through out the state and the system. The NPRM takes into account issues related to digital low power equipment and station operations.

And when will the analog LPTV/translator service go bye-bye?

The NPRM seeks comment on whether certain statutory provisions for the termination of analog TV service apply to authorizations in the LPTV Service and, if not, whether the FCC should consider establishing a trigger-based mechanism for this purpose, like that for full-service stations, but also accounting for the significant difference between full-service and low power stations.

For more information, visit the FCC's website www.FCC.gov and look up NPRM (FCC 03-198). MB Docket No. 03-185. Comments due 60 days from publication in the Federal Register and replies are due 90 days from publication in the Federal Register.

To see more about the 210 DMAs and what they are, visit:
http://www.nielsenmedia.com/DMAs.html

DTV Transition Scoreboard

By Fred Lawrence

According to the National Association of Broadcasters(NAB) there are a total of 941 full power television stations broadcasting in digital as of July 23rd, their latest press release on the matter. This is still only more than 55% of all full power television stations in the US. They also say that DTV signals are now being transmitted in 195 markets that include 98.8% of U.S. TV households. In addition, 79.66% of the more than 106 million U.S. TV households are in markets with five or more broadcasters airing DTV and 50.81% are in markets with eight or more broadcasters sending digital signals.

According to PBS, as of July 2003, 174 PBS member stations are offering digital broadcast services, covering 76.25% of all U.S. TV households.

Transcoding Digital TV in Rural Translators

By Tim Frahm, Director, Advanced Product Development Zenith Electronics
tim.frahm@zenith.com

Digital Broadcast Television presents a number of challenges to the rural American public that can be easily overcome with the implementation of Digital Transcoders as part of the typical translators used today to supply Analog Television to the public. Transcoders use full digital processes to restore signal quality that is reduced from interference normally found in most broadcast environments. The basic architecture of a Transcoder provides frequency agile tuning on the front end of the device, Forward Error Correction and Equalization of the digital television information and the option to change channel information and station identification in the Program and System Information Protocol (PSIP) used for navigation in digital television receivers.

Digital Transcoding also offers additional benefits to rural Americans by removing jitter and noise that can reduce the reception capabilities of consumer receivers, even under strong signal conditions. Another benefit is that Transcoders can decode the digital programming and make the video and audio available for transmission over the existing analog transmitters. This provides studio quality signals to rural customers analog televisions where they have had to live with snowy pictures in the past.

Implementation of Digital Translators (a system consisting of a front end processor, known as a Transcoder, and a low power transmitter) is done in much the same manner

as existing Analog Translators. Distant signals are received, processed and retransmitted on a different frequency in order to avoid interference with the original signal. As a note, there are also systems that use the same frequency as the original and are commonly known as on-channel repeaters. These systems are not common and require a great deal of shielding or new techniques to eliminate the interference. On-channel repeaters are not part of the discussion in this paper.

Given the architecture and implementation of Digital Translators that convert channels for re-transmission, there is a need to provide logical navigation tools to the end users. This is accomplished with the use of PSIP Virtual Channel information imbedded in the digital data stream. A virtual channel is typically assigned to be the physical analog channel from the same broadcaster. The result in a typical broadcast environment is that the analog channel and the digital streams all appear to be on the same channel with different sub-channels for each program. When the analog channel and the digital channels are both translated to new frequency assignments for re-broadcast, the relationship between the two channels is lost. The analog channel becomes the new physical channel and the digital channel remains on the original virtual channel when viewed on a digital television. As a note, the ATSC has added a requirement to the A/65B standard for digital television the need to support Transmission Signal ID (TSID) information in the EIA/CEA-608-B data stream inserted in the VBI of the analog signal an identifier that allows a digital television to build a relationship between the analog and digital sources from each broadcaster. A section from the ATSC standard is included after this paragraph to explain the ATSC requirement. The basic idea is good but puts a burden on broadcasters to add equipment in the analog transmitter to support this function. Also, existing digital receivers do not support this feature.

USE OF ANALOG TRANSMISSION SIGNAL ID (ATSC A/65B DOCUMENT)

The Virtual Channel Table in PSIP associates a user-friendly definition of a service (a channel name and number) with the physical location of that service. Both digital and analog services are accommodated. For digital services, the Transport Stream ID (TSID) parameter defined in ISO/IEC 13818-1 (MPEG-2 Systems) is used as a unique identifier at the TS level. For analog services, an identifier called the Transmission Signal ID (the acronym is also TSID) may be used.

The analog TSID, like its digital counterpart, is a 16-bit number that uniquely identifies the NTSC signal within which it is carried. EIA/CEA-608-B [13] Section 9.5.2.4 defines the data format for carriage of the Transmission Signal ID within eXtended Data Service (XDS) packets in the NTSC Vertical Blanking Interval.

In the US, the DTV system is designed with the expectation that the analog TSID will be included in any NTSC broadcast signal referenced by PSIP data. Whenever PSIP data provides a reference to an analog service, the receiver is expected to use that service's analog TSID to make a positive identification. The receiver is expected to not associate any channel or program information data with an NTSC service that does not broadcast its analog TSID.

Given the fact that TSID is a new requirement for analog and is not supported in existing digital receivers, it may be necessary to change the Virtual Channel in the digital stream to realign the analog and digital channels to be the same as the translated analog channel. This can be done in real time as part of the Transcoder product used in the digital translator. The information can be changed each time the signal is translated to a new channel. It is important to remember that virtual channels and physical channels are not the same and the digital television will learn the virtual channel information after it has done a scan to locate all of the available physical channels in that service area. The actual physical channel that is used for translation is irrelevant to the consumer watching a digital signal.

As a final note, the requirement for translators to identify themselves has been a burden on the broadcaster to take air time to identify all of the translators that use his signal. It is possible to include a process that alters the PSIP stream to change the call sign identifier in each translator. This will then be available to digital televisions to display on the screen, typically as part of the channel time display.

In summary, Analog Translators and Digital Translators will coexist in rural areas and must provide consumers the ability to locate and view both types of signals easily and in a logical manner that eliminates confusion about the source of the original content. Broadcasters should embrace these techniques in order to retain their identity and loyalty to the content they generate. Using PSIP as a navigation tool is very important to accomplish this goal.

What's on HDTV Tonight?

By Charlie Nullya

There is an online newsletter that is published daily by Dale Cripps entitled HDTV Magazine. We've mentioned it before here in the Tech-Notes, but it's worth mentioning again. It has been around for several years and is quite complete in its offering of timely information on who is doing what in the wonderful world of HDTV. Cripps also runs features, interviews and carries all the latest HDTV programming news. It's easy to follow and leaves nothing out. It's worth a spin. Give them a look at: http://www.ilovehdtv.com.

ABC	CBS	NBC	THE WB	PBS
DISCOVERY HD THEATER	HDNET MOVIES	HDNET	DIRECTV	
HBO	SHOWTIME	ESPN HD		

http://www.ilovehdtv.com

FCC Implements New Satellite Licensing Rules

From: Stephan E. Coran scoran@manatt.com

In order to streamline the licensing process and thus permit satellite providers to respond efficiently to changes in the telecommunications market, the Federal Communications Commission has amended the satellite space station rules and policies.

The new rules are intended to increase certainty and increase investment in the satellite industry.

The Commission hopes to reduce the time for applications to be filed and granted to less than one year. The new procedures will create a single processing line for geostationary (GSO) and nongeostationary (NGSO) systems.

Applications for GSO systems will be granted on a first-come, first-served basis. Applications for NGSO systems will be listed on a Public Notice to establish a cut-off date for filing competing applications. Grants will be issued to qualified applicants.

Instead of meeting a showing of financial qualification licensees will be required to post a bond, payable upon revocation of license for missing a milestone. The Commission will also limit the number of pending applications and the number of authorized but unlaunched satellites or satellite systems that one company will be permitted to have.

Newly created attribution rules will protect against a company evading the limit by way of corporate restructuring. Also, anti-trafficking rules have been eliminated in order to facilitate transfers to parties that can better use the spectrum.

With the exception of applications for replacement satellites, the Commission has instituted a filing freeze until such time as a summary of the new rules is published in the Federal Register.

FCC Media Bureau Sends Inquires To All Industries Involved In The DTV Transition

From: Robert Rini rrini@manatt.com

The FCC has undertaken a comprehensive inquiry designed to spur the transition to digital television. Players, large and small, in each industry received letters from the Commission, asking for specific information on the progress made to date, the plans for the future, and details about impediments each respondent sees to the timely construction of digital television and its adoption by consumers.

Networks were asked about the specific digital programming being fed to affiliates, as well as plans for high-definition and digital programming during the next year. Stations were asked whether they were on the air with digital signals, the percentage of customers who were being provided a digital signal, the type and cost of equipment being used, the ability to pass on a digital feed from the network without degradation and whether the digital signal was being carried by cable operators.

Cable operators were asked about which of their systems were committed to carrying HDTV and other digital content, the cable-tiers used for such "value-added" service, and the cost to the customer to receive it. The larger cable companies were asked for specifics on which analog and digital signals were being carried, as well as specifics as to which were must carry and which were subject to retransmission consent agreements - and why. The letters also asked about the cable operator's plans for digital programming, the progress in obtaining set-top boxes with digital connectors, and the efforts being made to promote high definition television.

DBS operators were asked whether they were carrying five digital programming services in at least 50% of their prime-time schedule and the costs to consumers. The inquiry specifically asked about capacity or other factors that may result in the need for

additional and/or larger reception dishes, or which would impact on the delivery of local, HDTV and enhanced programming in the future.

Equipment manufacturers were asked about their plans to educate consumers and efforts to meet the FCC's digital reception capability goals. Manufacturers were asked about the inclusion of ATSC tuners in new television sets, the efforts to assure quality over-the-air reception of digital signals, as well as availability of digital connectors for DTV sets and set top boxes.

Retailers were asked about staff training, the availability of information for consumer use, and the ability to display HD content in the showroom. In each case, responses are requested within thirty days.

For more information, go to:

http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A1.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A2.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A3.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A4.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A5.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A6.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A7.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A8.pdf
http://www.fcc.gov/Daily_Releases/Daily_Business/2003/db0602/DOC-235047A9.pdf

Canada's First Digital-Over-The-Air Station Selects Triveni Digital's PSIP Generation System and ATSC Transport Stream Analyzer

From: Dawn Danaher danaher@ariesmarketmasters.com

CHUM Television has chosen Triveni Digital's GuideBuilder™ metadata management system and StreamScope™ ATSC transport stream monitor and analyzer for its Toronto station 'Citytv'.

In February of 2003, Citytv Toronto began broadcasting Canada's first digital over-the-air signal. Triveni Digital's GuideBuilder system assists the station to comply with the ATSC PSIP standard, retain their market branding, and protect their channel identities in on-screen Electronic Program Guides (EPGs). Furthermore, Triveni Digital is enhancing GuideBuilder, the leading PSIP management solution in the US, with Canadian specific features such as use of the Canadian Rating System.

Additionally, CHUM Television also uses Triveni Digital's StreamScope MT-25 stream analyzer to measure and monitor its DTV signals and transport streams throughout its

geographic coverage area, while ensuring that their transport streams are standards-compliant.

"The Triveni Digital systems provide us powerful tools that are leaders in their respective technologies but also have Canadian DTV focus. Additionally, they are remarkably simple to use and were easily integrated into our DTV system," said Bruce Cowan, Director Broadcast Technology at CHUM Television. "We've been very impressed with the company's engineering expertise and the overall support during and after the delivery."

"CHUM Television has achieved major milestones this year for the Canadian DTV industry and is setting an example for all Canadian broadcasters. We congratulate them on their progress," said Mark Simpson, President and CEO of Triveni Digital. "We look forward to leveraging the work we have done for CHUM and the rest of our product line to assist other Canadian digital broadcasters."

New Transmitter Site for New York

By Fred Lawrence

According to a recent report, the Metropolitan Television Alliance, a group of New York broadcasters, has signed an agreement that would put at least 22 television antennas atop the planned 1,776-foot “Freedom Tower” spire at the site of the World Trade Center: Specifically, Channels 2, 4, 5, 7, 9, 11, 13, 31, 41, 47 and 68. Though separate, the antennas will appear as a single unit on the skyline. The television antennas will be designed to send signals from the New Jersey Shore to the end of Long Island to Fairfield County, Conn.

Edward Grebow, president of the broadcasters' alliance, says one of the big challenges will be to make the antennas aesthetically pleasing. They range in height from several hundred feet to 30 or 40 feet, he said, and could be concealed within a shell of fiberglass-like material. Twenty-two antennas are needed to accommodate both analog and digital signals from each of the 11 stations, but some channels could be combined.

Members of the alliance are WCBS (Channel 2), WNBC (4), WNYW (5), WABC (7), WWOR (9), WPIX (11), WNET (13), WPXN (31), WXTV (41), WNJU (47) and WFUT (68).

The new spire — planned to contain gardens instead of office space — is scheduled for completion in 2008 using a design that is not specified at this time and at an undetermined cost. Those involved have agreed to kick-in toward the construction costs and will lease space for equipment and other support infrastructure.

The broadcasters had considered other transmission sites, including a proposed 2,000-foot tower in Bayonne, N.J., that was opposed by the Federal Aviation Administration.

But not everyone is going to the new spire. Acording to another report, Spanish-language broadcaster Univision signed a 15-year lease to transmit their signals from atop the Conde Nast building at 4 Times Square, becoming the first television network there, says the building's owner, the Durst Organization.

Two Univision channels, WFUT-TV (Channel 68) and WFUT-DT (Channel 53), will use the tower for primary transmission, while WXTV (Channel 41) will use the facility as a back-up transmitter. Univision was formerly transmitting from the Empire State Building, where the city's other television stations are currently based. Univision would not comment on why it moved.

From the 53-story, 385-feet high Conde Nast building, Univision can transmit its signal to Westchester and parts of New Jersey. The Durst Organization says it is in negotiations with the other major networks to use the Conde Nast building as a back-up transmitter site.

Study Shows Digital Cinema Competing with Film in 2003

From: SCRI http://www.scri.com/dc2003.html

By 2003, almost eight out of ten film production/post houses will be will be shooting feature film digitally instead of on motion-picture film

While the digital cinema transition does not necessarily obviate the use of film, upon which the movie industry has been based for more than a century, it does presents a range of improved technical and creative options for filmmakers that can enhance and extend the viability of film as an imaging and--to a lesser extent--distribution medium.

According to SCRI's just released 2003 - 2005 Digital Cinema Marketplace Report, a total of 74.3% (cumulative) of respondents indicated that they either had shot--or were intending to shoot during 2003--a digital motion picture. With 15% unsure, the actual penetration rate is likely to be even higher.

Among film production/post facilities, by the end of 2003 over eight in ten (83.3%) will be shooting feature film digitally instead of on motion-picture film -- among cinematographers the expected incidence is equally high -- 78.5%.

Excerpted from SCRI's 2003 - 2005 Digital Cinema Marketplace Report by permission.

FCC Stops Accepting Forms 314, 315 in favor of new Forms

From the FCC

The FCC has placed a freeze on all radio and TV transfer of control and assignment applications, Forms 314 and 315, so they can be revised to reflect new media ownership changes.

The freeze would go into effect after the new rules are adopted and the new forms are approved. In the meantime, the agency is still accepting short-form 316s.

Upon receiving approval from the Office of Management and Budget for the revised FCC Forms 301, 314 and 315, and the publication of such approval in the Federal Register, the FCC has now lifted the temporary freeze on the filing of these applications. The newly implemented media ownership rules revised the ownership showings that are part of the application for new or modified broadcast authorizations and for assigning and transferring control of existing stations. The new forms are required for filing of new applications and amending applications that were filed under the old rules but which require amendment so as to be approved under the new media ownership rules.

For additional information, go to: http://www.fcc.gov/mb/elecfile.html

Fiber Optic Speeds Increased 10-Fold

From: The CGC Communicator CGC #578

new technology that increases communications speeds tenfold, to one gigabyte per second, "for optic-fibre services now available," has been introduced by Japan's Nippon Telegraph and Telephone Corp. This raises the prospects that broadcast-quality fiber links will be deployed for homes and offices.

Report from Reuters/Tokyo.

http://story.news.yahoo.com/news?tmpl=story&u=/nm/20030609/tc_nm/telecoms_japan_ntt_dc_1

FCC Lifts Filing Freeze On ITFS And MDS Applications.

From an FCC Press Release

On August 8, the FCC lifted its freeze on applications for new and modified MDS facilities and on applications for major changes to ITFS facilities. The freeze was implemented by the FCC's April 2, 2003 Notice of Proposed Rulemaking and Memorandum Report and Order, issued as part of a comprehensive review of rules and policies governing the 2500-2690 MHz band.

In lifting the freeze, the Commission has returned application filing rules and procedures to their previous status, but cautioned applicants that all new or modified facilities must comply with whatever rules are adopted for this band. Licensees were particularly cautioned that the FCC would "be especially disinclined to grandfather any nonconforming facilities that are built during the pendency of this rulemaking". The Commission stated that it will likely require that any such facilities be modified to comply with any newly adopted rules, but noted that it does not believe that doing so will prove to be overly burdensome.

With regard to ITFS, the Commission accepted the need to permit licensees to modify their facilities, especially to provide two-way service, but limited such modifications to existing 35 mile interference contour protection. In permitting only applications to modify existing ITFS facilities, while maintaining the freeze on new ITFS stations, the Commission noted that no new ITFS applications have been accepted since 1995.
For additional information, see: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-194A1.pdf

Do-Not-Call/Do-Not-Fax Rules Frustrate Trade Groups And Others.

From an FCC Press Release

The FCC recently released its Report and Order implementing the Telephone Consumer Protection Act. These rules are part of a coordinated approach by the Federal Trade Commission ("FTC") and the FCC to regulate telemarketing. Most are scheduled to take effect on August 25, 2003, though there is a real possibility the effective date of the rules will be stayed by the FCC. While the FTC does not have jurisdiction over most financial institutions, airlines, common carriers (such as phone companies), and insurance companies, the new FCC rules apply to these industries.

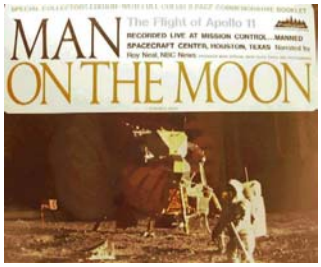
The FCC rules apply to both intrastate and interstate calls, while the FTC rules apply only to interstate calls. The FCC describes the new "do not call" rules as a floor for regulating telemarketing, but do not preclude states from enacting more stringent regulation of

intrastate calls. State-enacted regulations regarding interstate calls that conflict with the new FCC rules would likely be preempted. Among the significant aspects of the FCC rules are those addressing "unsolicited" faxes. The FCC rules replace the "established business relationship" and implied consent standards for sending faxes with a more stringent "signed written consent" standard. This change has the critical effect of preventing professional associations from faxing, even to their existing membership, meeting notices and agendas, program registration and membership renewal forms and publication promotions, without the signed written consent of each recipient.

For additional information, see:
http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-153A1.pdf

ROY NEAL, K6DUE, SK

From ARRL



Retired NBC News space correspondent, producer and executive Roy Neal, K6DUE, died August 15 in High Point, North Carolina. He was 82. Neal underwent major heart surgery August 12.

Recognized as a leading news expert in spaceflight and science, Neal--born Roy N. Hinkel--covered all of the Mercury missions for NBC and later reported the Gemini and Apollo missions and the early space shuttle flights. His space news experience led him to become involved with the Space Amateur Radio Experiment (SAREX)--now the Amateur Radio on the International Space Station (ARISS) program. ARISS, a joint project of ARRL, AMSAT and NASA, put Amateur Radio aboard space shuttles and developed the first permanent ham station in space aboard the ISS. Neal chaired the SAREX/ARISS Working Group and moderated ARISS international team gatherings and, quite often, school group contact teleconferences. Earlier this year, he was inducted into the CQ Amateur Radio Hall of Fame for his role in persuading NASA officials to allow Amateur Radio operation from space in the 1980s.

A Pennsylvania native, Neal's broadcasting career began at WIBG radio in Philadelphia. He served as a combat infantry officer during World War II and later became a program manager for the Armed Forces Radio Network in Europe. After the war, he was a television pioneer at WPTZ-TV in Philadelphia. He subsequently set up NBC's West Coast news bureau.

An ARRL member and active amateur operator throughout his adult life, Neal enjoyed DXing, HF and VHF. Survivors include his wife Pat and sons David and Mark. Arrangements are pending.

Belgium, Germany Drop Morse Requirement

From ARRL

Speaking of Amateur Radio; Belgium and Germany are the latest countries to drop the requirement to pass a Morse code examination to obtain HF operating privileges. Their action followed the decision of World Radiocommunication Conference 2003 to delete the treaty requirement calling on applicants to prove Morse proficiency to have HF access.

Belgians holding ON1-prefix Class B tickets can get new Class A HF licenses and ON4, 5, 6 or 7 prefixes by applying to Belgium's telecommunications authority and paying a 5 Euro fee. As of August 8, some 200 Belgian Class B licensees had taken advantage of the plan.

Starting August 15, an estimated 33,000 German Class 2 VHF/UHF-only licensees will be permitted access to the HF bands on an equal footing with current Class 1 licensees. "Morse telegraph knowledge as a prerequisite to use the high-frequency bands is no longer required," said a statement from the German Federal Ministry of Economy and Labor (BMWA). "These rules apply for foreign Amateur Radio licensees with comparable privileges operating during visits in Germany." At least for now, the upgraded Class 2 licensees will use their current call signs (prefixes include DB, DC, DD and DG).

Switzerland was the first country to drop the Morse requirement, albeit on a provisional basis while it makes the rule change permanent. The UK soon followed.

Radio Amateurs of Canada is conducting a national on-line Morse survey http://www.rac.ca/news/msurvey.htm to record Canadian amateurs' preferences on the current 5 WPM Morse requirement for HF access. The RAC Board of Directors will consider the results of the survey in arriving at a recommendation for Industry Canada, which will decide the matter in Canada.

There was a time when Radio Operators in the US Navy had to know 20 words per minute; no more. Many radio and television engineers, who are a bit long in the tooth, recall when code was one of the commercial licenses that could be take, back when the FCC had such things as operator licenses. Code has not been a requirement aboard ships, both commercial and military, for several years now. It is only a matter of time when it is expected that code requirements for US Amateurs will go away too.

"BPL" - A Major Threat To The Electromagnetic Spectrum

From: THE CGC Communicator CGC #587

If there is one "big issue" that a number of entities should be concerned about - from amateur radio operators to broadcasters to government users of the electromagnetic spectrum - the issue is "BPL" - Broadband data over Power Lines.

For example, you can kiss goodbye to the HF bands because of the wideband noise that will be created if BPL is approved for deployment in the U.S. at the injection levels proposed. How much spectrum will be impacted remains to be seen, but the noise will be virtually everywhere because the conduits for BPL transmissions - power lines - are almost everywhere.

The ARRL has an extensive presentation on BPL interference. The threat is real. Here is the URL. Read the text and download the video. You may be amazed:
http://www.arrl.org/news/stories/2003/08/08/2/?nc=1

Hollywood Alters Movies To Foil Camcorder Pirates -- 'Forensic Watermark' Imprints Bars On Recording

Try as they will, Hollywood has been sending enforcers with night-vision goggles into movie theaters and puts metal detectors outside advance screening rooms, but still the industry can't stop pirates from recording films and selling illegal copies before their theatrical debuts.

The problem is that the pirates are adopting ever more sophisticated technology, using tiny camcorders in purses and digital recorders about the size of a fountain pen.

Some handheld computers "have attachments that can record up to 122 minutes," said Jeffrey Godsick, executive vice president of marketing at 20th Century Fox. "Well, that's a whole movie in many cases. You can take the attachment and run it through a small hole in a tie or a shirt."

This is big business. The Motion Picture Association of America estimates studios lose more than $3 billion per year from piracy in various forms. So the movie industry is trying to fight back with a high-tech solution of its own.

Cinea LLC, which created an encryption system for DVDs, and Sarnoff, a technology research firm, are developing a system to modulate the light cast on a movie screen to create a flicker or other patterns that would be picked up by recording devices, making the resulting images unwatchable. The disruptive flickers would be unseen by the human eye in the movie theater.

The "forensic watermark" system is designed to be used with digital projectors, which show movies stored on computer discs rather than traditional 35-millimeter film. Only a small number of theaters have digital projectors, although it is expected that most theaters will go digital by the end of the decade.

http://www.nbc4.tv/technology/2120073/detail.html

The History of Television 1942-2000

We've just been informed that Albert Abramson, Television Historian, has just published his fourth book, The History of Television 1942-2000. Abramson says: "I'm sure that you and your readers will be pleased with what you read."

This is the second volume from Abramson on the history of television, this time covering the years between 1942 and 2000. The author details the significant developments of new cameras and picture tubes (making commercial TV possible worldwide), the invention of the video tape recorder, and more. Publisher: McFarland & Company, Inc. Jefferson, NC - USA

You can contact Albert Abramson at: Aatvhis@aol.com

http://www.traveldirectorynet.co.uk/books/code/ATBpart30/0786412208_History_of_Television_19422000.html

Study: HDTV to Boom

From: Sky Report

Lower retail prices and more digital content in both standard and high definition have helped increase demand for integrated digital televisions and HDTV, according to studies from IMS Research.

The firm said the HDTV market is poised for growth during the next five years. IMS Research said it expects the worldwide market for

HDTV displays to grow to 33 million unit shipments in 2008, up from about 4 million units in 2002.

Factors driving that growth are:
*Substantial investment in flat-panel display production capacity by the large television manufacturers, helping drive down retail prices;
*The availability of HD-DVDs, helping raise awareness and need for higher resolution displays;
*The addition of China and Europe as large new markets for HD.

For more information on the study, visit http://www.imsresearch.com.

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Record/Playback in HD in DV Format

From: Craig Birkmaier

According to a press release from Sony, Canon Inc., Sharp Corporation, Sony Corporation, and Victor Company of Japan, Limited (JVC) have announced a joint proposal of basic specifications for "HDV" (tentative name) format which realizes recording and playback of high-definition video on a DV cassette tape. The HDV format includes 720p (progressive) and 1080i (interlace) specifications, and enables the development of products conforming to the global high-definition infrastructure. The four companies will actively promote the specifications throughout the industry and plan to finalize the specifications around September 2003.

The specification will be built around the specs used in the JVC HD Camcorder shown at NAB; however it will be expanded to include additional frame rates not supported by JVC.

The Sony press release available at the URL below indicates that the format will use the MPEG-2 Main Profile at High 1440 level with 4:2:0 color. The formats included in the chart are 1280 x 720 @ 60P, 50P, 30P, and 25P, but NOT 24P, and 1440 x 1080 @ 60i and 50i but NOT 30/25/24P.

http://www.sony.net/SonyInfo/News/Press/200307/03-0704E/

Zenith Offers HDTV Personal Video Recorder

By Fred Lawrence

If the DV format isn't your cup of tea then how about recording and playing back standard or high-definition programming using an 80 GB hard drive?

Packaged in a set-top box (STB), Zenith's HDR230 represents a new generation of STBs that combine the best of digital HDTV tuning with PVR features. The net generation STB is designed to work with an HDTV set and offers several flavors of video formats: RGB or component (YPbPr) 1080i/720p/480p, S-Video, an A/V output, coaxial/optical Dolby AC-3 audio and an ATSC (8VSB) antenna input.

The only tradeoff is limited HD record time. Only about eight hours of HD recording is allowed, compared to nearly 30 hours for standard definition programming. The Zenith HDR230 is available now.

For more information visit www.zenith.com .

Thomson Stirs the Digital Transition Pot

By Larry Bloomfield

Thomson is suggesting that the FCC establish an interim deadline of July 1, 2004 (concurrent with the first digital tuner/decoder deadline), by which all broadcasters must transmit a digital signal of sufficient strength to serve their entire Grade A contour.

Thomson Consumer Electronics manufactures television receivers under the RCA and GE brands. In a recent communiqué with the FCC, they've called upon the FCC to expedite its approval of plug-and-play connectivity standards for cable-ready digital TV sets. The company also placed blame for poor over-the-air DTV reception with broadcasters that have a "lack of commitment" to full power broadcasting.

This is the same company, whose vice president of consumer products three years ago made the statement before the Churchill group in Palo Alto that their TV sets could display up to one million pixels of stunning HDTV. When it was pointed out that HDTV pictures being transmitted are two million plus, he declined to comment any further. Let's hope that his company has something that can display ALL the pixels broadcasters are transmitting.

In Thomson's defense, a Thomson spokesperson says they have significantly improved the reception selectivity of their recent DTV tuners. Thomson's latest tuner design will mark a 7 to 10 dB improvement over their first generation products, but this doesn't address the display issue.

Thomson's spokesperson says that multipath performance remains an important issue for over-the-air DTV and Thomson is investing more resources to insure constant improvement. "We believe that promising new multipath cancellation technology from LINX Electronics will minimize the majority of multipath problems where received signal strength is sufficient. Thomson is planning to utilize LINX technology in future generations of digital TV receivers," he said.

"Notwithstanding these advances in receiver capabilities and performance, accurate and robust reception is inevitably and directly related to the strength of the signal transmitted by the broadcaster," he continued. "Regrettably, most local broadcasters are not transmitting their digital TV signals at full-power. In fact, the commission's most recent figures indicate that only 25 percent of commercial broadcast stations are 'on-the-air' with a digital television transmission signal that covers their analog station service areas. This raises the prospect that a very significant number of homes that receive a station's analog signal cannot receive that station's digital signal.

"The availability of only a low-power signal can significantly hamper the ability of any terrestrial receiver—regardless of input sensitivity—to properly receive, tune, and decode digital TV signals. For example, with the prevalent use of low-power TV transmitters, there are instances where the adjacent channel interference ratios will be well in excess of planning factors used to design the receiver components. We designed our receivers assuming, appropriately, that broadcasters would fully engage in their responsibilities in this transition and send signals at full strength in compliance with the transition plan embodied in FCC regulations."

For more information visit www.rca.com.

Fox does HDTV turnaround

By Charlie Nullya

Many of Fox's primetime TV shows have been shot in the wide screen format of 16:9, but Fox only distributed them digitally to local affiliates in 480p - 16:9. The long time hold out to HDTV, often pushing this lesser wide screen format as being something to brag about. "Several Fox primetime programs will broadcast in HD starting in 2004," as the headline read.

The Fox decision was announced in a New York Times story in June of this year. Fox is still not too happy about doing HDTV. In a letter from top brass at News Corporation, Fox's parent company, it said they were "unhappy about introducing HDTV" before the adoption of a "broadcast flag" agreement by the FCC.

The flag proposal is a very controversial anti-piracy technology currently being considered by the FCC. Its intent is to allow placement of an electronic block to prohibit duplication of certain programs. The FCC has not taken a stand on the issue to date.

The transition to HD means a significant network upgrade for Fox and its 182 affiliates. The Fox turnaround on HDTV is significant in a broadcast industry struggling to convert to digital technology while remaining profitable.

Cheep HDTV

By Jim Mendrala

This is not a joke. You can now have HDTV in your home now for as little as $378 US Dollars. Not only will you have HDTV you can also record it in whatever format your heart desires.

Court Rules On EchoStar Infringing On Network's Copyright

From: Robert J. Rini rrini@manatt.com

A District Court in Florida ruled that EchoStar was infringing on the copyright protection of the four major networks by delivering distant network services to residences that could already receive local broadcast stations over the air.

Pursuant to the Satellite Home Viewer Improvement Act, satellite television providers are not allowed to offer network programming unless the customer is "unserved" (i.e., meets the statutory standard of living in an area that cannot receive a primary network signal). In 1998, the networks filed a suit claiming copyright infringement because EchoStar was providing distant network services to certain "served" households, impacting ratings and therefore advertising revenue. A Florida federal District Court granted the networks a nationwide preliminary injunction against EchoStar, but an appeals court ruled that the trial court had abused its discretion in granting the injunction.

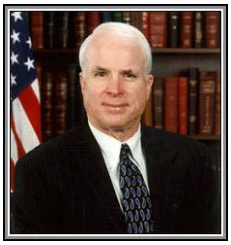
After a more comprehensive review, the District Court once again found that EchoStar had failed to meet its burden of proving that its subscribers receiving distant network feeds are "unserved households." While not taking away EchoStar's ability to transmit distant network programming to subscribers in a lawful manner - - the so-called death penalty -- the Court granted a permanent injunction requiring EchoStar to cease importing distant signals where local stations are available.

For more information go to:
http://www.nab.org/newsroom/pressrel/Statements/s0403.htm and
http://www.law.emory.edu/11circuit/sept2001/00-15378.opn.html

US Senators seek ban on industry-paid FCC travel

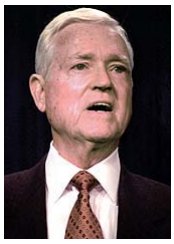
By Jeremy Pelofsky of Reuters

U.S. Federal Communications Commission officials would be banned from getting reimbursed by industry groups to travel to attend conventions and conferences under a bill introduced in the Senate recently.



A watchdog group said last month that FCC officials have received more than 2,500 trips costing some $2.8 million since 1995 paid for by the telecommunications and media industries which are regulated by the agency.

The limitation was included in legislation to reauthorize the agency's operation which was introduced on recently by Senate Commerce Committee Chairman John McCain, Republican of Arizona, and Sen. Ernest Hollings, Democrat of South Carolina.



The measure would also codify the agency's power to make media ownership limits stricter if necessary and require the FCC to review its media ownership limits every five years instead of current law which demands a review every two years.

The FCC earlier this month approved new rules that would allow media companies to get bigger, including permitting the television networks to own stations that collectively reach 45 percent of the national audience, up from 35 percent.

The bill unveiled recently would also give the agency the power to levy stiffer fines against those who violate FCC rules, as much as $10 million, up from $1 million.

CHRISTMAS TREE OF ISSUES

The bill introduced by McCain and Hollings also attempts to resolve another thorny issue that has confounded the FCC, how bankruptcy law applies to companies that fail to pay for wireless licenses when they bid during agency auctions.

The FCC spent years trying to reclaim wireless licenses from bankrupt NextWave Telecom Inc. NXLC.PK because the company filed for bankruptcy and failed to pay on time.

The measure would prevent bankruptcy laws from applying to companies that try to discharge debt owed to the government related to an FCC auction. It would also allow the agency to cancel licenses because of non-payment.

On travel reimbursements, the Center for Public Integrity complained that the FCC was too cozy with those it regulates in the media and telecommunications industries.

FCC commissioners and staff travel regularly to industry conventions, conferences and events, mostly in the United States but periodically overseas and the trips are usually paid for by trade associations or companies.

"Every independent agency needs to reevaluate their travel policies and not ... be seen as in the pocket of an industry," the center's Executive Director Charles Lewis said.

The FCC defended accepting travel reimbursements because the agency might not otherwise hear from people who cannot afford lobbyists or trips to the FCC.

"The chairman believes the trips are valuable and the bill may shift some of the burden to taxpayers but if Congress believes that's a good thing, we're fine with that," said FCC spokesman Richard Diamond.

Bill Would Disallow Copyright For Federally Funded Research

From: Chronicle of Higher Education

A bill introduced in the U.S. House of Representatives would prevent researchers from claiming copyright protections for published work that received "substantial" federal funding. No definition is given for "substantial" in the bill. Martin Olav Sabo (D-Minn.) introduced the bill in an effort to guarantee public access to research for "all who may benefit from it--especially when they've already paid for it with their tax dollars." The Public Library of Science, an organization that is planning to introduce two free, online scientific journals, supports the proposed legislation. Opponents said the law is unnecessary because a large portion of academic work is already available online. Peter D. Farnham of the American Society for Biochemistry and Molecular Biology said Sabo's bill would conflict with the Bayh-Dole Act, passed in 1980, which allows researchers to claim intellectual property rights on their work, even if funded by federal money.

http://chronicle.com/daily/2003/06/2003062702n.htm

FCC Tentatively Revokes Two Full Power FM Broadcast Licenses For Alleged Misuse Of Translator Stations

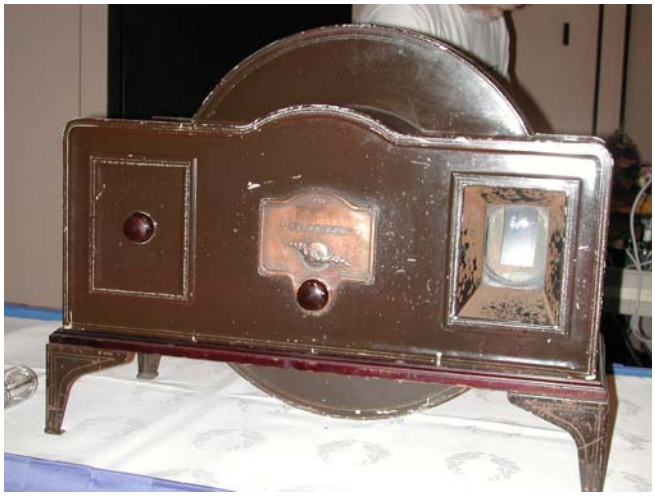
From: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03D-01A1.doc

Danger lurks when a full power commercial FM station misuses FM translators to extend the coverage of the primary station beyond the normally protected contour of that station. Put simply, translator abuse can lead to the revocation of a primary station license or licenses, as an Alaskan case shows.

New FCC Web Site Highlights the Technological History of TV

The FCC has created a new Web site outlining the technological history of television. There you will learn that the first complete idea for a television system was put forward in 1875 by a Boston civil servant named George Carey.

You'll also learn:



* Who first suggested the term "television,"

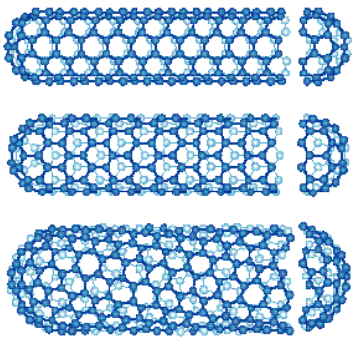
* When the first U.S. license was issued for a TV station,

* Who transmitted the first television commercial (for which the Federal Radio Commission promptly issued a fine), and

* What year a TV signal was first sent across the Atlantic Ocean via satellite.

The web site also provides numerous links to museums, libraries, personal collections, and other web sites that have interesting, in-depth information about the technological history of television. There are even links for kids to a fun site that explains how TV works. See it all at: http://www.fcc.gov/omd/history/

"Nanotubes" Pave The Way Toward Huge Non-Volatile Ram Capacity



A new chip technology based upon "carbon nanotubes" has passed a manufacturing milestone, according to claims by Nantero, the Boston area company that is developing the technology. The prototype random access memory chip holds 10 gigabits of data and may eventually replace many existing forms of memory in lucrative applications such as MP3 players, digital cameras and PDAs.

http://www.nantero.com/pdf/press%20release%205_%2003.pdf

PSIP and Closed Captioning University

From: John Willkie jmwillkie@cts.com

ATSC will be conducting a PSIP (Program System and Information Protocol) and Closed Captioning "University" on October 22 - 23, 2003 at the Embassy Suites, 1900 Diagonal Road, Alexandria, VA. Keep in mind, the Closed Captioning for digital is much different than that for analog with far more features. PSIP is not all that well understood by engineers, not to mention operators.

The goal of this unique seminar is to provide tutorial information and hands-on applications details for station engineers and operators, and other persons involved in the PSIP distribution chain from program production through to the consumer. Since the FCC is considering adopting PSIP **as a required element of DTV** transmission, this seminar is especially relevant at this time. The seminar will also include an afternoon of valuable closed captioning education. Use the links below to see the draft program and to register. Draft Program and Register Now! As with anything of this kind, space is limited.

A block of rooms has been reserved at the Embassy Suites at a reduced rate of $179/night. The hotel provides an extensive breakfast buffet and complimentary happy hour to registered guests. Please call 703-684-5900 x 6666 and ask to make a reservation with the Advanced Television Systems Committee block by September 21, 2003.
Sponsored by: Decisionmark, LINX Electronics, and Thales Broadcast & Multimedia

Features

In Life and Death

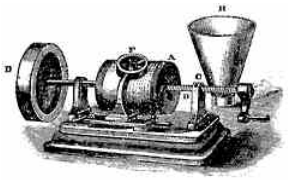
By Larry Bloomfield

While in Binghamton, NY during this year's Road Show, we came across a story about the final internment of Charles Hallinan, SBE's second national president. It is both bazaar and humorous, in a macabre sort of way, but befitting his life-long interests. You can read about it on our website:
http://www.tech-notes.tv/Biographies/Hallinan/Hallinan.htm

The Story, "Charles Hallinan, The Life and Times of a Tube Man," is written by a close friend of Hallinan's, Thomas G Siglin. It's worth the visit and the time.

Forgotten Facts

By Tech-Notes Staff



Here's something that was forgotten long ago about the invention of the phonograph recorder by Thomas Edison over 100 years ago. Most people think, of course, what a genius Thomas Edison was, but very few know the reason he invented the phonograph recording system.

Well, you know, he might have been a great inventor, but he probably really wasn't into the commercial aspects of his inventions too much. Actually, it was more than 20 years before he accepted the notion that the phonograph record player would be ideal for playing music and sounds for entertainment! He thought for quite a long time that the use of his invention in this way was a debasing of his work.

FYI

From the FCC

According to the FCC's latest Telephone Trends report which drew data from TNS Telecoms, a marketing information research firm, and the average monthly telecommunications bill for households with wireline service was $83 for 2002. That breaks down to $36 for local exchange service, $12 for long distance, and $35 for wireless service.

While the cost of wireline exchange and long distance services continues to decline, wireless use is accelerating and more than offsets the other savings.

There are currently four toll-free prefixes in use: 800, 888, 877, and 866.

http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-237412A1.doc

Parting Shots

By Larry Bloomfield

When the game plans for digital were announced, very early on in the transition, few, if any television networks or stations really noted which way they'd be going or what they'd do with this new technology and its capabilities. There was one exception to this:

The Public Broadcast Service. The engineers and managers at PBS saw some of the capabilities of this new technology and told the world that they'd not only produce high definition programming, which they have, but the daytime would be spend sending multiple programs in an effort to maximize the channel space. It would appear they PBS is keeping to their digital charter as are their local "member stations."

Case-in-point; "KQED, the San Francisco public television station, took a huge and little-noticed step Aug. 8 when it began broadcasting four separate channels of programming in the single digital channel assigned it by the Federal Communications Commission," as the press release stated.

Multicasting is not new to the Bay Area. KRON-TV, back when it was an NBC affiliate, broadcast three programs at one time: one in HDTV (Jay Leno), Bay TV (a cable service) and weather information, the latter two in standard definition, but this does not diminish what KQED is doing. KQED has launched a full time multicasting effort. During daytime hours, when KQED doesn't broadcast in HD, the spectrum is occupied with three other channels offering a variety of shows from the PBS library, while KQED continues its analog broadcasts on Channel 9, which has a different schedule of programs than the digital channel with the four new multi-cast channels.

Perhaps commercial television can take a wake up call. Experimentally, I have seen up to twelve channels of standard definition crammed into the spectrum of one digital channel using statistical-multiplexing and each channel look every bit as good as any of today's analog TV. The FCC says only the main channel has to be readily receivable in the clear; the rest can be encoded, sold, used for pay-per-view or anything else the broadcaster wishes to do with them. What a novel concept: paying for the transition to digital by using the technology of digital.

NEW SUBJECT!

During the Road Show, I had occasion to meet and speak with the engineers who are in the trenches making what remains of analog continue to work while making the transition to digital. It sickens me to hear the non-technical types at any broadcast facility, especially General Managers, take the view or have the attitude that their engineers and technicians are "a necessary evil." If it weren't for these good souls with their technical know-how, the high priced help would be with out jobs.

The NMPR issued by the FCC with respect to LPTV and TV Translators making the transition to digital is very timely, if not a bit late. Much preliminary work has been done in this area by Translator gurus such as Kent Parsons in Utah. There is an insidious rumor that Parsons has retired, but anyone who knows him, knows that is just not true. He may not be getting a pay check from his traditional sources, but he certainly isn't retired by any sense of the word.

Parsons is working on getting separate rules for LPTV and Translators so that the issues of each can be addressed more judiciously. If you'd like to see what is happening in that light, check out the proposed NPRM entitled "Rural Translator Service" RM-10666. Parsons has promised to keep Tech-Notes readers up to date on what is happening. He truly is a pioneer in the area of digital translators and digital LPTV: More on this in future editions of the Tech-Notes.

Because of this pending migration and the plethora of equipment that will be needed to make it all happen, it would be stupid for me not to take up the offer made by Larcan -- USA to be a representative for them in the Pacific Northwest. I have accepted. My territory will be Oregon, Washington, Central and Western Montana, Idaho and California. There are certain areas within this territory that are covered by existing representatives and I will, of course, respect those good folks.

I've been familiar with Larcan for many years. In addition to being one of the underwriters of this year's Road Snow, I've maintained both their full power transmitters and their translators at various locations during my carrier. I've heard just about every kind of story during the Road Show about nearly everyone of the underwriters. Larcan faired very well in this area.

It is because of the quality that I personally know Larcan builds into their equipment and the appreciation for the way they do business that helped make this decision easy for me. In addition to representing Larcan-USA, I will also be putting together training packages on the various products that I will be representing. I'm also in the process of making inroads with antenna manufacturers so I can offer a complete package to those interested in what Larcan-USA and I have to offer.

There is also no big secret that Lightening Masters of Florida has been speaking with me to represent them in the same areas as Larcan-USA. Since lightening is something that everyone has to deal with, not just broadcasters, there is a distinct possibility that we will come to some kind of arrangement. Everyone knows that lightening will pick out the most expensive piece of equipment or that device which you cannot get

replacement parts for and devastate it. If you can dissipate or reduce the electrical charges in the areas near your equipment, you've reduced the possibility of lightening doing its dirty deed on your equipment. More on this as the situation matures.

Not necessarily a change in direction

Since no one at Tech-Notes gets paid to do any of this, it is necessary to keep the cash flowing so we can continue to make Tech-Notes happen. Yes, there will be more and more about digital TV translators, FM Translators and digital LPTV. Perhaps some of the folks east of the Mississippi will realize that a translator is an excellent way to fill in gaps within their DMA. Perhaps those interested in these kinds of equipment will contact me. Who knows?

What about Jim Mendrala? Jim will continue to be responsible for the digital cinema parts of this publication and most anything else he wishes to contribute. He's still a co-publisher of this newsletter and down there in Southern California, attending all the technical committee meetings he can fit into his very busy schedule.

Stay tuned.

Larry@Tech-Notes.TV

Know what these two pictures are?

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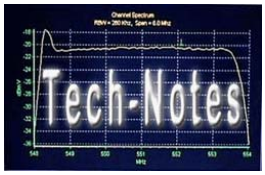

Thanks.