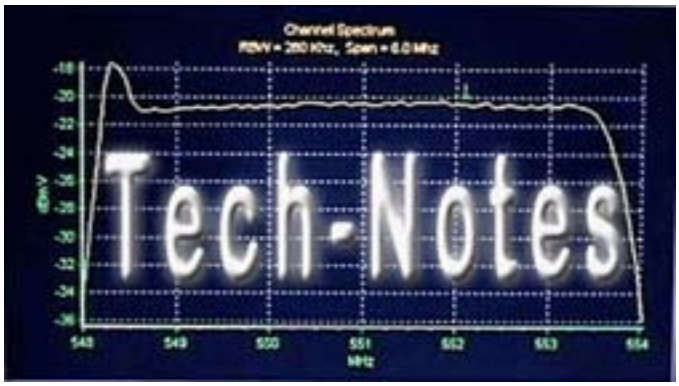


http://www.Tech-Notes.tv
March 15, 2007
Tech-Note – 137
First Edition: May 18, 1997

Our purpose, mission statement, this current edition, archived editions and other relative information is posted on our website: WWW.Tech-Notes.TV
This is YOUR forum!

Index

Note: All **Blue** underscored items in this PDF newsletter are working links.
(Click on the Link below to navigate to that section of Tech-Notes)

Editor's Comments

As the saying goes, excuses are like body parts – everyone has one or more. I'm hoping that you'll agree that the wait is worth it. I've tried to assimilate interesting items for our readers in this issue while dealing with other issues. I'm always open for suggestions on the kinds of things you'd like to read here.

In this edition, we are privileged to once again have John Silva contribute his experiences during the early days of television in the Los Angeles market.

Silva joined KTLA when it was W6XYZ in 1946, giving, that broadcast facility, though its various owners, continuous, inspired and loyal service and leadership for over 32 years. While reminiscing here in the Tech-Notes about his many experiences and contributions, John continues to contribute to the entertain media by working in the area of digital cinema.

Because of the length of time in getting this edition out and the value of John Silva's article, it has been decided that the other segments of this edition will be very brief. None-the-less, here's hoping we can get more of this kind of thing from others in other markets for future editions.

Starting with this edition, we will include a new section devoted to those who have survived the broadcast industry – those members of the Order of the Iron Test Pattern.

The Road Show - A Taste of NAB 2007
What's Coming

We have finally completed filling in all the dates on our itinerary for this year's Taste of NAB 2007 Road Show. We will be returning to some very familiar locations, but have added several new ones as well. Where are we going? You can see where we're going – just click here.

It should be pointed out that the sponsors of the Taste of NAB 2007 Road Show care enough to share with you their technology. As you may or may not know, the whole purpose of the Taste of NAB Road Show is to bring to those engineers, technicians, and other interested folks a taste of the technology that was presented during this year's National Association of Broadcaster's conventions to those who didn't or couldn't make it to the big one in the desert. We hope and trust you'll give them PRIME consideration when it comes to selecting products, technology and the like for your facility.

As we have stated ever so many times, there is NO SUBSTITUTE for the real thing! There are only two places on this planet where the preponderance of current broadcast related technology is presented: The NAB convention in Las Vegas and the IBC gathering in Amsterdam (Europe). This year's NAB is April 14 - 19, 2007.

As we have also said so many times before, it is exceedingly important for each broadcast, post production and other related facility to send at least one engineer to one of these events in order to keep abreast of the latest technology – if they don't, it's like shooting themselves in the foot! And to the engineers, technicians, etc., if your organization is dumb enough not to send you to NAB, you shouldn't hold your breath for a trip to Europe. - Here's hoping to see you at one or the other – NAB or the Taste of Nab.

ENGINEERING ACTIVITY AT KTLA OVER THE YEARS

By John D. Silva

A Changing of the Guards

During Klaus Landsberg's tenure at KTLA from 1942 to 1956 (14years), engineers "ruled the roost!" They had the primary role in designing, inventing, selecting, installing, and maintaining equipment and related systems. Being an independent operation, this was even more the case at KTLA than other TV stations or networks in those early days. Klaus, with his strong technical background, knew in those early stages, that engineers needed to play the major control role, as opposed to other station departments, e.g. sales, production, promotion, etc.; that were at that time, automatically forced to play secondary control roles.

During the latter stages of Klaus's illness, he asked me to take on more engineering developmental duties, i.e. upgrading the main transmitter, etc. He further asked me to take over the direction of the shows that he was still directing at that time. Regardless of assuming these extra responsibilities, I could not ignore my prime responsibility as Chief Engineer, which was directing and supervising my engineering staff.

Klaus Landsberg passed away on September 16, 1956. Shortly after his untimely death, which was a terribly sad time for all of us, Lew Arnold, from the New York office of Paramount Pictures, was chosen by Paul Raibourn, President of Paramount Television Productions, to become KTLA's General Manager: His background was in sales, not engineering.

Once settled in, and after he had reviewed the qualifications of everyone on board, he called me into a meeting in his office. There he noted that I had two main responsibilities at KTLA, e.g. handling and controlling all technical matters at the Station, and directing a significant number of our major TV shows, mostly at night.

He said that one of these two responsibilities had to be given up in the best interest of the station. He gave me two weeks to make up my mind and get back to him.

The shows that I was directing at that time were:–

- The Pasadena Rose Parade (seven times)*
- Circus*
- Spade Cooley*

The shows that I had directed before that time were –

- Harry Owens
- Bandstand Revue
- Ina Ray Hutton's All-Girl Show
- Lawrence Welk (3 years)*
- Frosty Frolics*
- City at Night*
- Boxing*
- Wrestling*
- Roller Derby*
- Baseball*
- Track*
- Meet Me in Hollywood*

- Ice Hockey*
- and, too many on-the-spot breaking news events to count *

* These were all live remote shows

I took the full two weeks to decide. Ultimately, I decided that I could best serve the interests of KTLA by remaining as Chief Engineer, and to give up directing shows. I felt that his forcing the issue was probably right. Shortly afterwards, I told him of my decision to give up directing shows. Beyond that, I never directed any KTLA shows or productions.

In early 1957, with Lew Arnold in the driver's seat, some of our department heads (Sales, Production, and Promotion) immediately pressed him to change their own degrees of control at the station, thereby giving them primary control roles at the station and to subjugate the status of engineering to a secondary role.

As Lew had no engineering background whatsoever, he readily accommodated their wishes. At that time, these department heads wasted no time in flexing their political muscle over engineering, including myself. This was somewhat of a bitter pill to swallow, but it was either assume this new secondary control role, or travel on to new pastures. I decided to stay on and learn to live with it. I had too many engineering projects in mind that would ultimately benefit KTLA in the future, to depart.

The KTLA Telecopter – the World's First Mobile News Unit in a Helicopter

One of my major engineering responsibilities at that time was to make sure that our mobile units were designed physically and electronically for maximum speed of operation in getting to "on-the-spot" breaking news events quickly and getting on the air before the competition did. This meant keeping the existing mobile units up-graded or designing new ones that could get to breaking news event locations and get the story on the air first. This was quite a challenge, to say the least.

For those unfamiliar, Los Angeles and vicinity was, and is, an extremely huge area consisting of no less than 6000 square miles of humanity-crowded territory filled with vehicular traffic and all kinds other forms of congestion. This included many geographical obstacles such as getting around hills, canyons, valleys, and the like. Further, there were many locations that were non-line-of-site situations to Mt. Wilson, where we where we were not able get microwave signals out from ground level. Also, in those early days, the vast Southern California freeway system was just beginning, which, offered very little, if any, help in wading through the massive traffic.

While driving to work one morning on the Hollywood freeway, and thinking about all of the above frustrations, the idea of designing and building a news mobile unit in a helicopter suddenly crossed my mind like a bolt of lightning. Wow! This would be an answer to our prayers - of always beating the competition to breaking news events, by getting there moments after it happened. Also, we would avoid missing out on news events at times because of traffic tie-ups delaying our arrival at a location after the main action of interest had already concluded.

This was really exciting! On arriving at my office at the station, I immediately started making a list of questions that needed to be answered before attempting to make this happen. Because I knew that our newsgathering competition would love to get the same idea and beat us to the punch, I decided to keep this matter totally to myself for the time being.

Return to Index

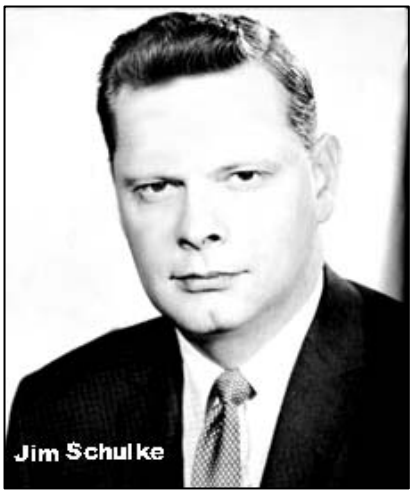
Some Items and Questions That Soon Came to Mind

1. I needed to get topographical maps for Los Angeles and surrounding areas and do a propagation analysis.
2. What microwave frequencies would be best to use?
3. What microwave power and antenna gains will be required?
4. What type of antenna can be used to keep an uninterrupted signal going to Mt. Wilson?

5. What type of antenna positioning system can be used on the 'copter?
6. What video and audio equipment should be used?
7. Can the equipment weight be reduced down to what the helicopter can handle?
8. What size lens is needed to capture potential scenes?
9. How long can the helicopter fly before refueling?
10. What are the altitude restrictions for helicopters at news events?
11. What kind of helicopter is available that can get the job done at an affordable cost?
12. Will we be able to get FAA approval?
13. How much will this whole thing cost (buy or lease)?
14. Will management be willing to go along with the plan?

After further study and some pre-design work, I felt sure that the design and construction of a Telecopter was feasible, it would get the job done as I had envisioned, and it would serve to give KTLA a tremendous advantage over our competition in covering on-the-spot breaking news in Los Angeles and surrounding cities.

I then went to Lew Arnold, the existing KTLA General Manager, with my idea and plan. When I finished, Lew thought for about 30 seconds without saying a word. He then said: "I can't approve this project, John. I'm concerned that we might fail at the task, which would upset the New York Office to no end. All I can say is: go back to your regular duties". At this point, I was completely blocked in my quest. There was nothing I could do or say at that moment that would make the proposal go forward. However, I was determined not to give it up. Along with my "regular duties", I kept on refining what I had previously done. This was in the latter part of 1957.

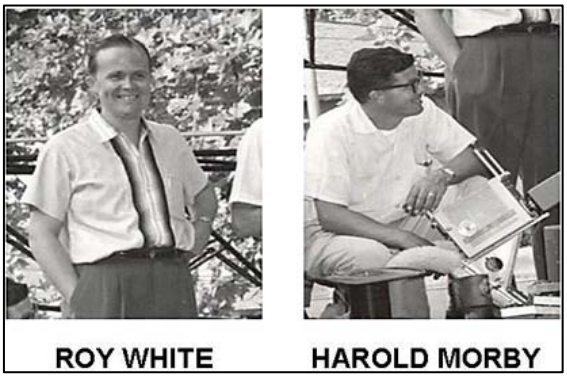

Jim Schulke

Fortunately, for the Telecopter's sake, Lew Arnold was terminated as General Manager of KTLA near the end of that year and was replaced by Jim Schulke, also from the Paramount Television Productions New York office. When I first met Jim, I knew I would like to work with him.

I waited until I sensed that he was settled in his new job. I then made an appointment with him, and delivered my Telecopter presentation as I had done with his

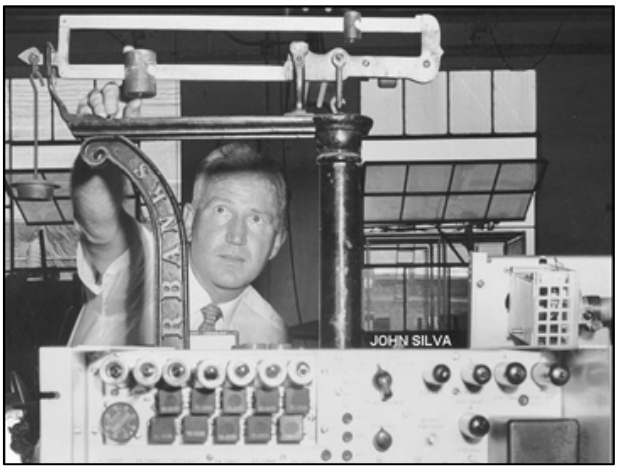
predecessor. His reaction to it was totally positive. He said, “This is a fantastic idea! What are we waiting for? Let’s get on with it immediately!” He couldn’t have been more supportive. He asked me when I thought I could get the job done. I said, “With a little luck, it would be about mid-1958.”

Jim then reacted to the concept, just like I had after I had gotten the idea that morning while driving to work on the Hollywood Freeway. He said, “Great! Now let’s keep this project a total secret. We don’t want our competition to get wind of this, or they’ll try to beat us to the punch.” He directed me to select a couple of my engineers that I could trust, to help me, as he put it, “glue it together” adding, “but be sure to first swear them to secrecy. I don’t want anyone at the Station to know about this project, except you and me, and whoever you select to help with the installation. To further document your work”, he said: “I’m going to hire David Kovar, who is an outstanding photographer, to take candid pictures of the whole project, every step along the way”. We then looked at each other eye-to-eye, smiled, shook hands, and I departed to make the Telecopter a reality. You can’t imagine how elated I felt as I left his office.


ROY WHITE HAROLD MORBY

As instructed, I selected two of my trusted engineers, Roy White and Harold Morby, to help me physically and electrically ”glue the Telecopter together,” as I had designed it.

A few days later, Jim asked me to do a complete budget, equipment list, and an estimated time-frame for the whole project. Fortunately, in anticipation of this, I had already prepared most of the items, including an equipment list and costs for the proposed Telecopter receiving point which was to be installed in our main transmitter building on Mt. Wilson. Two days later I presented him with a complete report. Within ten days from that time, he literally created a miracle in getting an approval for the project from Paul Raiborn in our New York office. He used my numbers and **supporting dialog**, explaining why I strongly felt that the project would be successful.



At the start of the project, there was much effort on my part in fine-tuning the system design, mechanical development, and in getting 2000 pounds of needed equipment and cable (power generator, camera, microwave transmitter, antenna, video support equipment, audio, control equipment; and inter-connecting cables) down to 368 pounds, which was a strict Federal Air Administration (FAA) requirement. These were the days when things were made with vacuum tubes, large heavy transformers and other components – not with lightweight transistors and chips.

In researching the possibility of leasing a helicopter to serve as the airborne news vehicle, I found that a company named National Helicopter Service that was not only located locally with many successful years of service, but were very knowledgeable about the business, had access to many makes and models of potential helicopters for lease or purchase, and maintained a staff of very qualified mechanics and pilots.


DICK HART, PRESIDENT

The President of this company was (and still is) Dick Hart, who was extremely knowledgeable about his business. Also, their Vice President, Bob Gilbreath, was one of the best helicopter pilots in the business, and would be available to help us in flying the craft during the development stages.


Bob Gilbreath

Getting ready for that first flight

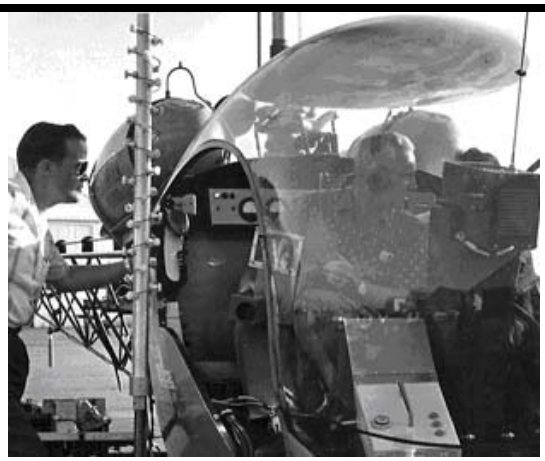

POSITIONING HELICAL ANTENNA


CHECKING ANTENNA POSITION

ANTENNA DOWN 1/3RD

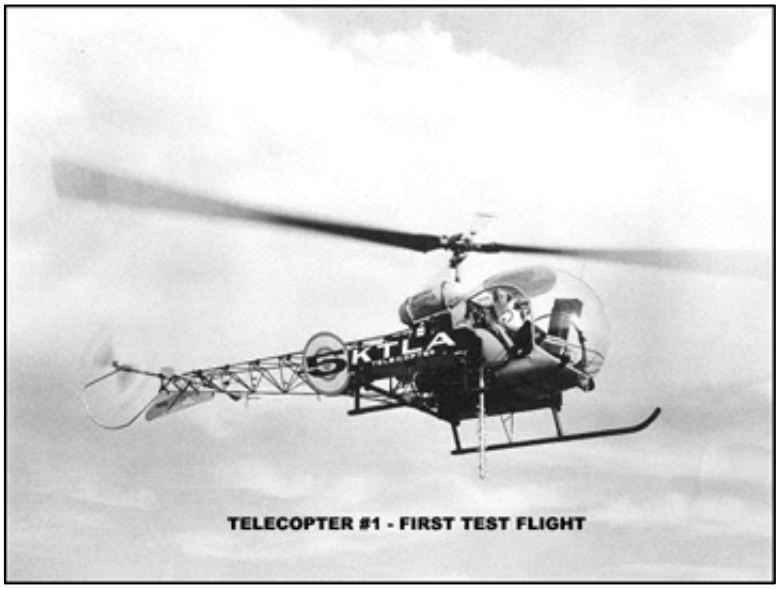
J. SILVA, H. MORBY & R. WHITE

R. WHITE & J. SILVA PRE-FIRST FLIGHT



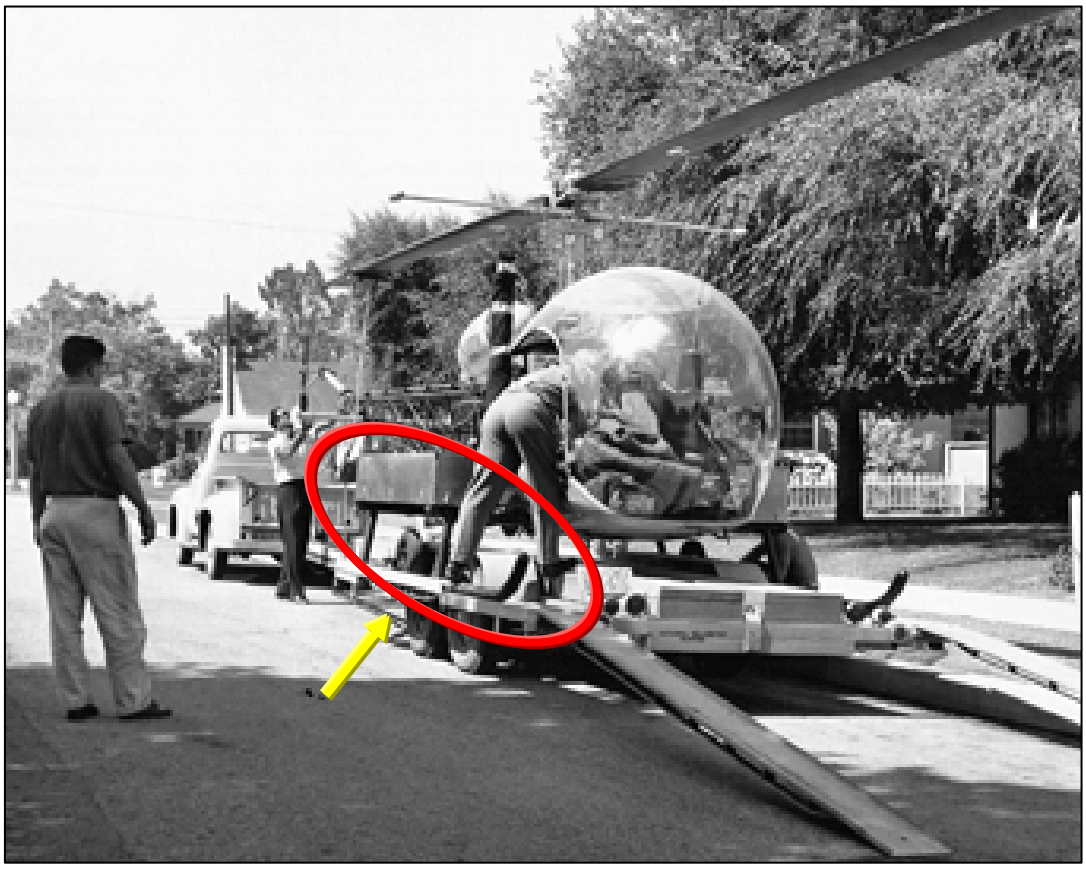
J. SILVA & L. SCHEER PRE-FIRST FLIGHT

On July 3, 1958, Larry Scheer as pilot, and I as engineer/cameraman, took off for our first test flight at the Van Nuys Airport. Due to equipment failure caused by intense summer heat, noise, and vibration from the helicopter's engine and main rotor, we weren't able to get our microwave signals through to the receiver on Mt. Wilson. Some may say that I might have had a brief laps in self-protection awareness; but at this time, I was determined to make the Telecopter work, and as quickly as possible. Determining the culprit equipment while in flight would save many days of development



TELECOPTER #1 - FIRST TEST FLIGHT

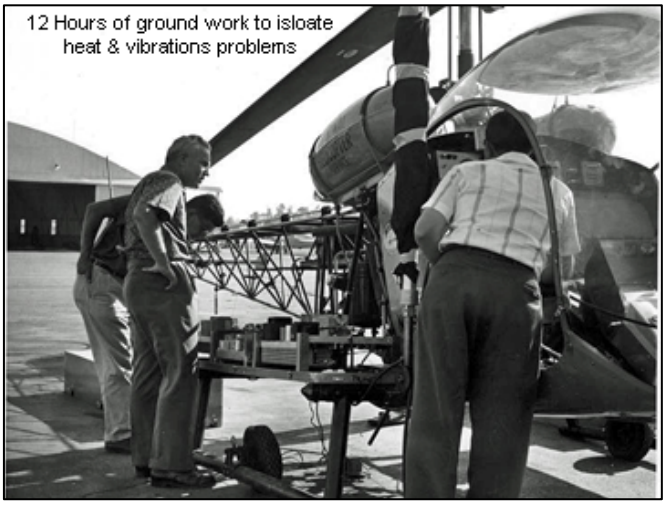
time, and unnecessary project time was our enemy. So, after a brief discussion with Larry Scheer, during which he had agreed to hover the craft; and without a safety belt -- which we didn't have with us--and at an altitude of 1,500 feet, I backed out of the cabin, and stood on the top of the bottom part of the right skid. I then, facing the helicopter and holding onto pieces of the craft's structure, I side-stepped my way back to where the major portion of our equipment was mounted inside the metal cabinet attached to the skid, all in preparation for looking for the equipment that had failed. I forced myself not to look down during this process, as I didn't want to fall from the 'copter by suffering from height-fright (vertigo). If I had, this would have unfortunately ended the project and this article would have never been written.



To better demonstrate the arrangement of equipment on the right skid, the picture above shows the Telecopter on the ground during the construction phase. It further shows the then unpainted equipment enclosure out on the right skid. This is where I needed to get to find our transmission problem, this time while in flight. Access to the equipment was accomplished by unlatching the top of the side panel facing me, and pivoting it down around its hinged bottom. As Larry was carefully hovering the helicopter and wondering how I was doing outside, the unlatched panel stayed in place while hanging all the way down. Once it was in this position, I made my way to the left part of the cabinet to access and observe each piece of equipment.

Return to Index

Shortly thereafter, which seemed like hours, I determined that it was the microwave transmitter that alone had failed. So then, still refusing to look down at the ground below, I ***very*** carefully side-stepped back from where I was, and then re-entered the cabin with Larry Scheer, who appeared somewhat relieved to see me all in tact. Once there, I heaved a big sigh of relief and I quickly explained to him what I had accomplished.



I then directed Larry Scheer to land at the airport. The next twelve hours were first spent repairing the microwave transmitter and then carefully examining each piece of equipment out on the skids to see if it could possibly be in harms way from the helicopter's abusive environment under the main rotor. During the latter process, I called the Paramount Machine Shop foreman, who was always most cooperative in giving us assistance when we needed it. When I explained what we were trying to do, he agreed to send a mechanical expert over early the next morning to give us a hand. Very early the next morning, on July 4th, with the Paramount mechanical expert observing and making suggestions, we added temporary heat isolation, sound baffling, and vibration dampening to most of the equipment mounted out on the skids. Fortunately, though a tedious process, it only took us about six hours to get the job done

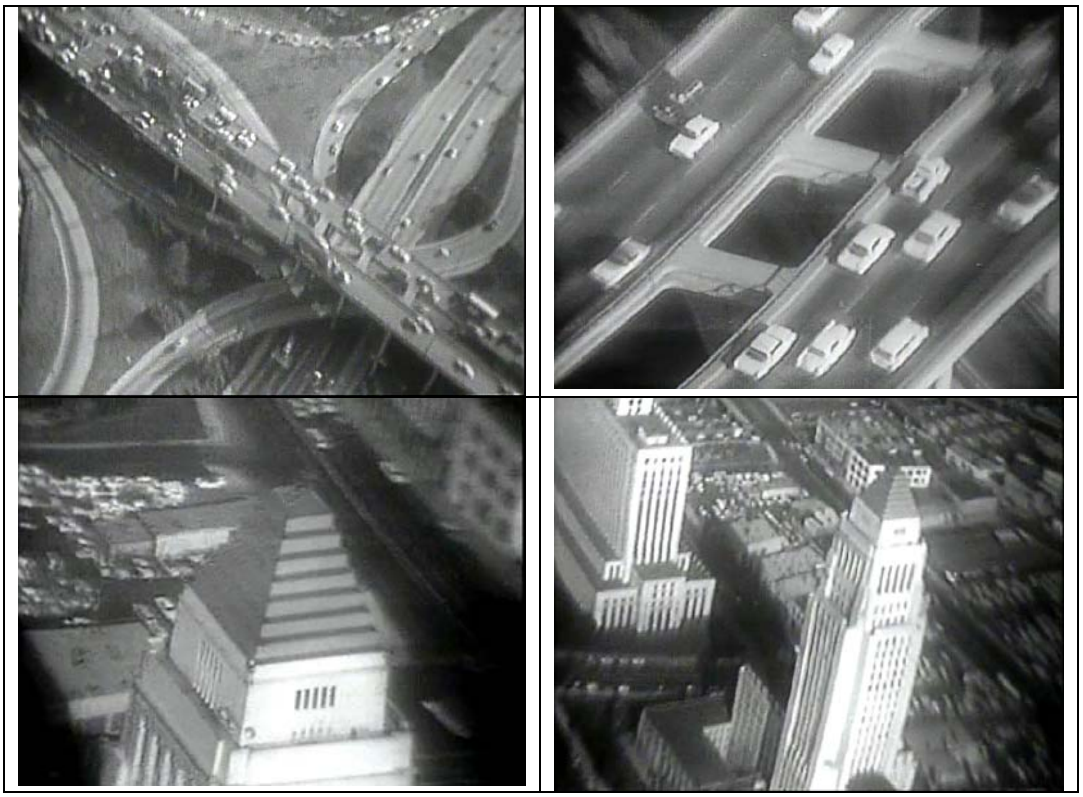
Then, about 11:30 am on July 4, 1958, Larry Scheer and I made our second test flight over the same rout as before. Lo-and-behold, Mt. Wilson reported that they were receiving our picture and sound. The signals weren't perfect; but they were good enough to prove that my idea for a Telecopter was viable.

Many test flights followed, which led to significant improvement along the way. In about two weeks, after we had consistently achieved broadcast-able pictures and sound, as received at Mt. Wilson, I got a telephone call from Jim Schulke.

He wanted to know how we were doing. I told him that we were just about there, and things were looking good; but that I needed one more week to finalize everything. “Wonderful”, he said. “I have scheduled a Telecopter demo at the Police Academy up in the hills on July 24th. The Press will be there, along with Fire, Police, and Sheriff Officials. We need to get the ‘copter signals relayed to two monitors for them to view pictures that you will be taking of the freeway interchange and then, followed with a shot of the L.A. City Hall. Then we’ll need you to fly over to the Academy and land close to where we will be; and you can answer any questions they might have”. Are you sure that you will be able to do all of this”? Then, after quickly making sure that I had the picture in my mind of what he had just said, I answered, “Yes, Jim, we’ll be ready, and I will take care of the items you’re asking for. We can discuss this later to make sure we’re in sync.”

The First Non-Public Demonstration of the Telecopter at the Police Academy

On July 24, 1958, Bob Gilbreath, VP of National Helicopter, as pilot, and I, as engineer/cameraman made this first non-public demonstration of the Telecopter in action, taking pictures over the freeway Inter-exchange and then above the Los Angeles City Hall, just as Jim had asked for. Our pictures and sound were microwaved directly to Mt. Wilson, our receiving site for the Telecopter**;** and were re-microwaved down to our receiver at the Los Angeles Police Academy, where Fire, Police, Sheriff Officials, and members of the Press were watching with great interest on the two 27-inch TV monitors, that Jim had also asked for.



Frame captures from a kinescope recording of that flight

We purposely had blocked signals to the monitors until the demonstration actually started. The guests were not told what they were about to see; but they were advised by Gil Martyn, our KTLA News Director, that when it happened -- it would knock their blocks off. The strategy of handling it this way was Jim Schulke's plan.

As he related to me afterwards, which made me feel quite pleased, the guest officials and news reporters were extremely excited in anticipation of what they were about to see, even

AIRBORNE — Narrating the demonstration for newsmen held at the L.A. Police Academy is Gil Martyn, veteran KTLA Newsman. Looking up: Jim Schulke and John Silva, the men responsible.

POWER PLANT — Pointing out the power packed, condensed transmitter of KTLA's telecopter is KTLA's Chief Engineer John Silva, who designed it. Hanging on his words are Bob Gilbreath, telecopter pilot, and KTLA V.P. Jim Schulke.

though they didn't have a clue about what it was to be. Then, when our camera shots over the interchange suddenly appeared on both monitors, and they heard Bob Gilbreath's narration, their response became overwhelmingly great, and they applauded long and profusely.

After taking the above pictures, and a few more, we flew over to the Police Academy and landed close to where our guest observers were gathered. The picture to the right shows Jim Schulke and Bob Gilbreath listening to my description of the Telecopter camera and associated equipment. Also shown are Jim Schulke, Gil Martyn, and a member of the Press, looking at and discussing the equipment in and outside the Telecopter.

The First Public Demonstration of the Telecopter

On July 29, 1958, we introduced the Telecopter for the first time to the Los Angeles television audience. Again, Bob Gilbreath served as pilot and I was the engineer/cameraman.

At this time, with KTLA ground cameras pointed towards us as we approached the cleared parking lot just outside the newsroom, we landed within a few feet of the building, with our announcer, Ken Graue, describing what was going on, and telling

ANTENNA DOWN

ANTENNA 2/3RDS UP

the audience how our station would be using the Telecopter for on-the-spot breaking news in the very near future..

Shortly thereafter, we took off from the parking lot showing pictures from my camera. We then flew along the Hollywood Freeway, taking various shots of the traffic. We finally landed at the Los Angeles Coliseum where a KTLA remote unit camera followed our approach. This was accompanied with narration by Ken Graue. With the rotors idling, Stan Chambers then interviewed me while Bob Gilbreath and I were still sitting in the copter.

The sequence ended with the ground cameras showing our take-off and our microwave antenna being lowered below the skids. All of this footage was made as a kinescope recording, which is still available as KTLA archival recordings.

On September 15, 1958, as announced by Jim Schulke, KTLA commenced the world's first daily airborne news coverage with the Telecopter in a Bell 47-G2 helicopter. Four months later, in 1959, I asked for, and was given approval by Jim Schulke to build an advanced version of Telecopter #1 for the reasons described below:

The Operation Was a Success

In the first four months following its debut, KTLA signed a record $510,000 in local business. And later the same year, Procter & Gamble and Philip Morris signed for $250,000 worth of Telecopter news commentary by Clete Roberts.

Because the Telecopter's operation had been proven, and that it had more than paid for itself in improved station revenue, it was decided to upgrade the helicopter to an advanced model to provide:

1. Faster cruising speed (105 mph)
2. Greater flying time before refueling (2 hrs)
3. All equipment to be reachable from inside the cabin
    a. For easier maintenance and adjustment.
    b. To avoid heat, noise, and vibration
    c. Greater safety for the cameraman (no climbing out on the skids when in flight).
4. Zoom lens ratio increased to 15x1, w12x ext. (22.5mm· 675mm range). The Bell 47J2 helicopter was decided on for Telecopter #2, as it met all the above requirements.

THE NEW BELL 47J-2 TELECOPTER #2

Return to Index

The Telemobile/Telecopter Combination

In 1963, I decided to bring one of our news mobile units into the equation with the Telecopter, for special breaking news coverages. I didn't ask anyone if I could do it; I just did it! Everyone at the station seemed happy about it. What we did was to modify both units. The mobile unit, which I called the ***Telemobile***, had a 2 GHz microwave transmitter that was configured to simultaneously transmit both pictures and sound up to a dedicated microwave receiver in the Telecopter.

Both units had two-way RF inter-communications equipment to communicate with each other. Both the Telemobile's microwave transmitting antenna and the Telecopter's microwave receiving antenna had omni-directional transmission and reception patterns, respectively.

This meant that as long as the distance between the two units was kept to within about a mile, and we maintained a line-of-site condition between the two, the audio and video signals from the Telemobile would reach the Telecopter with acceptable signal-to-noise ratios (provided acceptable signals), without any concern about antenna miss-alignment.

An audio/video switcher was added to the Telecopter so that audio and/or video signals could be selected, either together or separately, in the 'copter. With this arrangement, the cameraman/engineer or pilot would have the choice of feeding sound from the pilot/announcer's microphone and/or sound from the Telemobile announcer's microphone, to the input of the Telecopter's microwave transmitter, which would then be transmitted up to our receiver at Mt. Wilson.

The same switching arrangement applied to the video signals from the Telemobile's camera and/or the Telecopter's camera. This provided a flexible situation where the Telecopter was the director-control point, where video and/or audio from either unit could be selected to be sent up to microwave receiver on Mt. Wilson, and then on to the Studio via our TSL link. Needless to say, this permitted us to originate live news events

from the Telemobile, from locations that here-to-fore, had been completely inaccessible, for whatever reason.

What This Telecopter/Telemobile Combination Provided

If we had a news event that was not line-of-sight to Mt. Wilson, we had the Telecopter as a sky-hook, ***second hop***; and we could switch video and/or audio signals from either unit into the Telecopter's microwave transmitter anytime we wanted to.

If we wanted a traveling shot down the freeway, or any other street, we also had the Telecopter as a sky-hook to let us get the job done.

One of the first breaking news events, where we used the Telecopter/Telemobile combination, was the Baldwin Hills dam break on December 14, 1963. In this case the Telemobile was parked off to the side down below the dam wall, which was a non-line-of-site situation to Mt. Wilson. The Telecopter maintained a circular, one-mile-diameter, path showing both sides of the failing dam wall, while receiving audio and video signals from the Telemobile, which we used as needed.

By the end of 1963, we had amassed a total of 4 news ground mobile units and Telecopter #2 in our on-the-spot breaking news arsenal. I had designed each one. Each one had the equipment to work with the Telecopter as a Telemobile.

In July 1964, a journalist with TV-Radio Mirror Magazine was so enamored with our news coverage that he wrote the following:

> ***"When the end of the world comes, I expect KTLA to be poised on the edge of the crater, covering the story."***

A Special Telecopter History Presentation for the Society of Television Engineers

All project details were continuously documented by me as they happened in 1958. It included: my getting the original idea and making sure that such a project would be successful.

This also included, getting administrative approval to move ahead with its implementation, the details of the Telecopter's secret installation in the back yard of National Helicopter's President, Dick Hart, and the activity performed in making sure of the reliability in transmitting continuous and acceptable picture and sound signals from the Telecopter up to our microwave receiver on Mt. Wilson.

A multitudinous amount of pictures of the action, step-by-step, during the complete project, were taken by our designated photographer, David Kovar, to supplement this documentation.

Forty-three years later, on Thursday May 16, 2002, I made a presentation covering the complete Telecopter project, as was requested by the Board of Directors of the Society of Television Engineers (STE) at a dinner meeting attended by over 125 important members and TV industry guests. The meeting was held in the east ballroom at the Castaway Restaurant**,** up in the Burbank hills. This included a 15-minute fly-by near the beginning of the presentation, with the KTLA Sky-Cam Telecopter and girl in the sky news reporter, Jennifer York; which had been planned as a surprise for the audience.

We set up special video and audio feeds so that Jennifer, in the 'copter, and I, at the podium, could talk with each other during the fly-by.

We also had access to live pictures of Jennifer inside the Sky-Cam, and outside camera shots from the helicopter that were selectively shown on a 12ft. screen using a High Definition projector. Sounds of our conversation were played out over the ballroom PA system for the audience. When this occurred, it is safe to say, the audience was totally astounded.

The KTLA Sky-Cam and Jennifer York's appearance was approved and arranged through the courtesy of Jeff Wald, KTLA News Director. Chris Reiley, Director of

Production was instrumental in paving the way for the search and use KTLA archival videotape and kinescope footages of Telecopter-related action. Also, Dave Cox, Manager of News Operations at that time, set up the mechanics in scheduling live shots from KTLA's Sky-Cam fly-by with Jennifer York. Jennifer's appearance in Sky-Cam during the presentations was just outstanding.

With Chris Reiley's approval, Don Kent, KTLA senior engineer, helped immensely in finding and editing the Telecopter archival material that was used in the presentation. He also served as technical director in smoothly running these clips in proper order during the presentation.

A few months later, a special DVD was produced by Modern Videofilm under the approval of their Executive Vice President, Al Hart, a long-time member of STE that covered all the elements given in the presentation. The presentation and DVD included official pictures of the step-by-step development of the Telecopter that were taken by David Kovar, our photographer. Also included were KTLA historic archival footages of videotape and kinescope recordings of Telecopter activity. This was all through the courtesy of the KTLA News Department.

To avoid duplication, much of this detailed information will not be included in this document. However, the DVD covering the complete project can be purchased by contacting the existing Treasurer of the STE, Jim Smith at: 661-259-0356, or JimK0EDR@aol.com.

In 1970, I received an Emmy for:

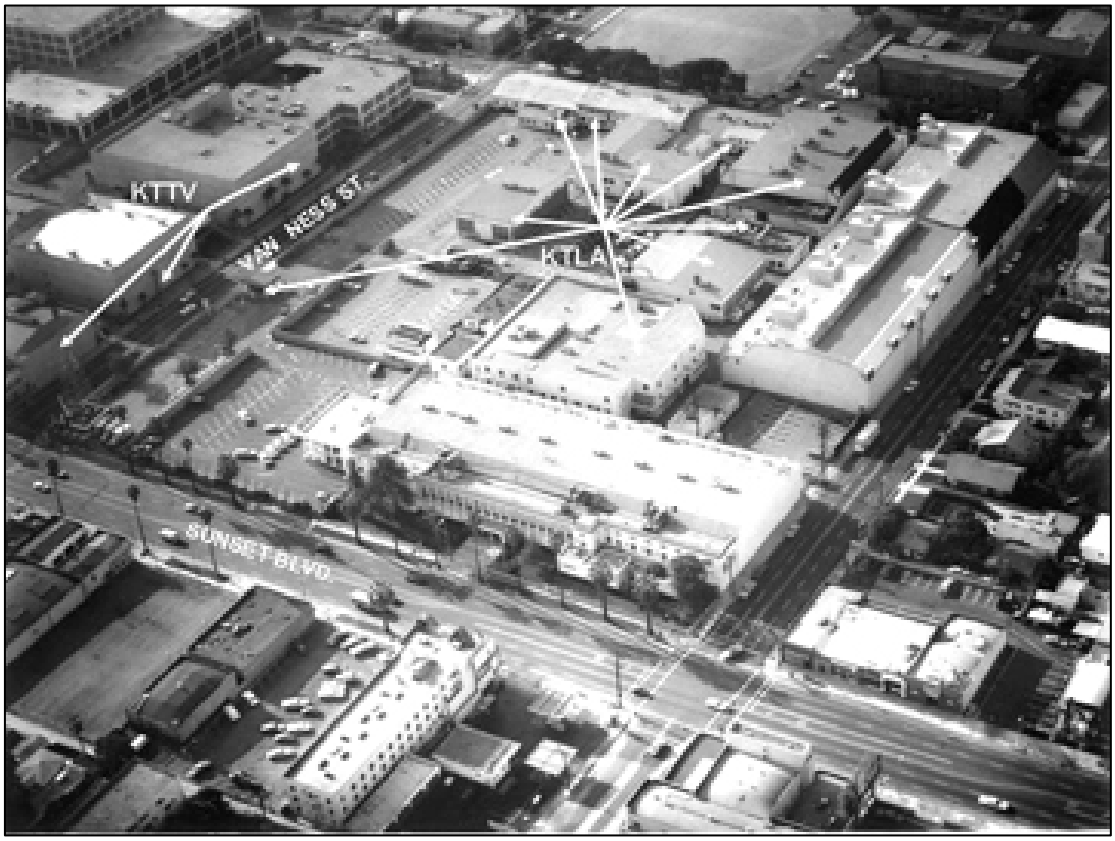
Outstanding Achievement within a Regularly Scheduled News Broadcast.

I believe the award was given as a result of my conception and development of the world's first mobile news unit in a helicopter, the KTLA Telecopter, in 1958. I was most honored, and was handed my Emmy from none other than Mary Tyler Moore.

Note that the size of the Emmy received was a cut-down version of the regular Emmy, which is quite a large sized award. The fact is this was a full-fledged Emmy award. However, the National Academy of Television Arts & Sciences, in a political move in 1970, voted to considerably reduce the size of the trophy given to recipients in the Los Angeles area. This was intended to be a permanent change. However, there was such a ruckus over the matter all over the United States immediately thereafter, that the New York office promptly rescinded their order. Since that year, Emmy recipients in the Los Angeles area have received the normal large-sized trophy, as before.

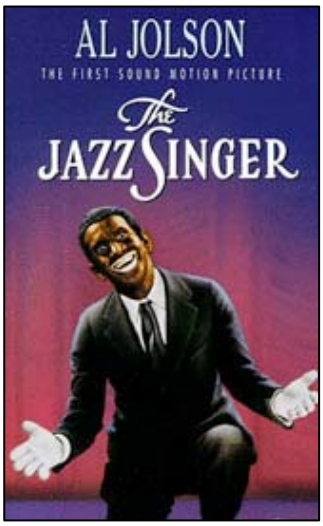
Return to Index

Stage 6 and the Bolshoi Ballet



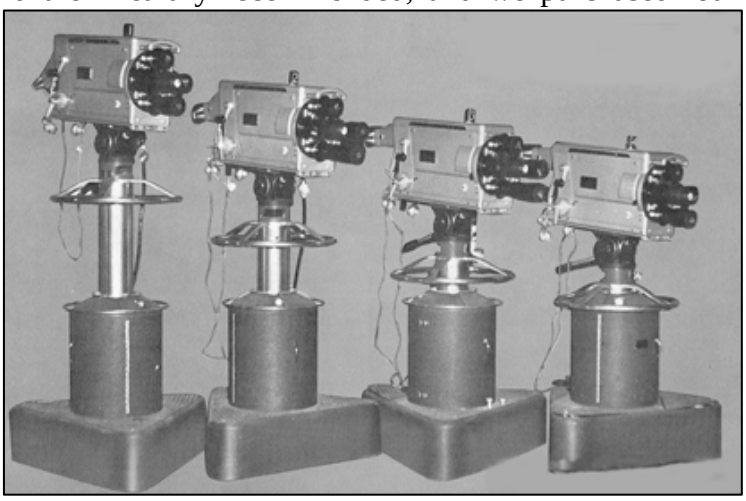
In 1954, Paramount Pictures purchased a historic and then unoccupied movie lot from Warner Brothers, located at Sunset Blvd. and Van Ness Ave. This was done to accommodate KTLA's growing need for much more space to work in. When the transaction was completed, KTLA began to gradually occupy this property over several months. The new property spanned approximately one large square city block.

It also included no less than five very large former film stages, one of which had been used by Warner Brothers to make the world's first talking motion picture titled "The Jazz Singer, starring Al Jolson, who in it, sang the song, "Toot, Toot, Tootsie, Goodbye". Its first theatrical release was on October 6, 1927.



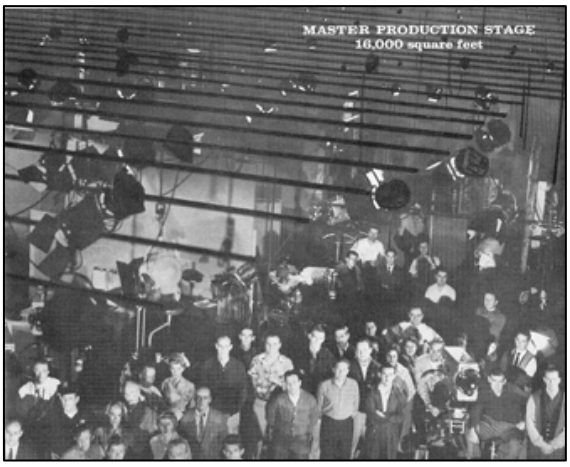
Under Jim Schulke's leadership, starting in the latter part of 1959, KTLA started preparing the first of these large stages named "Stage 6", for taping shows and commercials for network and independent content producers. This involved buying the highest-quality video cameras available.

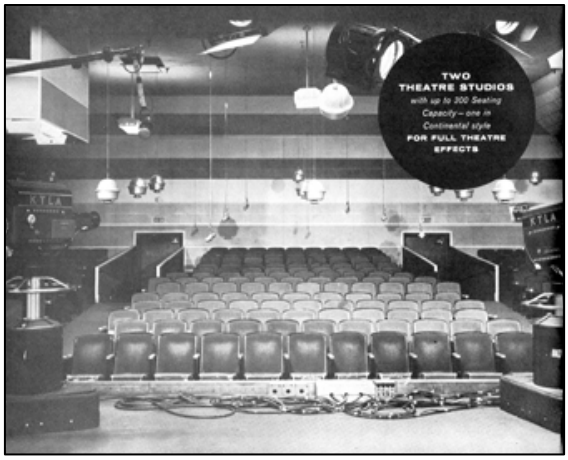
For this, I thoroughly tested and then heartily recommended, and we purchased four Marconi Mark IV B&W cameras, which used 4 ½ inch image orthicon pick-up tubes made by RCA. Without a doubt, these cameras produced pictures having the highest B&W quality in the world at that time. Also, they delivered an unbelievable linear gray-scale. This was exactly what we were looking for.



This preparation also included purchase of: lighting grids and lighting dimming equipment, video monitors, camera support equipment including sync generators, video and audio routing systems, audio and video distribution amplifiers, and much more. This included the purchase of two additional Ampex videotape recorder/players that were to be located in master control with three others, all of which were wired to serve both our facility and broadcast needs.

As Chief Engineer, I was responsible for the design of the Stage 6 video, audio, and intercom system; equipment selection, ordering and acquisition; supervision of equipment installation by my staff engineers and contractors supplying heavy items such as: stage flooring as needed, lighting grids and apparatus, lighting dimmer equipment and

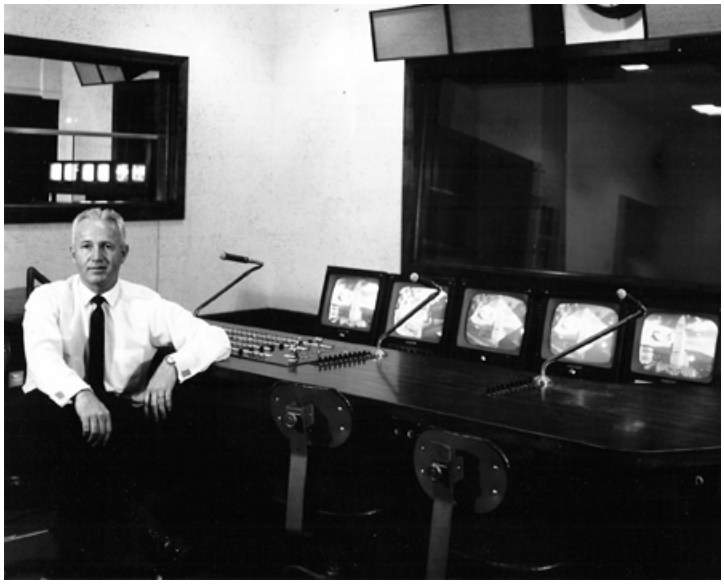




wiring, scenery storage, inter-connecting cables between Stage 6 and Videotape and Master Control, etc.

Our facility work and the stages involved were not related to our KTLA day-to-day broadcast activities. Once all scenes from facility productions were captured on videotape, audio tracks were mixed, sound effects were added, picture and sound elements were edited to coincide with the script, and the finished product was then delivered to the customer.

Stage 6 was chosen for the first series of facility productions because of its proximity to the Videotape Recording and Playback room in Master Control, only 100 feet away.



We named this new sister division Paramount Sunset Studios, which was designed and configured to provide program origination content on videotape, and was followed with signal processing in our post-production facility, which included editing, etc.; and finally ended with the deliverable finished product. The above picture shows a tired John Silva sitting in the Stage 6 control room after many hours spent meeting the Stage 6 total system deadline.

A Partial List of the Shows that Were Done by Paramount Sunset Studios:

Bolshoi Ballet
Gunsmoke
Alamo
Donny and Marie Show
Pontiac Spectacular
Lets Make a Deal
Hedda Hopper's Hollywood
Totally Hidden Videos
Rexall Spectacular
And any other network programs and network commercials

TV-ola - The World's First Electronic Frame-by-Frame-Accurate Videotape Editor

In Mid-August of 1959, Jim Schulke dropped by my office in the Master Control building. In a serious moment, he asked me if there was any chance that I could design and build an electronic, frame-by-frame-accurate videotape editor, which had not yet been invented.

I thought about this for a few seconds. In answer to his question, I replied that I thought that coming up with an electronic frame-accurate videotape editor might be possible; but I would need a little time to think about it. He said, "Fair enough, but don't take too long in letting me know whether it's possible for you to do this or not. I have plans for it when we start our upcoming facility work on Stage 6". I thought this was a fair request.

Videotape Editing Procedures in Those Days

Videotape editing in its early days was crude compared to film editing. It was done by first playing back sections of recorded videotape and subjectively selecting *in-points* and

out-points. An aqueous solution of fine graphite, called *Editview*, was then applied with a small brush onto the recorded control track of the videotape media, hopefully at or near the point coinciding with the program content where a desired edit was to be made. Once the metallic solution had dried, usually after blowing on it, the sync pulses then became visible to the eye. Later, to aid in locating the exact edit point, a 40-power microscope was added to the editing system, which helped speed up the process.

Finding the correct vertical sync pulse in the vertical interval recorded on the tape, at the end of the desired out-clip, which coincided with the end of its last frame, was the first follow-up objective of a videotape editor in making the edit.

Locating the correct vertical sync pulse in the vertical interval of the in-clip to be edited (spliced) to the beginning of the out-clip, which coincided with the beginning of its first frame, was the editor's second follow-up objective. Both of these tasks were subjective trial-and-error processes that many times required further videotape passes. At times, this sub-process would consume an exorbitant amount of time.

At this point, the tape medias containing both in-clips and out-clips, needed to be cut at the right points for each, and then spliced on the back side of the tape, with a narrow and sticky piece of plastic media -- in a sense, how a film edit was made. The tape slicing was done with a hinged, guillotine-like tape cutter. Before this tape cutter had been invented, the tape media cut had to be made with a sharp razor blade.

The Design of the New Frame-By-Frame Edit System

Jim Schulke had asked me the above question to see if we might just be able to come up with an editing tool that would be superior to that of our competitors. No one else had a frame-accurate videotape editor at that time. This was brilliant thinking on his part.

I did think about it for several days. In the process I found that the Hughes Corporation had developed a video monitor that with an external trigger would freeze a single picture frame on its screen. A demo of the unit proved that it worked like a charm. With a little arithmetic I determined that using four of these freeze-frame monitors to sequentially freeze and display selected frames, might very likely get the job done. The next thing I did was to let Jim Schulke know that I may have found a way to do it. I gave him a time frame of about 4 to 6 weeks to design and to produce the unit. He, of course, was pleased.

Three weeks later, I had completed the design. All equipment and parts were quickly purchased, mounted, wired, and tested. The editor was completed and tested just 6 weeks after Jim Schulke first asked me if I could invent and build it. Fortunately, it worked quite well right from the start. My videotape engineers loved it, as did Jim Schulke.

I met with Lyon & Lyon patent attorneys shortly thereafter, over a period of about 4 weeks, and provided them with a complete description of the editor with drawings and sketches of the complete unit. On January 23, 1961, **the patent** was issued in my name. Its name was declared: "***TV-ola***", as I had submitted as the final of about five or six choices. Two weeks later, **I assigned the patent over to Paramount Television Productions, our corporate entity, at no cost to them**.

Here's how it worked

1. The videotape clip requiring the edit was played-back and viewed on the left-most monitor of 4 freeze-frame monitors mounted sequentially from left to right in a roll-around console.
2. Just prior to the desired edit point, the editor would press a freeze button on a control panel on the console. Immediately, the first frame was frozen on the left-most monitor. This was considered the 0 sec. frame. With the tape continuing to run, for each sequential second thereafter (1 sec., 2 sec., and 3 sec.), a frame was automatically and respectively frozen on each of the remaining monitors.
3. The editor would then examine each of the 4 monitors to see if any of the picture frames could be used as the edit-point. If not, the editor then had to decide which of the two adjacent picture frames would serve as end-point boundaries and be used to repeat the first sequential freezing process, with the exception that, this time, four picture frames needed to be sequentially frozen every 1/3 of a second, and each displayed individually across the 4 monitors. (0 sec., 1/3 sec., 2/3 sec., and 1sec.), starting with the left-most of the two adjacent picture frames previously selected. Again, this operation was done by using a control panel on the console, as before.
4. Next, the editor would then examine each of the 4 monitors to see if any of the picture frames could be used as the edit-point. If not, the editor then had to decide which of two adjacent picture frames would serve to be used as end-point boundaries and be used to repeat the sequential freezing process as before, with the exception that, this time, four picture frames needed to be sequentially frozen every1/10 of a second, and each displayed individually across the 4 monitors. (0 sec., 1/10 sec., 2/10 sec., and 3/10 sec.), starting with the left-most of the two adjacent picture frames previously selected.
5. Finally, the editor would then examine each of the 4 monitors to see if any of the picture frames could be used as the edit-point. If not, the editor then had to decide which of two adjacent picture frames would serve as end-point boundaries and be used to repeat the process as before, with the exception that, this time, four picture frames needed to be sequentially frozen every1/30 of a second, and each displayed individually across the 4 monitors. (0 sec., 1/30 sec., 2/30 sec., 3/30

sec.), starting with the left-most of the two adjacent picture frames previously selected.

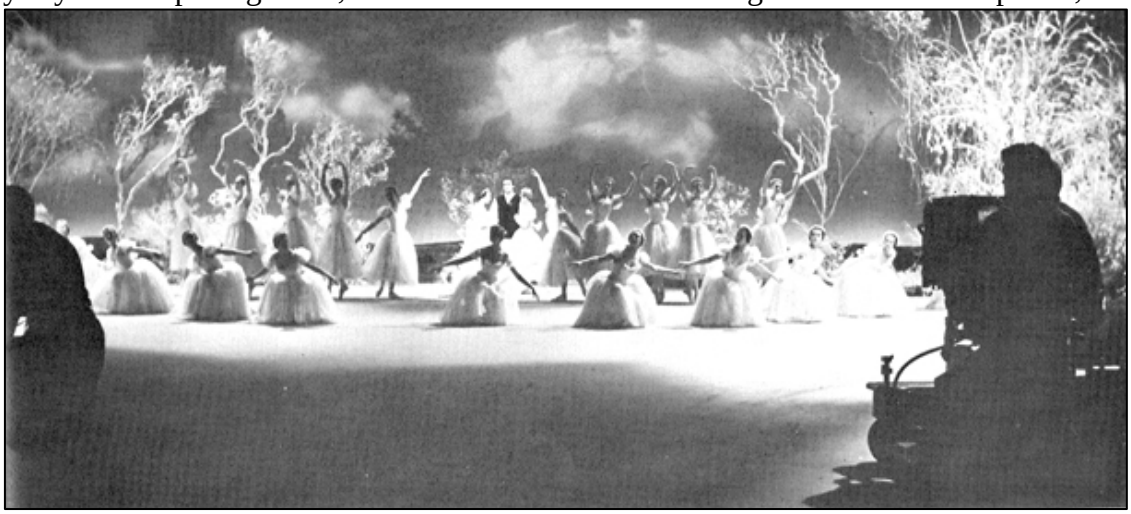
6. Now, the editor would then examine each of the 4 monitors, now seeing 4 adjacent frames sequentially displayed. He would then choose one of the 4 picture frames as the edit-point.
7. Once selected, using the control panel, the tape would be rewound and played back so that only the selected edit-frame would appear on the left-most monitor, and a start-of-frame mark would be simultaneously recorded at the exact point in the vertical interval on the control track.

Once this edit point was electronically recorded, standard videotape editing procedures using Editview, a 40-Power microscope, and a hinged guillotine-like tape cutter were used to complete the splice.

The Advantages of this Frame-accurate Videotape Editor

1. The edit-point-selection was an intuitive, positive, and a rapid frame-accurate process. It was not approximate in any manner.
2. All guess-work and awkwardness were eliminated from the task.
3. The complete process was at least ten times faster than using the subjective process formerly used in videotape editing.
4. Because this was a one-of-a-kind product that no other company had, it became exclusive in Paramount Television Productions' favor.

The timing of the completion of the TV-ola videotape editor, followed by training on it by my videotape engineers, couldn't have been better. Stage 6 had been completed, and



our first high quality production involved the videotaping of the famous Russian Bolshoi Ballet. The result was outstanding in all respects. The picture quality produced by our Marconi Mark IV B&W cameras in capturing this magnificent choreography performed by the Russian performers was a pure joy to see.

Then when it came time for editing, the TV-ola performed beautifully; just as expected. It was a one-of-a-kind device that gave us an exclusive advantage over the competition.

Paul Raibourn at Paramount Pictures was so delighted with its performance that he directed that any reference to the editor within the industry be kept top secret, the exception being, to our valued customers.

Productions by Paramount Sunset out of Stage 6 that immediately followed the Bolshoi Ballet were: numerous sponsored programs, commercials and promotions, several of which were associated with the *Emmy Awards*. Later, a western series **titled**: *Wrangler* was videotaped. It was noteworthy, in that it was the first TV western series ever to be produced on tape. The series, which was produced by Paramount Television Productions for NBC Television and starred Jason Evers, was mostly shot on-location. Stage 6 was available to be used for pick-up shots needing a controlled environment.

Because of the secrecy vale that was placed on the TV-ola, which was certainly right to do, the videotape editor, got very little trade magazine attention. However, on July 30, 1960, a writer named Joel Tall wrote an article in the July Issue of the *Saturday Review*, titled: An Edit Technique for TV Tape, in which he covered the TV-ola editor extremely well, describing all of its features and advantages.

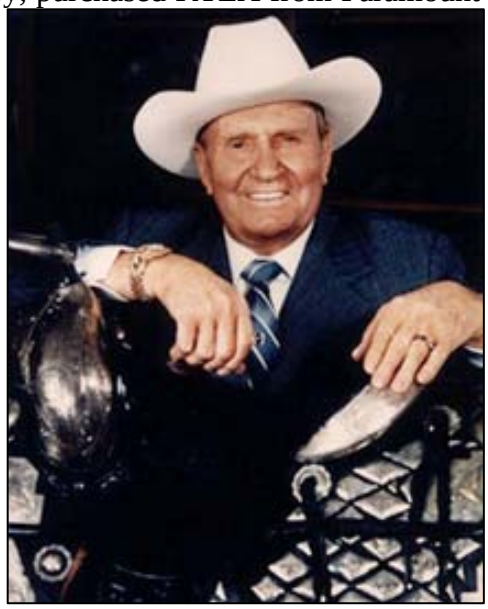
Jim Schulke Resigns and Stretch Adler Takes Over as KTLA General Manager

In 1961 Jim Schulke, without any warning, resigned as General Manager of KTLA. This was a great surprise to all, including myself, as he was credited for doing so much for Paramount Television Productions and KTLA, serving as General Manager of the station. This was a shock to me because we both had worked together so closely in earlier years, helping to advance the station's image in the TV Broadcast industry. I was not unable to find any published reason for his departure, nor did anyone else seem to know why. I didn't have a change to speak with him on the matter before or after his quick departure. I was truly sorry that Jim Schulke was no longer with us. Now his position needed to be filled with a replacement.

Approximately two weeks later, Paul Raibourn, in the New York office of Paramount Television Productions, sent a telegram to all department heads, including myself, stating that Stretch Adler, also from the New York office, would be the replacement for Jim Schulke, becoming the next General Manager of KTLA, effective March 1, 1961. A few days later, Stretch was on board and started learning everything about the station and its personnel.

Gene Autry, as Golden West Broadcasters, Purchases KTLA

In 1965, Singing Cowboy & Movie Star, Gene Autry, purchased KTLA from Paramount Pictures for 12 million dollars, under the corporate name of Golden West Broadcasters (GWB). Shortly thereafter, and as had been predicted, Stretch Adler was released from his position, and was shortly replaced by a gentleman named: Art Mortensen, as GWB's first KTLA General Manager.



Less than 2 years later, Art was relieved of his duties due to not making the expected and required earnings numbers. He was replaced by Carlo Anneke, who was promoted from KTLA Sales Manager to the position of Interim General Manager of the Station. A few months later, he became the full-fledged General Manager. Shortly afterwards, Lloyd Sigmon, who had been Chief Engineer of KMPC for many years (Gene Autry's key radio station in Los Angeles), was promoted to: Executive Vice President and General Manager of Golden West Broadcasters Corporation.

Purchasing and Installing Philips Plumbicon Cameras at KTLA

In March 1966, a technical project involving: master control, two KTLA stages, and two supporting audio and two video control rooms was proposed and later approved by Gene Autry, as we needed to get more serious about color production at KTLA. This involved selecting, purchasing, and installing four new color cameras in the two broadcast stages; installing support equipment; running camera, video and audio, PA, and inter-communication cables throughout the entire complex. Two additional color cameras were needed to be purchased for remote operations.

Before the work could be completed, I needed to determine by observation and testing, which color cameras would best be purchased and installed in the new broadcast stages.

We had been using 2 RCA TK-40A cameras used in a Fruehauf trailer as a mobile unit for 1955 Rose Parade. Later, we inherited three, 3-tube TK-41 cameras when we bought the Red Skelton mobile units, and thereby avoided having the RCA TK-42, 4-tube cameras, having a 4 ½ inch image orthicon tube for luminance, and 3 videcons for RGB

content. As a result, they required twice as much light as for 3-tube image orthicon color cameras.

I tested the RCA TK-45 color cameras and they seemed reasonably adequate; but then I learned about the Philips new "PC" series of Plumbicon color cameras, which at that time had just been rated by respected broadcast engineers as the best in the world.

On June 8, 1966, I went on an overseas trip via KLM Royal Dutch Airlines to Eindhoven, Holland to check out the new Philips "PC" series Plumbicon color cameras. The trip was fully paid for by Philips Corporation as an incentive towards our purchasing six of their new Plumbicon cameras. The KTLA construction project continued during my absence. This overseas trip was extremely informative and beneficial; but it took only four days.

What I determined after multitudinous demonstrations by Philips in Eindhoven, was:

1. The PC-70 cameras had considerably better red response, as compared to the PC-60 cameras (their introductory model).
2. With image enhancing and vertical aperture correction applied, color-performance of the PC-70 cameras was noticeably superior to that for any 4-tube cameras then presently on the market.
3. The PC-70 cameras were considerably smaller; easier to set up, operate, and maintain, than any of the 4-tube color cameras then currently available on the market.

When I returned from the trip, I met with the General Manager and department heads and gave everyone a full report, which concluded with a recommendation to purchase 6 Philips PC-70 Plumbicon cameras, which was immediately approved. The cameras were promptly ordered and received in about 4 weeks.

Not long afterwards, the station project was completed. Everything worked as planned. The new cameras produced beautiful pictures, and the new facility improvements served the station well for many years to come.

The Color Telecopter

Along with all these happenings, I was determined to finish my design of a color version of the Telecopter, which I had been working off and on for several years. It had been eight years since Telecopter #2 started doing on-the-spot breaking news coverages.

In late 1966, after Gene Autry was well settled in after buying KTLA from Paramount Pictures, he became particularly proud of his now-existing air fleet, consisting of all of KTLA's mobile units, including Telecopter #2, all of KMPC's Airwatch fleet, and a

corporate plane. Here is a picture of the KTLA units (colored red), and the KMPC fleet. Yes, Gene was happy; but I was getting restless about improving the capabilities of the Telecopter in its Version 2 form. We had done very well for quite a few years in staying on top in breaking-news in the Los Angeles area, and the Telecopter served well to make this happen. I had thought a lot about improving its capabilities. I was ready to take it to new levels; but hitting the new owner for a change just after he had bought the station was not quite the thing to do at this time. But I kept right on thinking about it, just the same.

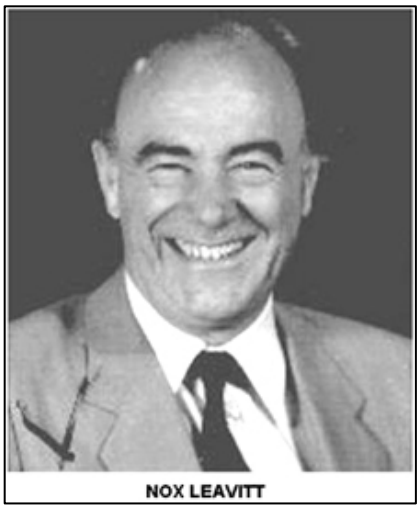
Return to Index

My First Meeting with Nox Leavitt Regarding Westcam.
Converting to Color Television.

While I was waiting for a chance to make a presentation for an advanced color Telecopter, my thoughts turned to searching for a camera positioning system that would allow the use of a longer focal length lens to provide close-ups of objects without producing "jiggley" pictures.

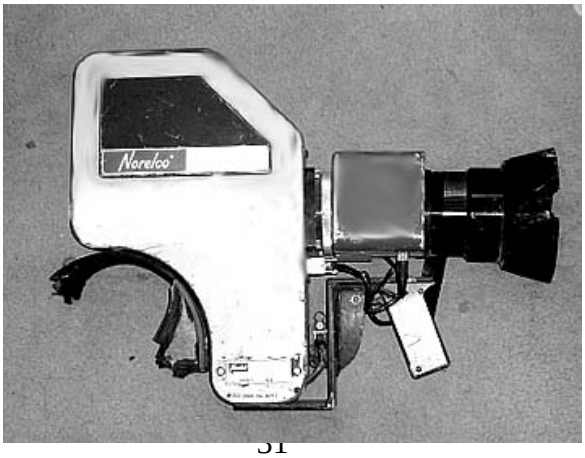
One day in my search, I came across some 35mm film clips taken from the movie "Funny Girl" starring Barbara Streisand.

In one particular scene, she was leaving the country in a ship in the harbor, and she was standing up on the bow - all to a musical background. For this scene, a 35mm film camera with a long focal length zoom lens was mounted on a gyro-stabilized platform attached to the outside of a helicopter. The 'copter flew around the ship, and the camera's lens was smoothly zoomed-in to a close-up of her face in a manner that was totally spectacular, and without a single jiggle in the picture. My immediate thought was: "I've got to have one of those for my new color Telecopter".


NOX LEAVITT

In searching for the source that built the camera system used for this scene, on this great film, I found that a company named Canadian Westinghouse had built it. I further found that the man who originally designed it, and now owned the product for distribution, was a gentleman named Nox Leavitt. His company was named ***Isotec***, which was located in Ontario, Canada.

To make a long story short, I made a trip to this Canadian company, met with Nox, and explained what I had in mind. He then said to me, "But this is a film system! I don't know anything about television". Jokingly, he added, "I can't even spell Television!" I then replied, "Well I can! Let's work together and convert it so that it can also produce live TV pictures!" Well this we did do; and the rest is history. The system required 40 slip-ring contacts to accommodate the Philips PCP-90 color camera that I was planning to use with the color Telecopter.



Features Needed For the Advanced Telecopter

Here are the new features that were needed to be incorporated in the new Color Telecopter; that would elevate it to a totally new level in the coverage of news events:

1. Use a helicopter with a greater weight-carrying capacity and have greater speed of travel.
2. Total control of equipment, including camera positioning, to be done inside the cabin.
3. Camera equipment must produce the best color quality available.
4. A gyro-stabilized camera platform must be used that would isolate all helicopter movement and vibrations from the zoom lens used. This would allow the use of longer focal-length lenses to provide interesting close-up shots from 1000 foot to 5000 foot altitudes.
5. A gyro-stabilized microwave antenna platform that would include antenna pan, tilt positioning, and an up/down retraction unit so the antenna could sit below the skids in flight for 360 deg. coverage, and return above the skids for landing and ground use.
6. Provide: control panels for: camera pan and tilt action, audio, intercom, microwave antenna pan, tilt, and physical placement below-and-above-the-skids.
7. Provide: 2-way communications; and off and on switching of all equipment.

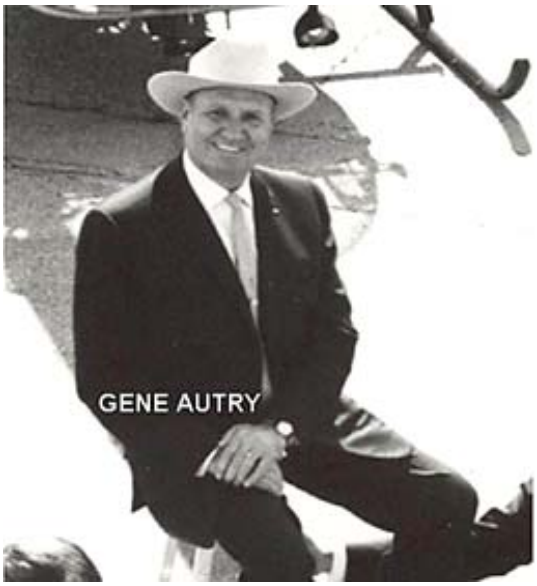
After Research, It Was Determined

1. The Bell 206A jet-ranger satisfied the helicopter requirements. It was required to handle the additional equipment and structural weight on-board. This considerably raised the cost of owning or leasing the unit

2. The Wescam gyro-stabilized platform: satisfied the smooth camera positioning requirement, and eliminated camera lens jiggle from helicopter vibration, and spurious craft movement.
3. The zoom lens to be chosen must have a 20x1 zoom-ratio with a 2X extender, providing a 22.5mm focal length when zoomed all the way out, and a 900mm focal length when zoomed all the way in.

In June 1969, I met with KTLA Vice President and General Manager John Reynolds on upgrading to a Color Telecopter. Fortunately, he was quite enthused about it. He quickly set up a subsequent meeting a day later with the two of us and Gene Autry, to discuss the matter. Fortunately, the Cowboy became very enthusiastic about the proposal and who then, on the spot, agreed to spend the necessary money to build the ***advanced*** Color Telecopter.

JOHN REYNOLDS



GENE AUTRY

Without any hesitation, we immediately started to work on the project. The Bell 206A Jet Ranger was ordered; but unfortunately its delivery was quoted as: 3 months from date of order. Regardless of this, I ordered it, and I then ordered all of the equipment needed to satisfy the system requirements listed above.

For the next 3 months, partial installation work continued without a helicopter. In the meantime, Nox Leavitt sent one of his best engineers, Ed Dafoe, and our now color-TV-capable, Wescam gyro-stabilized camera platform, down to our hanger at the Van Nuys Airport. Once there, he and I conferred to make sure the unit was working properly, as placed on a test workbench we had arranged for. This took about a week and a half to do. After that, Ed went back to his company in Ontario, Canada, and was due to come back when our Bell Jet Ranger arrived.

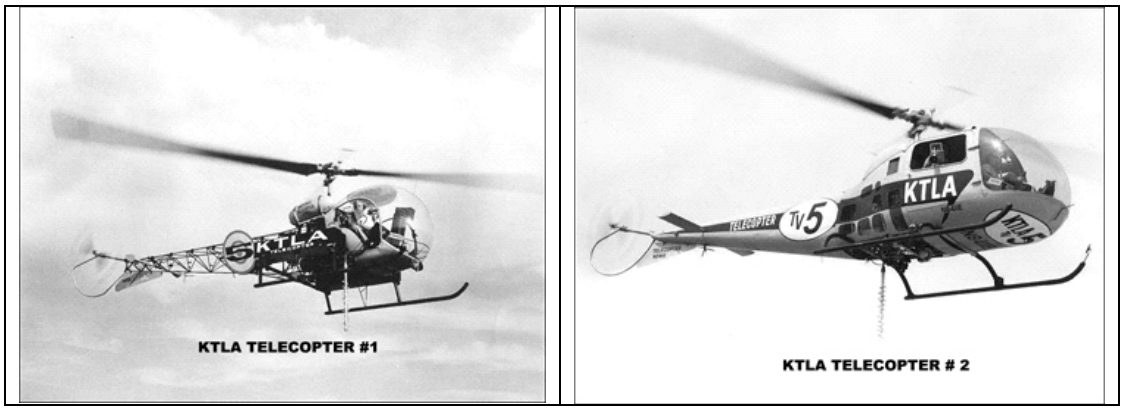
On September 15, 1968, our long-awaited Jet Ranger arrived at the Van Nuys Airport. At that point we pressed for final installation, and Ed Dafoe returned to help us proceed with the Wescam installation.

Once completed, we had to go through a *weight and balance* test for an FAA's inspector, which we passed. The Jet Ranger (Telecopter 3) was then ready for take-off.

Larry Scheer then flew the Color Telecopter in test flights with me until it was thoroughly checked out, was performing as intended, and was ready for service. I then trained Harold Morby, my Telecopter engineer-cameraman, to become familiarized with, and was able to operate all the equipment on-board. Everything was then ready for service.

On January 1, 1969, on its first on-the-air mission, the new Color Telecopter was used to provide air views over and during the Pasadena Rose Parade. From then on, it was ready for on-the-spot breaking news events.

Considering that the KTLA Telecopter, in one version or another, has been serving the public in breaking news coverage, virtually and continuously, from its inception on September 16, 1958 to the present; its 49th Birthday this year, will be on: September 16, 2007.



KTLA TELECOPTER #1

KTLA TELECOPTER # 2

KTLA COLOR TELECOPTER

In 1974, during a period of lean years caused by an industry recession, KTLA Vice President and General Manager, John Reynolds, found it necessary to sell the Color Telecopter (version 3) to KNBC in order to reduce and offset the cost of doing local news. KTLA received a sum of $350, 000.00 from the Network Station for the transaction. During those first 16 years, up until the time of the sale, Larry Scheer and Harold Morby faithfully served as pilot-announcer and engineer- cameraman, respectively. Over the majority of this time, KTLA had a complete lock on all breaking news events in the Los Angeles area.

Return to Index

On September 4, 1974, in New York City, Golden West Broadcasters and I both received individual Emmys with the same inscription which read:

Outstanding Achievement in Engineering Development
For The Telecopter
JOHN D. SILVA for his conception and expertise
and to
GOLDEN WEST BROADCASTERS for its realization

John Silva Presented NAB Engineering Award

John D. Silva of Golden West Broadcasters, developer of what has been called "the most versatile news gathering device ever," was honored by his fellow engineers.

NAB's Engineering Achievement Award was presented to the vice president for research and development for the Los Angeles firm at Tuesday's luncheon.

Mr. Silva, who specializes in remote facilities for television, was instrumental in the development of the "telecopter". The innovation revolutionized not only local airborne television news coverage but provided the motion picture industry with the first stabilized moving platform from which most action movies are shot today.

The engineering award cited Mr. Silva for his distinguished professional career, for his many contributions to our nation's knowledge in the field of communications technology, for his untiring efforts to foster advances in the art of broadcasting, and for his pioneering spirit which has so richly enhanced the forward progress of broadcast engineering.

John W. Bowman, WMAL, Washington, chairman of the conference committee, presided at the luncheon.

The presentation to Mr. Silva was made by George W. Bartlett, NAB vice president for engineering, following showing of an 8-minute film depicting use of the "telecopter" on various news-gathering missions.

NAB 1975

News

DST change

By Brian Way
Vice-President ESE

In August of 2005, the United States Congress passed the Energy Policy Act which changed the dates of both the start and end of daylight saving time (DST). This law goes into effect this year (2007). DST will start three weeks earlier (2:00 A.M. on the second Sunday in March) and will end one week later (2:00 A.M. on the first Sunday in November) than what had traditionally occurred.

ESE responded immediately by updating the firmware and software for all new product shipped after August 19, 2005. But, this change in DST will have an impact on several of the older Master Clocks and GPS based product manufactured by ESE prior to the Energy Policy Act.

The solution for this governmental DST change is to purchase and install a new updated micro controller.

The micro controller has a cost of $75.00 and includes installation instructions. Please contact ESE to determine which micro controller is needed for implementing this solution for your unit(s). Please have available the model number and serial number, as noted on the product label, so that we can provide you with the correct part.

Editor's Notes and comments on Daylight Savings Time and the above: Tech-Notes does not normally publish pricing information, but because there are so many ESE clocks in use and they are one of our Road Show sponsors, we have chosen to make an exceptions in this one case.

More on DST

Also please note that there are many other items that will be affected by this change in DST: EAS gear, computer based operating systems/gear, pre and post sunrise/sunset times for those broadcast facilities that have to deal with that kind of thing and the list goes on. Your editor suggests you be resourceful in considering what you have that might be affected by this change and look into what it will take to have the least impact on you.

For those who don't know, EAS is an acronym for Emergency Alert System which is the successor to the old Emergency Broadcast System where over the air relays of critical messages generated by the National Command Structure (White House) are automatically

forwarded (in theory) to every broadcast station in the US. The predecessor to this was CONALRAD (Remember the very old radios with the 640 and 1240 marks on the AM dial?).

The receivers follow specific protocols described in the FCC rules. Time is a component because outdated messages may be discarded, but this is not a time based switcher, rather a device with a critical reliance (in some cases) on accurate time maintenance within the system. EAS is a holdover from the nuclear threat/cold war days that now, as a result of the terrorist threat has new emphasis. I believe it is unique to the US market.

We are well aware of the fact that most of our readers are from the television side of the industry, but there are many facilities that are co-located with their AM counter parts. In addition to this, you may wish to share this with your AM friends as well.

The FCC recently issued a public notice concerning the impact of the earlier start date (March 11) and later termination date (Nov. 4) for daylight saving time (DST) on AM stations with Presunrise Service Authorization (PSRA) and/or Postsunset Service Authorization (PSSA) and it has done nothing but create confusion and consternation amount AM broadcasters in particular.

These changes in DST hours require modification of all outstanding PSRA and PSSA authorizations. Thus, the FCC is withdrawing all PSRAs and PSSAs issued prior to February 1, 2007, effective March 11, 2007. FCC staff has recalculated the permissible presunrise and postsunset operating powers for all eligible AM stations. Copies of the new PSRA and PSSA documents are now available in each affected station's electronic correspondence folder, accessible through the Commission's database.

You can view the public notice and information therein on how to access the new PSRA and PSSA authorizations by clicking DA-07-938A1.doc. We were told that you can call NAB Legal with any questions at (202) 429-5430, but when we did and they found out we weren't members of NAB, we were told: "Goodbye."

This all said, it is difficult for you editor to understand why we need daylight savings time in the first place. We have yet to see any daylight being either saved or wasted. There isn't one thing in nature that gives two hoots or a holler about what a clock says except man. Why does man have to have clock changes, except perhaps for time zones as we travel around the world to function? Is this another case of Congress fixing something that isn't broke?

Giving Away the Spectrum

The most valuable thing broadcasters have is spectrum and a technically uneducated Congress is, and has been, whittling it away, bit-by-bit for one reason or another and it would appear that another bill to allow unlicensed devices into unused TV broadcast channels is in development on Capitol Hill. Our sources tell us that Rep. Jay Inslee's (D-

Wash.) is likely to introduce his own white space bill "in the coming weeks" and you guessed it: it has no interference protection for existing licensed television facilities. (To see the current totals of all broadcast – Radio & TV, click here.)

UHF COMMERCIAL TV	789		
VHF COMMERCIAL TV	587		
UHF EDUCATIONAL TV	252		
VHF EDUCATIONAL TV	128		
TOTAL		**1,756**	
CLASS A UHF STATIONS	471		
CLASS A VHF STATIONS	96		
TOTAL		**567**	
UHF TRANSLATORS	2712		
VHF TRANSLATORS	1806		
TOTAL		**4,518**	
UHF LOW POWER TV	1710		
VHF LOW POWER TV	517		
TOTAL		**2,227**	
Grand Total			**9068**

(From FCC figures as of Dec. 31, 2006)

It was also said that the bill would eschew protections for wireless mics, however, the bill is still a work in process, with our source saying: "The language has not been finalized."

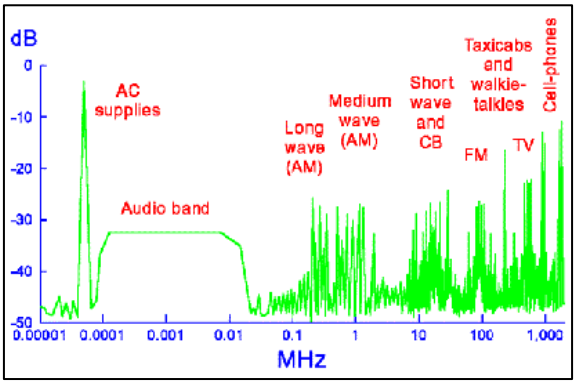
Spectrum or bands of frequencies have been set aside for various radio (broadcast) services. Each of these services has its rules designed to protect current and future users from intentional, unintentional and wrongful interference, however, irrespective of these engineering facts, pressure continues to increase in Washington to allow low-power, unlicensed RF transmitters into unused broadcast channels, or white spaces. We engineers, technicians and broadcasters KNOW that these channels are intentionally unassigned to prevent TV signals from interfering with one another. The actual devices intended for use in the spectrum are still in development, but have been variously described as wireless multimedia routers for the home and portable communications gear.

A coalition consisting of Microsoft, Dell, Intel, Hewlett-Packard, Philips and Google is pushing to open white spaces and has told the FCC it will soon provide a prototype device for interference tests. There is no question that there are those who'd tell the FCC that the Easter Bunny and Santa Claus are coming too.

Inslee was one of the first lawmakers to ratchet up the heat on opening white spaces. In 2005, he introduced an amendment ordering the FCC to finish its unlicensed devices proceeding (ET Docket No. 04-186) within a year. That amendment passed out of the House as part of the bill ending analog transmissions in 2009, but it was stripped out of

the final version signed by the president. Perhaps we could convince the good folks of Washington State to give Mr. Inslee a wake up call or strip him out of his congressional offices.

According to Broadcasting & Cable, two white space bills are already in circulation in the Senate. One from Sen. John Kerry (D-Mass.) orders unused broadcast channels to be made available for unlicensed devices within 180 days of passage. Kerry's Wireless Innovation Act was part of the last year's erstwhile telecom reform legislation. He reintroduced it earlier this year. And Sen. John Sununu (R-N.H.) has also rolled out the White Spaces Act of 2007, which would open white spaces within 90 days of passage, or by Oct. 1, whichever comes first. Sununu's bill also considers the option of auctioning licenses for the spectrum.



As you can see from the various sponsors, this issue crosses over both party lines – ignorance abounds. The FCC's own timeframe would release unlicensed devices into TV spectrum Feb. 17, 2009; the day analog TV transmitters must be shut down. Perhaps this is the safest of all bets. If the track record for the shut down of analog television is any guide, we may never have to worry about giving the white space created by vacating analog stations to unlicensed devices.

This article started out with the statement: “The most valuable thing broadcasters have is spectrum…” Add to this the incontrovertible fact that two things cannot occupy the same space at the same time and good engineering practice says you must not only take into account co-channel operators, but first and second adjacent channels as well, puts this whole idea of white space on course for problems the likes of which we don’t have and don’t want.

This topic can not end here without asking several questions: Whatever happened to the engineers at the FCC? Do they know something we don’t or doesn’t anyone pay attention to them anymore and is free over the air broadcasting on its way out? Something’s got to be done and it appears no one knows what!

Less Than 2 Years And Counting

(and the general public doesn’t have a clue!)

According to an article by George Leopold that recently appeared in EETimes entitled: “Analog TV nears sign off as DTV mandate approaches,” U.S. retailers (supposedly) took analog TVs off their shelves at midnight Wednesday, Feb. 28th when a government mandate took effect requiring all TVs sold in the U.S. to include a digital TV tuner.

Return to Index

The article went on to say: “The March 1st deadline is part of the U.S. digital TV transition that began in earnest last March when a Federal Communications Commission mandate took effect requiring that all TV sets 25 inches or larger must include a digital tuner compliant with the Advanced Television Systems Committee's DTV standard.

The next major deadline in the transition is Feb. 17, 2009, when the U.S. ends analog broadcasts and shifts to all-digital over-the-air television. This is the date refereed to in the title that the general public doesn’t have a clue about. Congress approved legislation last year setting the 2009 deadline and creating a $990 million subsidy program to provide eligible U.S. households with digital-to-analog converter boxes.

We see a plethora of market researcher press release that predict chaos during the U.S. digital TV transition, not to mention if details of the converter-box subsidy scheme aren't work out in time.

Typical of what we’re talking about and what we’ve hear many times over is this story shared with us by our associate, Craig Birkmaier (craig@pcube.com): “I was installing a network in the office of a friend yesterday who is in the video production business. Another workman was hanging new doors on the offices. Somehow the conversation got to TV. He claimed that he does not watch much - has Free OTA TV, four channels, and that is more than enough. I asked him if he was going to buy a digital TV receiver so he could watch TV after 2/17/09. He had no idea what I was talking about.”

As we lament the lack of education about the US transition to digital television to the general public, we received a press release that speaks about three major trade associations joining forces to “educate” consumers about the switch and, to quote the release: “to make sure no viewer loses over-the-air signals due to ignorance.” The organizations involved are the Consumer Electronics Association (CEA), National Cable and Telecommunications Association (NCTA) and the National Association of Broadcasters (NAB). To this end, they jointly written to officials of the House and Senate Commerce Committees about plans to launch an massive consumer education campaign in advance of the February 2009 DTV transition. (Perhaps we can get them to do something about the interference that will happen when unlicensed devices are in use on the so called white spaces created by the analog turn off.)

According to the groups, the campaign is designed to help television viewers to better understand the nature of the transition and become educated about the changes that will occur before the cut-off date. The letter said the efforts will focus on developing simple, powerful messages about the consumer benefits of digital technology and provide information about steps consumers may need to take to maintain their OTA signals. The campaign will include a wide variety of creative ways to communicate to consumers about the transition, including:

- A robust web site for useful information about consumer options during the transition;

- Printed materials that can be distributed to consumers through point-of-purchase displays and other sales channels;
- Public service advertising in cable, broadcast and print media; and
- Promotions and publicizing details of the digital-to-analog converter box coupon program offered by the National Telecommunications and Information Administration.

Ericsson presents cash offer to acquire TANDBERG Television

Although Tandberg, Ericsson, et. al are not the biggest players in the US broadcast industry, they do play a roll and you should know what's going on. It seems that several companies have been bidding to take over Tandberg Television. Most recent is Ericsson who has announced they are to pose a voluntary public cash offer to acquire Tandberg Television.

According to Ericsson, upon completion of this transaction, Tandberg Television will become a wholly owned subsidiary of Ericsson. The acquisition will be conducted by means of a public voluntary cash offer for all of the 80,529,876 outstanding shares in Tandberg Television, which values all the outstanding shares to NOK 8.5 b.
V solutions."

Ericsson's bid tops one made by Atlanta, Georgia-based broadband network developer Arris Group Inc. Ericsson's official name, LM Ericsson Telefon AB, launched their bid battle for Tandberg Television Ltd with a $1.38 billion cash offer that tops the $1.2 billion cash-and-stock agreement announced in January for the company to be acquired by Arris Group Inc.

With $891.6m in revenue last year and $550m in cash and equivalents, Arris cannot match the firepower of Ericsson's $25.5 billion revenue and $8.9 billion cash pile. Ericsson, which already owns 11.7% of Tandberg shares, has agreements to buy a further 13%, sees the company as the final component in its product line-up to cash in on the vast growth of multimedia networks.

Ericsson sees a competitive landscape occupied by Alcatel-Lucent, Cisco, Microsoft TV, Motorola, and Nokia Siemens, and Ericsson's flurry of acquisitions could prompt a feeding frenzy of deals to mop up the independent players in this sector.

Ericsson sees Tanberg's video head-end, encoding and compression technology, which is designed to maximize picture quality while minimizing bandwidth, not to mention Tandberg's a strong position in MPEG-4 compression technology, which is regarded as essential for cost-effective delivery of High Definition TV as a big incentive in their efforts.

FCC Officially Raises Station Ownership Cap to 39%

In what is viewed as a housekeeping move by the FCC in advance of its oversight hearing before House Democrats on March 14, the FCC officially rewrote its rules to raise the cap on a TV group owner's household reach to 39%. That's the total percentage of U.S. households a single TV station group owner is allowed to reach, although only half of a UHF stations audience counts toward that cap.

It only took the FCC a little over three years after President George W. Bush signed the bill into law that changed the cap to 39%. The FCC had wanted to raise it from 35% to 45%, but Congress stepped in to split the difference.

The FCC did see the need as no station sale has come before it that would have pushed any of the networks above that limit. In fact, networks seem to be moving in the other direction, selling stations rather than buying them.

The deal still isn't closed. The new rules won't take effect until 30 days after being published in the federal register.

Cisco Buys Apple!

What follows is an interesting twist on things that appeared in Sky Box and was written by Evie Haskell evie@Mediabiz.com.

Well ... not really. At least, not yet. But some interesting smoke signals are on the horizon and whether or not the San Jose company has set its acquisitive sights on Apple's Cupertino campus, the signs are well worth considering.

Here's a quickie review of the situation to date: When Apple officially launched its iPhone in January, Cisco set up a squawk, claiming that it held rights to the iPhone name via an existing VoIP product. While the legitimacy of Cisco's claim came under some debate, the tussle continued, with Apple declaring the claims "silly" and Cisco insisting on its primacy. Negotiations wound round and round, apparently going nowhere when .... viola! ... King Soloman popped up and, metaphorically at least, the iPhone was split in two. Both Cisco AND Apple, it was decided, could use the name in exchange for Apple's agreement to "explore the opportunities for interoperability."

Now ... have you ever known two unrelated companies to agree on sharing a name? Like ... could Pepsi come out with a new product and name it Coke? Can you imagine Steve Ballmer's reaction if Michael Dell launched a "Vista"?

But that's what Cisco agreed to do with Apple. From Steve Jobs' point of view, the iPhone/iPhone solution is obviously a big win. After all, the man has practically built a religion around the "i" and dropping it from the phone would have left a major hole. But

from Cisco's point of view ... well, from the few details made public, it's hard to see the gain. Unless, of course, the giant manufacturer has its eyes on an Apple acquisition.

Granted this takes a flying leap of faith. But let's not forget that Cisco is a virtual acquisitions machine, so much so that the company devotes a whole section of its web site to an acquisitions' summary. Let's also not forget that Cisco successfully bought its way into the cable business by purchasing Scientific Atlanta in 2005. And finally, let's not forget Cisco's oft repeated desire to become more of a force in consumer electronics.

So ... could Cisco swallow Apple? As we've said, it's a stretch. But it's worth considering. For those of us playing in the multiplatform space, both Apple and Cisco are important bellwethers to which way the technology winds blow.

And keeping an eye on them is definitely a smart idea.

Record Fine for Univision

Three years ago, Univision began broadcasting a show about the misadventures of 11-year-old identical twin girls who swapped identities after discovering they had been separated at birth. The billed it as an educational program for children. May be it is, may be not, but the FCC has imposed a $24 million fine on the Spanish speaking network. The penalty is also expected to send a strong signal to broadcasters that they will be expected to meet their required quota of shows that educate and inform children, after years of permissive oversight in this area.

Kevin J. Martin, the chairman of the commission, says this is a tough rebuke to Univision for claiming to meet its obligations to broadcast educational children’s programs by showing the Latino soap opera “Complices al Rescate” (“Friends to the Rescue”) and other so-called telenovelas. It is our understanding that the Commission’s view is that rather than giving kids programming that is educationally nourishing, Univision elected to give them the Spanish-language equivalent of a soap opera. Chairman Martin might want to look at some of our English programming if he really wants some grist for his mill.

It wasn’t too many years ago when we all watch “Rocky & Bullwinkle,” which was billed as a kid’s cartoon. One cannot forget “The Flintstones” and “The Jetsons”either. I’d venture to say that much of the humor and nuances in those series wasn’t understood by the youth of that time until they got a lot older. Those series ran not only in prime time, but could be found in the early morning weekend fair on a lot of stations as well.

The $24 million fine, along with a plan to show more programming that would comply with the rules, are part of a consent decree that Univision has tentatively agreed to that would resolve complaints by viewers. It covers violations at 24 Univision stations over a 116-week period from 2004 to early last year.

Univision has suffered it share of FCC intrusion – both regulatory and financial. There was a time when foreign ownership came into question. But then there are times when it is wise to lick your wounds, pick yourself up and move on and this is probably one of those times. Once the full commission has approved the decree, as expected, Univision will be able to complete its $12 billion sale to a consortium of private equity firms. So by paying the fine, it clears the way for the FCC to vote on the transfer of control of Univision's licenses to an investor group led by TV kids programming vet Haim Saban. The licenses could not be transferred with complaints pending against the stations. Incidentally, those investors buying the Univision stations include Providence Equity Partners, where a senior executive is Michael K. Powell, the former F.C.C. chairman, and Haim Saban (previously mentioned), a wealthy investor who built a major business on the Mighty Morphin Power Rangers action figures.

You probably have not have heard the last on this subject from the do-gooder church groups that filed the complaints over a 116 week period against the stations. Most had asked for the license to be pulled by the "offending" stations. One cannot wonder if they'd like to have the spectrum to fill with their information.

Per new FCC digital TV rules, broadcasters now have to program an average of three hours of educational kid's shows on each of their free DTV multicast channels as well as their primary analog channel. It back – this may be the biggest novella of them all.

Exciting Merger News from SIRIUS

We know – we know, this is satellite radio, but this story truly a sign of our times. Since we drive across the US for nearly five months out of the year, it didn't take long to discover it was a real pain changing radio stations as they'd fade out about every half hour or so and then trying to find the same network program on a clearer station in the direction we were going. So, yes, we opted for one of the satellite radio services and we're glad we did (Sorry NAB). It's not hard to understand why truckers have these things in their cabs. Except for and an occasional tunnel or, where we live here in Oregon, an occasional thick clump of tall trees, reception is excellent everywhere.

The following is an e-mail we recently received - it says it all. We only took out the fluff:

To: SIRIUS Subscribers

Today (Feb. 19) is a very exciting day for SIRIUS customers. As you may have heard, SIRIUS Satellite Radio and XM Satellite Radio are merging to form the nation's premier audio entertainment provider.

This combination of our two offerings will benefit you - our loyal listeners. As a single company, we'll provide superior programming to you every day with the best of both SIRIUS and XM. Currently, XM and SIRIUS broadcast a wide range of commercial-free music channels, exclusive sports coverage, news, talk, and entertainment programming.

Return to Index

Howard Stern. Oprah and Friends (***Ed note***: Don't let these two sway you one way or the other). The NFL. MLB. NBA. ESPN. CNBC. Fox News. Additionally, the combined company will be able to improve existing services such as real-time traffic information and rear-seat video as well as introduce new ones.

After shareholder and regulatory approvals, we anticipate that the combination will be finalized by the end of 2007. Until then, both companies will continue to operate independently. We will continue to provide you with the uninterrupted service. We do not anticipate any changes in your service during the merger process, however, please call our customer care team on 1- 888-539-7474 should you have any questions.

Stay tuned, Mel Karmazin, CEO

Dolby introduces solution to inconsistent loudness

By Larry Bloomfield

One on-going problem in our industry is audio levels — that is program sound versus commercials and when switching from channel to channel on either cable or satellite, you either can't hear or you get blasted out. Of course advertisers want their messages to stand out, but it is a constant source of viewer annoyance. All broadcasters have a peak level which they may not exceed to remain legal at their transmitter, but it is the perceived loudness that is the problem. The differences come when the area between average audio levels and peak audio levels is compressed in some material and not other. Some broadcasters have been fined for airing commercials where the compression is too great delivering a perceived excessively high level.

According to a recent press release, Dolby Digital had introduced the concept of dialog normalization, but not all broadcasters use Dolby Digital. The systems allow for dialog to be transmitted at the same level, whereas music and effects are free to range to higher and lower volumes. Having mixed audio when working for CBS O&O back in the days when it was know as KNXT (now KCBS-TV), I tend to be overly critical of music/sound effect levels vs. dialog. I often wonder what possible artistic plateau is trying to be reached at the expense of the audience.

Dolby has offered a solution to this problem by introduced a new audio-processing technology called Dolby Volume that is designed to help broadcasters address the annoyances of inconsistent loudness in systems that do not carry dialog normalization data. It brings a fundamentally new approach by delivering consistent volume levels. It models how humans perceive audio to finally eliminate variable loudness when changing channels or programs, without disruptive audio artifacts. It also delivers a robust and vibrant audio experience at low volume by dynamically and automatically compensating for the human ear's lower sensitivity to bass and treble sounds as the volume level decreases. If I remember correctly, this is called the Fletcher-Munzing (SP?) effect.

Receiver-side technology will not remove the importance from master control to control loudness or the need for dialog normalization, but it will provide a simple solution for the viewer. By purchasing future receivers fitted with the Dolby Volume technology, they can tame the excessive levels however they are transmitted.

For more information, visit www.dolby.com.

HDTV in Hotel Rooms

During the Road Show – A Taste of NAB, we don't normally stay at really high class hotels, but we don't stay at sleazy places either. When we saw this, we had to pass it on to you as it demonstrates that at least one hotel chain is doing their part to expose folks to HDTV.

The story is from the Washington Business Journal, is dated 2/26/07 and is by their Contributing Writer, Barton Eckert. "Marriott figures there is enough of a demand for high-definition television to install sets in all its U.S. and Canadian resorts. The installation will be completed within three years, the company says. By the end of this year Marriott says it will have the new units installed in 25 percent, or 40,000, of its JW Marriott, Marriott and Renaissance guest rooms in the U.S. and Canada. Since we've been known to stay at one or more of these Marriot brands when lesser posh facilities aren't available, we'll be looking forward to this experience.

Although the brand of set was not mentioned, the 32-inch sets will have plug-in panels that will allow guests to connect laptops, digital cameras, camcorders and video games and they will also have 25 watt speaker systems, with no headphones required, for better sound from MP3 players and iPods.

Blu-ray catching up to HD DVD

We have a Betamax vs. VHS war going on again, but this time it's in the format for high definition DVDs. According to figures from Nielsen VideoScan, the Blu-ray Disc format may be catching up with its competitor, HD DVD, in terms of movie sales. Ever since both formats launched, the HD DVD format has held a clear lead in many aspects, but in January, Blu-Ray started to quickly close the gap. In the first week of January, Blu-ray movies outsold HD DVD by a ratio of 2 to 1, and the following week was 3 to 1.

At the end of 2006, only 695,000 consumers owned a player for

either format, which split in to 270,000 HD DVD players and 425,000 Blu-ray players. The majority of Blu-ray players are PS3's; only 25,000 Blu-ray stand-alones were sold in 2006. As for HD DVD figures, half of them are Xbox 360 add-ons.

It isn't clear whether the boost for Blu-ray was the initial rush to "check it out" from gamers with new PS3s, or the fact that HD DVD had no new title releases over the period. HD DVD still seems to have more titles available for purchase than Blu-ray right now.

What's happening with DVD & Hi-Def Disks?

Video freaks all over the world had been waiting and waiting and waiting for the "next DVD" to arrive for almost 5 years, the process being delayed several times. Not many broadcasters have utilized the DVD technology, but that may change. The original idea of having *just one format* that would eventually replace the current 4.7GB capacity DVD-Video format was thrown out during the process and it was already obvious that the emulation of DVD's rapid adoption rate would never happen with the next generation format. After five years of waiting, we got our high definition formats -- HD DVD and Blu-ray during the year 2006.

Understandably, considering the device price tags and the lack of content, the adoption rate hasn't been very quick. And to complicate the things, it seems that the good olde DVD is "good enough" for most people (which wasn't the case when DVD began to replace VHS as the major format with DVD being so much better quality, small in size and VHS just wasn't really "good enough," – not even for Joe Average. Furthermore, to get a better picture quality when switching from the VHS to the DVD, it was simply matter of purchasing a new player and in some cases, a player that cost as little as 1/3 as much as a VHS unit.

With high def formats, people also need to have a proper HD capable television set, making the new formats harder to sell until the HDTV sets become truly mainstream products (mind you, the high def players only output high def video when connected via HDMI and older HD capable TV sets might not have HDMI connectors at all, complicating things even further..).

If you wish to have the best of both formats, you might take a look at the LG Electronics Blu-ray burner & HD DVD reader combo drive. LG is again using the shotgun method to somewhat unify both blue-laser, next generation formats by releasing a Blu-ray writer / HD DVD reader combo. The GGW-H10N drive will playback Blu-ray, HD DVD, DVD & CD discs and can burn to dual layer 50GB BD-R / BD-RE (re-writable) discs.

The burner also doubles the industry's standard rate for 25GB single-layer BD-R recording with 4x speed. It is expected to be available anytime now here in the US with a very healthy price tag well over a grand, but it's considered a bargain since all the features are packed into one drive.

Blu-ray & HD DVD may not be the answer. Keep in mind that these two formats use the "new" DVD sized disks that hold 25GB, but there is a 100 GB disk sitting in the wings. 100 GB is all that this kind of media can physically hold and retain their current size. Current DVD's, the ones you can rent from Blockbuster etc., can hold up to 4.7 GB. Hi-def video material typically takes about 4.5 times as much physical space in or one whatever the record media might be, so we're talking 21.5 GB for a typical hi-def movie without copious amounts of compression. Since the average movie is typically 90 to 120 minutes in length, it would seem reasonable to get four movies or 8 one hour TV programs on the 100 GB disk. To buy in either for these formats, the typical cost of the 25 GB disks with a movie on it runs about $20 – $30, depending on how long it's been out and the content.

Some computer software is now coming out in a DVD format: Windows Vista is just one example. As programs become more complex and require more media space, you can bet that we've not seen the last of the DVD as we currently know it.

This brings to mind storage. Storage and the transportation of digital material is an ever growing industry. As the requirements for storage on a disk increases, the capacity continues to become an issue. It is not unreasonable to believe that the 25 or 100 GB disks will be used for that purpose. It is also not unreasonable to believe that television programs will be distributed in one or more of these formats, if not stored at local stations and used to transport to material to presentations, point of sale and other useful purposes.

With motion pictures look at digital as a means to eliminate their very costly distribution of film, it is not unreasonable to think tinsel town isn't considering these kinds of media for short term storage in theatres. With hard drives available in stores that tip the scale at 1 Terabyte (TB), the lesser capacity of even the100 GB disks doesn't seem likely, but getting digital feeds into every part of this country where there are theatres hasn't quite arrived as yet and this could well be a short term answer.

Remember the motion picture industry is setting standards well beyond television's HD formats that are limited to a 6 MHz bandwidth on a channel. Some movies are currently being shot in 1080P/24 and industry standards are be considered at frames that will be 2K x 4K: that's a pixel count four times that of today's HD television, which is slightly more than 2 Megapixels per frame. Doing the math says that the 100 GB disks would be the smallest a movie with those standards could fit on.

There is and has been an answer in development in Longmont, CO – a company called InPhase Technologies – a spin-off of Lucent Technologies (the old Bell Labs). They have what they call their Tapestry media that will hold well over 17TB. The record/playback is holographic, but unfortunately the technology has only been able to achieve 300 GB at this time. This is still three times better than the best Blu-ray/HD-DVD. As the mechanics of writing and reading improve with this holographic technology improves, they will approach the physical limits of the Tapestry media. Stay tuned!

CBS to Sell Four TV Stations

It's either the large market money makers, or we're rid of the; or so it seems at CBS. According to an article in Broadcasting & Cable, CBS plans to sell four of its TV stations, plus a couple of low-power outlets for the tidy sum $185 million to investment group Cerberus Capital Management. Of course the FCC has to rubber stamp the deal.

The stations include two CBS affiliates and two My Network TV affiliates which are KEYE-TV Austin, Tex.; KUTV Salt Lake City (plus satellite KUSG(TV) St. George, Utah; WLWC TV Providence, R.I.; and WTVX TV West Palm Beach, Fla., plus low powers WTCN-CA and WWHB-CA.

If you'll remember, last year they dumped stations in Oklahoma, New Orleans, Columbus, and Indianapolis.

From: "Barry Thomas"

Many of you know I am Treasurer for the Society of Broadcast Engineers but I'm also the chairperson of the SBE Strategic Planning committee. To that end I'd like to have a discussion with the brain trust on this list on the state of our profession, the perceived and actual role of the Society of Broadcast Engineers in that profession, and ways that SBE can be a more active part of your professional lives.

We all are faced with the truism that Broadcast Engineers are expected to do more with less and are faced with, in many cases, a lack of respect. SBE is in the position to help engineers with tools to manage those pressures and improve their prospects. In fact, SBE members can look at their membership cards and see our purpose:

1. To promote and advance the science of broadcast engineering.
2. To establish standards of professional education, training, and competence for members.
3. To encourage the exchange of ideas and promote professional standards.
4. To represent the needs of members before regulators and the industry.

Since SBE is the singular organization dedicated to these purposes, we want to make sure to do this in the best way possible. Could I ask for comments about this subject and ways SBE can better achieve our purpose?

What would you expect from a professional organization with the purposes outlined above?

Return to Index

- If you're not an SBE member, why not?
- What would/could be done to encourage your increased involvement?
- If you are not Certified, why not?

I am interested in taking thoughts presented here, work with my committee and present recommendations to the next meeting of the SBE National Board of Directors at the NAB in April. Thanks in advance for your comments.

Barry Thomas, CPBE CBNT
barryt@broadcast.net

ATSC Cable QAM Tuners - CableCARD or ATSC Ready

By Richard Fisher

As of 2006, nearly all TVs sold in the US now use this updated internal tuning system for receiving DTV over the air (an FCC regulation) and all analog and digital cable channels without a cable box. This has added a new wrinkle to how your TV is setup and how it operates.

First thing you may note when you setup the TV or product, such as a DVR, is that it takes quite a long time (10-30 minutes) to perform an auto programming of all available channels when you are on a cable system. In the past, your TV or other product was limited to the analog only channels up to 125, but with most cable systems typically limited to channel 99 or lower, in which case you needed a cable box to receive the digital tier above that. With QAM, you can now receive that digital tier directly but that also adds another couple hundred more channels for which your product will search, hence the time required for a complete channel scan.

Once this is completed you are in for another surprise: You have channel numbers that you didn't know existed and that do not appear in the guide from your cable company. For example, you may find in scanning that you can receive the FNC channel as number 90-002 on your product, but the cable company channel guide states this channel is on 224. Furthermore, you may find that 90-003 is MTV which your cable guide states as being on 176. If your product supports a cable card, and you are going to get one for it, then you can skip to the end of this article. If you intend to get a cable box that will resolve all your tuning issues as well.

The reason for this channel discrepancy is that the actual transmission has nothing to do with the sequence or linear channel numbers shown on your product. This was a huge problem in the early 80s with the introduction of analog cable tuners on televisions that required the customer to properly setup and often times only allowed about 20 channels to be setup or stored. Manufacturers provided transmission to channel number conversion charts in the owners manual to assist, yet a great deal of effort was spent in the field helping customers setup their product. To recall that time, a much simpler time indeed,

the sequential transmission of the channels was 2-6, 14-21, 7-13, 22 on up. Yes, 14 follows 6, 7 follows 21 and 22 follows 13! This was unexpected for many folks and difficult to wrap their brains around. Fortunately by the late 80s these manual tuners were replaced with digitally controlled tuners that removed this hassle and allowed the user to watch any channel they could receive just like having a cable box. Most have forgotten or never experienced this era of manual tuners.

QAM digital cable is far worse in this regard because there is no universal sequence like we had for analog cable. On top of that, many channels will be stored that will appear blank when you tune to them; those are the pay digital channels. You may also see channel numbers come and go. Those are Video-On-Demand (VOD) and Pay-Per-View (PPV) channels that are created on the fly for the customer and removed once the viewing has ended. Nobody can tell you how the raw channel numbers will be displayed for the cable company in your area unless one of your local citizens figures it out, documents it and makes that available on the internet. Many can appear between known analog cable channels, adding to the confusion.

Georgia, Atlanta - Comcast QAM HD channel list

Despite the inconvenience, there is much to be gained, such as potentially free access to some digital channels and definitely any local DTV/HDTV channels (an FCC regulation) even for simple basic cable service. If your product does not support a cable card or you don't want or need one then you will need to use channel up and down and go through a lengthy process of recording the raw channel number your product is showing and determine what actual channel or program content that is. In effect you must create your own channel map for the digital channels. Once that is done you can manually remove the ones you can't receive, or don't want to show up, during channel scan.

Cable Card

If the product supports a cable card, then getting one resolves all tuning problems since that is where the channel map information comes from for your cable company. A cable card will also allow you to subscribe to other digital channels or tiers of service for your system without having a cable box. Please note that current cable cards do not support VOD or PPV services, and those will require a cable box. For more information, see my recent article: CableCARD Basics.

Gotchya!

When you are shopping, keep an eye out for displays that claim to be ATSC or QAM capable yet are limited to 480I output. For example, Hitachi's entry level CRT rear projection HDTVs. The reason for that conundrum is that the FCC defines that any display with a tuner is called a television, and all televisions are required by the FCC to include ATSC tuners to maintain universal compatibility with over the air broadcast systems. The FCC does not specify performance capability, only that it works. Manufacturers like Hitachi decide what performance level they will provide and if you consider that most viewers are using either a cable box or satellite system one can see why they might do that to reduce the sales price. If you move up to Hitachi's next tier, they include fully capable HD ATSC tuners with CableCard for those seeking those features.

News In Brief

From: Lee Woods, Chief Engineer KOIN-TV

Past DTV Newslinks can be found in a searchable archive on the HDTV Magazine website at: http://www.hdtvmagazine.com/forum/viewforum.php?f=12

Congress, FCC debate analog-to-digital date
A tug of war over the date when America switches off the signal to millions of analog TV sets and forces the populace to adopt digital TV is brewing between Congress and the FCC.
(Hollywood Reporter)
http://www.hollywoodreporter.com/hr/content_display/television/news/e3i9410da3dd7ac1a567e439bc1a673b9a1

Congress, Leave Digital TV Alone!
(TVPredictions.com)
http://www.tvpredictions.com/whip030107.htm

Regulators pressed to meet DTV-conversion deadlines
The U.S. federal government's coupon program to subsidize the purchase of digital converter boxes is slated to begin in 10 months, and industry leaders eagerly await details, which insiders say will come out very soon.
(Electronic Engineering Times Asia)
http://www.eetasia.com/ART_8800454836_499501_205dbcaf20070302.HTM?from=RSS

Rabbit ears losing their rabbit's foot
Death of analog TV in 2009 means adjustments for over-the-air viewers
(Denver, CO Rocky Mountain News)
http://www.rockymountainnews.com/drmn/tech/article/0,2777,DRMN_23910_5388545,00.html

Analog televisions slowly get turned off
It's not easy to pick out the lingering, outmoded TV on the shelves at Karl's.
(Gillette, WY News-Record)
http://www.gillettenewsrecord.com/articles/2007/03/01/news/news01.txt

Cox tunes into more hi-def
Cox Communications' deal will allow HDTV owners in Hampton Roads to finally get Fox and NBC in a high-definition format.
(Hampton Roads, VA Daily Press)
http://www.dailypress.com/business/local/dp-69914sy0mar02,0,2811044.story?track=rss

Cox Cable to Offer Local NBC, Fox Stations in High-Definition
(Norfolk, VA Virginian-Pilot via RedOrbit)

http://www.redorbit.com/news/technology/857938/cox_cable_to_offer_local_nbc_fox_stations_in_highdefinition/index.html?source=r_technology

Sinclair & Comcast Extend HD & SD Deal [Phillip Swann]
The battle over compensation for standard and High-Definition signals is pushed back.
(TVPredictions.com)
http://www.tvpredictions.com/sincomb030107.htm

EchoStar: No 'Backseat' to DIRECTV On HDTV [Phillip Swann]
The satcaster's top executives comment on high-def in a conference call with Wall Street analysts.
(TVPredictions.com)
http://www.tvpredictions.com/echohd030107.htm

MGM Planning HD Movie Channel
Studio Boasts 1,200 HD Titles
(TVWeek)
http://www.tvweek.com/news.cms?newsId=11628

New digital Variety Channel to offer 24 hour programming
WXXA/Channel 23 in Albany, N.Y., has launched a new, digital television channel programmed in "lifestyle" blocks.
(Albany, NY Business Review)
http://www.bizjournals.com/albany/stories/2007/02/26/daily32.html?from_rss=1

HDTV 101: What you need to know
In the past few years, television has undergone a revolution. Thanks to HDTV (high-definition television), we can get unbelievably clear pictures. But choosing an HDTV set can be confusing.
(USA Tocay)
http://www.usatoday.com/tech/columnist/kimkomando/2007-03-01-hdtv-101_x.htm?csp=34

DLP(R) HDTV Continues Market Leading Momentum into 2007
New Slim Form Factor Models, Consumer Demand for Full High Definition 1080p Resolution and Competitive Pricing Drove Increased Market share in 2006
(PR Newswire via Yahoo News / Kensei News & Information Service)
http://biz.yahoo.com/prnews/070301/clth087.html?.v=39
http://www.kensei-news.com/biz_news/publish/ce/article_50017.shtml

Sharp LC-52D92U
Problems with screen uniformity spoil the otherwise impressive Sharp LC-52D92U's chances to be counted among the elite flat-panel HDTVs.
(CNET Editors' Review)
http://reviews.cnet.com/Sharp_L_52D92U/4505-6482_7-32306273.html?subj=fdba&part=rss&tag=MR_Search+Results

Blu-ray? HD DVD? It's Time To Choose
The two movie disc formats that are competing to replace the DVD have had a rocky start, with clunky first-generation players and an audience that has been reluctant to buy them for fear of betting on the losing side.
(Associated Press via Hartford, CT Courant)
http://www.courant.com/business/hc-techtest0302.artmar02,0,492215.story?track=rss

Sony to unveil HD version of Anycast Station
The AWS-G500HD HD-only version of the system retains the original multifunctionality of its SD predecessor.
(Broadcast Engineering)
http://broadcastengineering.com/products/sony-hd-anycast-station/

FCC Gives Modeo a Boost
Mobile broadcast company Modeo held a press event Feb. 28 in New York to promote the company's beta service test in the area.
(Broadcasting & Cable)
http://www.broadcastingcable.com/article/CA6420645.html?display=Breaking+News

Wireless Rivals Primed for Mobile TV
(BusinessWeek via RedOrbit)
http://www.redorbit.com/news/technology/857312/wireless_rivals_primed_for_mobile_tv/index.html?source=r_technology

New television tower arrives in Doerun
More than 90,000 pounds of steel arrived in Doerun Monday for the construction of WALB-TV's new tower. Now, construction of the new one thousand foot, T-shaped tower will begin.
(WALB-TV Albany, GA)
http://www.walb.com/Global/story.asp?S=6142300

HDTV guide focuses on big picture, clearly
(Columbus, OH Dispatch)
http://www.dispatch.com/features-story.php?story=dispatch/2007/02/27/20070227-B1-00.html

Look Past the Living Room: How to Sustain HDTV Sales
U.S. consumers are particularly drawn to the "thin" form factors, namely LCD flat-panel or plasma panel TVs, as they have been with iPods and Razrs. Almost 60 percent of TV intenders in the U.S. favor these two types of TV sets. Among Internet households earning $100,000 or more a year, that percentage increases to 80 percent.
(TechNewsWorld / E-Commerce Times)
http://www.technewsworld.com/story/6MTyEI0ROJZXSE/Look-Past-the-Living-Room-How-to-Sustain-HDTV-Sales.xhtml
http://www.ecommercetimes.com/rsstory/56019.html

Information & Education

DTV Training

From: Gary Sgrignoli

Happy New Year to everyone!!! Hope your holiday season went well. Last year has been a busy one for television broadcasters and manufacturers to say the least, with end-to-DTV-transition plans ramping up exponentially. One could say that much hope exists for both the broadcasters and the Chicago Cubs, although I believe that the broadcasters have a much better chance of succeeding than the Cubs (even with new manager Lou Pinella !!!). At least the Bears made it to the Super Bowl!!! And, speaking of broadcasters' hope, I hope that you will have the opportunity to attend one of the upcoming VSB seminars being offered around the country in 2007! And you can always check on the status of upcoming seminars on the MSW website (www.MSWdtv.com).

The DTV transition continues to accelerate with at least 1600 DTV stations on the air covering 211 markets containing about 99.95% of the TV households (about 91% of the households are in markets with 5 or more DTV signals). Behind us is the beginning of the FCC tuner mandate - 100% of all TV sets must have DTV tuners now, the “plug & play” cable compatibility issue, the “broadcast flag” resolution (kind of ...), and the DTV translator rules (the LPTV June 2006 filing window has passed). NTIA has already issued an NPRM asking for comments on their $40 coupon program to be used at the end of the transition. Besides that, there is a significant increase in HD programming (including live programs such as sports, Super Bowl, Olympics, and even the local news) as well as more models of lower-cost DTV sets with integrated digital tuners on showroom floors (5th generation VSB chips have been out since spring 2005 & 6th generation was announced at the end of 2006). With the advent of the 2nd Periodic Review in the fall of 2004, which set the post-transition channel election and replication/maximization process that just culminated with the recent release of the channel allocation NPRM, and Congress settling on February 17, 2009 as a hard analog "turn off" date, the last phase of the DTV transition is surely well under way!

These day-long digital VSB transmission seminars have been offered around the country for the last 8 years (70 of them in total), with more on the way. Some of the cities across the country that have hosted seminars in the past have been: Albuquerque, Atlanta, Austin, Baltimore, Birmingham, Boise, Boston, Calgary (Canada), Chicago, Champaign (IL), Cincinnati, Columbia (SC), Dallas, Denver, Des Moines, Harrisonburg, Honolulu, Indianapolis, Kansas City, Knoxville, Lansing (MI), Los Angeles, Manchester (NH), Milwaukee, Minneapolis, New Orleans, New York City, Norfolk, Oakland, Orlando, Philadelphia, Phoenix, Pittsburgh, Portland (ME), Portland (OR), Raleigh, Reno, Sacramento, Salt Lake City, San Diego, San Francisco, San Jose, Seattle, Tampa, Topeka, and Washington DC. The plan is to visit new cities as well as to revisit some of the ones mentioned above.

There are now three (3) types of VSB transmission seminars to consider. The original 1-day VSB Fundamentals course contains all the basics of data communication in general as well as the VSB System in particular and is a pre-requisite to the 1-day VSB Measurements seminar that covers VSB testing information that is needed in the laboratory, at transmitter sites, and at remote field sites. The third seminar is a 1-1/2 day VSB Combo course that combines both VSB Fundamentals and VSB Measurements together for a complete look at the system. This 3rd seminar includes a solid fundamentals review in the first 1/2 day, and then focuses on the measurements the following full day of the seminar.

All three seminars are operated in a similar manner, with corporate sponsors covering the majority of the costs and only modest registration fees for the attendees. Look carefully in the list below to see which of the three seminars is being offered in each city !!!

Upcoming all-day VSB seminars are currently scheduled for:

1. PBS Technology Conference
MGM-Grand Las Vegas, Nevada
VSB Fundamentals
Wednesday April 11, 2007
8:30AM –5:45 PM
In Conjunction with PBS Technology Conference and just before the NAB Show. (Note: This seminar will be open to the public. Non-PBS personnel are welcome.)

2. WVPT TV Studios
Harrisonburg, VA.
VSB Measurements Seminar
Thursday May 17, 2007
8:30 AM –5:45 PM
Host: SBE 78 Harrisonburg, Virginia
Sponsors: Belden, DVG, Evertz, Rohde & Schwarz, Streambox, Nucomm, ECS, & WVPT-TV

3. Idaho Public Television, Boise, ID
VSB Measurements
Thursday, September 27, 2007
8:30 am to 5:45 pm
Hosts: SBE Chapter 78
Sponsors: TBD

In addition to the above confirmed dates, the Charleston SC, Orlando FL, Kansas City MO, Los Angeles CA, Manchester NH, and Pittsburgh PA SBE chapters as well as the Washington DC WEBE/SPMTE groups are trying to book seminars some time later this year. These additional seminar dates should be forthcoming in the near future.

Corporate SPONSORS that are interested in being involved in any of the above upcoming seminars should contact me immediately so that I can put you in touch with the appropriate seminar host people before sponsorship opportunities close.

As usual, the modest registration fee for these seminars covers an updated 1-1/2" thick (800-page) detailed seminar notebook as well as lunch. The announcement flyer for the Seattle and Spokane seminars are attached, which contain contact information and general logistics. If you know anyone wanting to attend such a seminar (e.g. any local station engineers or business clients in the area), please forward this information to them.

As an FYI, local TV broadcasters often host these seminars in conjunction with local broadcast organizations such as SBE and SMPTE. These seminars are designed to be "break-even" events for the hosts with my travel expenses and speaker fees paid by corporate sponsors, while the cost of the handout books and refreshments are covered by the very modest registration fees (often between $60 - $75 per person) charged to the attendees. The seminars often draw between 30 - 60 people (and sometimes more), and one credit is given towards SBE re-certification. Also, the material in the "VSB Fundamentals", “VSB Measurement”, and “VSB Combo” seminars will help those preparing to take the 8-VSB Specialist Certification test that is now offered by SBE. See the national SBE website for more details (www.sbe.org).

If you know of any broadcast-related groups that would want to co-host or co-sponsor any future VSB seminars in their cities, please let me know. The fall and winter seminar schedule is currently being planned. I believe that these educational seminars are well worth the time, energy, and money to attend, especially in this last phase of the DTV transition where so many requirements are in effect for broadcasters.

As the DTV transition continues to roll out, the channel election comes closer to completion, the NTIA coupon program becomes finalized, DTV education of the public begins in earnest, and the final date for analog shutoff comes closer to reality (will the 2/17/09 date really “stick”???), let's all work towards continued success and increased consumer DTV education in 2007.

Gary Sgrignoli
DTV Transmission Consultant
Meintel, Sgrignoli, & Wallace
847-259-3352 Office phone
847-650-9878 Cell phone
gary.sgrignoli@IEEE.org
www.MSWdtv.com

An attempt at humor to fill the rest of this page

- 42.7 percent of all statistics are made up on the spot.
- 99 percent of lawyers give the rest a bad name.
- Remember, half the people you know are below average
- He who laughs last thinks slowest.
- Depression is merely anger without enthusiasm.
- The early bird may get the worm -- but the second mouse gets the cheese in the trap.
- Support bacteria -- They're the only culture some people have.
- A clear conscience is usually the sign of a bad memory.
- Change is inevitable, except from vending machines.
- If you think nobody cares, try missing a couple of payments.
- How many of you believe in psycho-kinesis? OK, now raise my hand.
- So what's the speed of dark?

BROADCAST STATION TOTALS AS OF DECEMBER 31, 2006

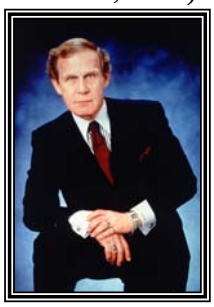
The Commission has announced the following totals for broadcast stations licensed as of December 31, 2006:

AM STATIONS	4754	
FM COMMERCIAL	6266	
FM EDUCATIONAL	2817	
TOTAL		**13,837**
UHF COMMERCIAL TV	789	
VHF COMMERCIAL TV	587	
UHF EDUCATIONAL TV	252	
VHF EDUCATIONAL TV	128	
TOTAL		**1,756**
CLASS A UHF STATIONS	471	
CLASS A VHF STATIONS	96	
TOTAL		**567**
FM TRANSLATORS & BOOSTERS	4131	
UHF TRANSLATORS	2712	
VHF TRANSLATORS	1806	
TOTAL		**8,649**
UHF LOW POWER TV	1710	
VHF LOW POWER TV	517	
TOTAL		**2,227**
LOW POWER FM	771	**771**
TOTAL BROADCAST STATIONS		**27,807**

The Swiss Army Phone…Is Good Enough for Everything Good Enough?

By Andy Marken

"I've been waiting my whole life, I just don't know what the hell for," -- Amelia (Catherine Zeta-Jones – **The Terminal**, 2004)



Sometimes our kids – and the community at large – make us feel like Tom Hanks in the 2004 **The Terminal.** We simply go from gate to gate trying to get on the next technology plane to fly to our destination…optimum personal and business productivity.

We haven't even installed Vista -- probably wait until quite a few folks fly that plane before we get on board!!

We have a new cellphone with a camera as well as network and messaging capabilities. Phone works great. Haven't bothered reading the passenger instructions in the seatback for the rest of the marvelous features…we figure we'll just get airsick!!

The kids? They're all thumbs.

They take, send, receive photos…they IM; they surf the online video sites…they email people; they download ring-tones and music…they have calluses!

We're starting to wonder if it isn't time to board and start using one of these mobile information terminals (that's what Samsung calls them, Nokia has another name).

Then an old friend Dick DeBartola (the GizWiz guy on ABC-TV) reminded us we had helped introduce a lot of that function and capability back in the early '80s when we were hawking the Atari Portfolio.

This was an ultra-portable before ultra-portable was cool.

Back when the Internet was just a twinkle in DARPA's eyes and before Motorola had introduced their 30-minute brick phone, the name palmtop PC was coined. We saw a lot of folks thumb typing at 30+ words a minute (we could actually stumble-type 20 wpm).

Priced under $400 when PCs cost a gazillion dollars and about the size of a VHS tape, it easily fit in your pocket.

This was no frickin' toy !!!

It ran a derivation of MS-DOS (JT – Jack Tramiel – had no love for that kid Billy Gates!). Used RAM as internal memory. Included a text editor, spreadsheet, address book and you could dial phone numbers by playing touch-tones through the speaker. Had optional parallel and serial interfaces for working with your big, clunky, expensive PC.

Fast forward 20+ years, add a few chips, do a little integration, use today's wireless technology (hardware,

Return to Index

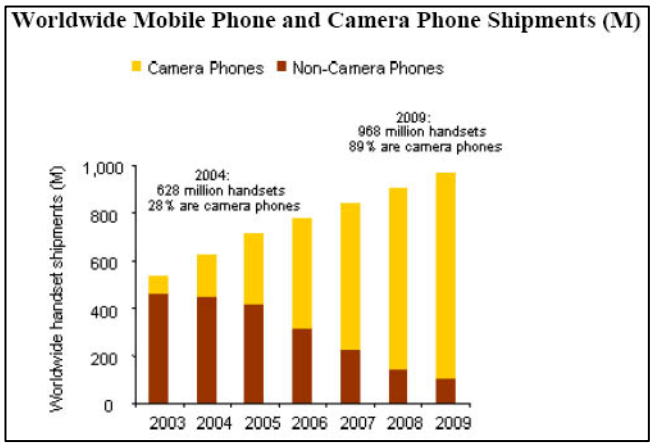
software, content, carriers) you're at the edge of space.

We're moving beyond ordinary WiFi and transitioning to WiMAX (bigger, fatter, more robust wireless pipes).

Industry analysts say we have (ok will soon) faster network speeds, new batteries, bright/energy-efficient screens and more for our all-in-one + phone solution... They're telling us we're finally going to be able to cut the umbilical cord to the PC and use the new mobile devices for buying/creating content, personal TV network, music studio, heck even our digital wallet.

A recent article noted that to see what the rest of us will be doing with these ultra-portable PC we only have to look to South Korean and Japan.

These consumers led the way with camera-phones. Today it's one of the features nearly everyone expects to find in their mobile device.



So what if they take less than one photo a month (Wirefly Research).

But music…that's going to be different.

After all Jobs is making a killing with his iPod and iTunes. So what if the sound is only "acceptable?" People on the go wouldn't appreciate HighDef Dolby, DTS music quality anyway!

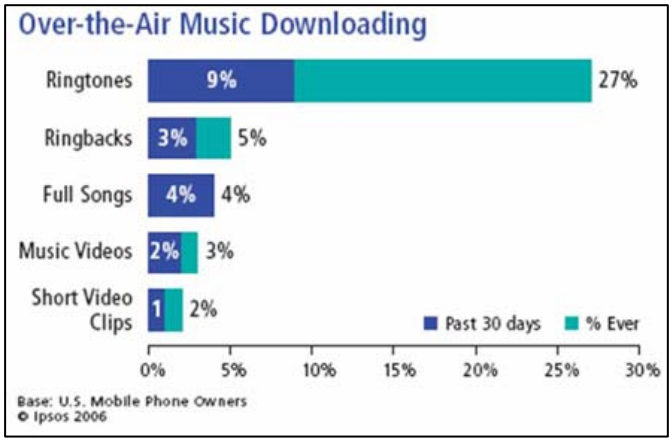
Ok so he sold 80 million of the damn things. We've got more phones out there and "everyone" carries his/her phone with them all the time !

Throw a hard drive in the little hummer. Or load it up with flash. Better yet keep the unit cost down and sell them add-in special SD cards.

Sell your own proprietary download music service and watch the money roll in.

Ipsos found):

- 70% of American mobile phone users are aware of full sound downloads
- 1-20 have done it – it's hard to download to your PC and then to your phone
- Ringtones are still a big hit (big dollars)
- Direct-to-phone download is more expensive than straight online (iTunes) services from most service providers.
- Verizon has sold only a million songs vs. Apple's 1.75 billion



Sobering up, analysts now say music on the phone won't be an iPod killer any more than…well anymore than Zune.

The added service – as with all of the online music services – suffers. People need to be able to easily explore, capture, display and share their music. Until then, it's going to be a retarded offering.

One analyst stepped back from the sucking sound, looked back and forward.

Before kids had tapes and CDs. They swapped, ripped, exchanged the content.

Today that's still a big hassle and few of us will bother.

People don't load up their iPods with thousands of songs…it's expensive and time consuming. They won't load up their phones with hundreds.

You may buy the song (ok rent it) but it's a captive to the service you use and the device you put it on.

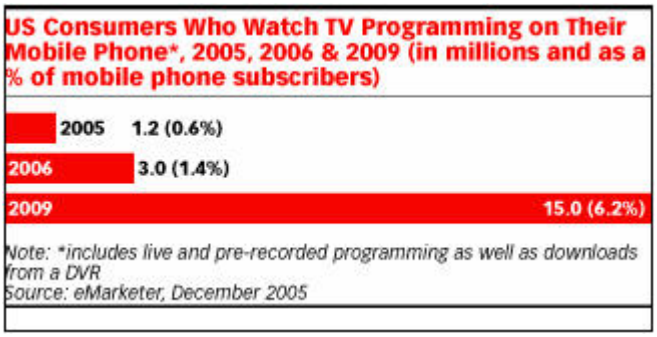
Our kid is a hero in his group. He rips old CDs, tapes and yes our ancient vinyls and puts them into MP3s.

Face it, the music exchange hasn't met the industry's adrenalin pumped expectations.

But TV? That's universal. It's something you don't have to think about…like reading.

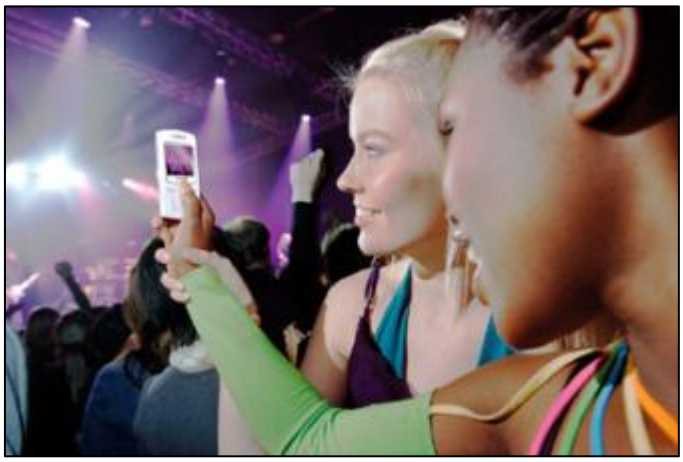
New service…new revenue stream…new hopes.

Hey with the new WiMAX in place it will mean you really can be stuck in the airport and enjoy your personal TV. So what if only 1.4% of the U.S. mobile phone subscribers watch TV programs on their phone. By 2009 that number is going to grow to a fantastic 6.2%!



We're talkin big bucks here folks. Of course the income has to be divided among the carrier, aggregator, network, SAG, meaningful "others."

The fact that we can get local TV shows free on our notebook with products like ADS Tech's MiniTV doesn't phase telcos or phone developers. They know people will love the new added service that they pay for and watch on their small non-HighDef screens.



Ok so movies haven't proven to be the killer either. There are other services telcos can sell.

Personal video services are gaining a lot of traction as folks put up their own versions of **Dumb, Dumber** on the sites.

This is great. Kids will grab and post their personal videos on their everythingphones for anyone/everyone to see. The site runs ads next to the content so the investors make money. The Telcos sign-on and start selling their service to you and divide the profits between YouTube, the aggregator and their pockets.

The content developer? He or she gets the honor of 15-minutes of glory. Fantastic!

Don't question the numbers and the potential (ever noticed we always say it's going to be a huge market 5 years from now?). If you do industry sharpshooters will think you're clueless and simply repeat what Amelia (Catherine Zeta-Jones) said in **The Terminal**…"That's something a man like you could **never** hope to understand."

Probably true.

After all…we're not part of the Thumb Generation.

The analysts caution that getting our collective hands on all of this great content isn't going to be fast, seamless or easy. **DDDUUHHH!!**

But that's OK because a lot of MBA VCs are dumping big dollars in every start-up that emerges in the Web 2.0 world.

So what if only one out of 10 of their investments pay off? That's better odds than Vegas gives.

All we have to do is figure out why kids are loyal to their mobile "everything" phone but they jump services at the blink of an eye.

Just remember Japan and South Korea are testing it all and showing what the rest of us are going to enjoy.

Oh crud…just as we were about to get on board Gartner reports that Japanese mobile customers are moving to non-camera-embedded devices. Next they'll tell us that South Koreans are following suit and both are abandoning these other great services that only cost them $100 - $150 a month for small screen, mono-sound entertainment.

Trying to track and predict trends is about as easy as reading the airline options to get the best flight, best seat, lowest fare.

Guess where we're sleeping tonight? Ever feel like you're living in an airport?

16:9 and legacy 4:3 F.Y.I

By Dunn Duane

File under 'HD or Bust" Confidential

There are a number of ways to handle the two aspect ratios as stations transition to wide format so-called HD DTV.

We are seeing various width vertical black bars on 4:3 material inserted into 16:9 using our 7710ARC-F Evertz modules which apply graphic side panels via fill. How much black depends upon the source. Different ARC setting can usually/mostly get rid of this.

Summary: We can correct the black pillar edges issue but may have to live with it to continue with the current delivery strategy which is to produce in 16:9 and center cut that for SD. Since we have mostly

SD acquisition and server ports we have to do an anamorphic squeeze, and then stretch that for "HD" using a phalanx of converters.

Details: The reasons we see these pillars are mostly due to (now) noticeable blanking and timing issues in the source material;

- Legacy analog blanking (creates black edges and hence smaller active picture area) This increases with video generations.
- Add Legacy analog to digital SD conversions
- Add other accumulative analog and digital system timing issues.

Disney O&O engineering recommends using ARC (Aspect Ratio Converter) presets for easy converter setup for functions like insertion of full 4:3 images onto 16x9. At KGO this works great on accurate newer 4:3 sources. Others need lots of correction.

What broadcasters might decide to do to minimize or eliminate these bars takes a bit of history and forward thinking since blanking issues have a long history and we all will be inserting 4:3 into 16:9 forever on newer digital systems via flat screen displays & fewer tube displays.

In the hay-days of tubes there was a generous over-scan allowed which was accounted for in production using SMPTE Safe Title as a guide. Camera operators and graphics folks are well aware of this. Today's LCDs, & Plasma direct view sets have little or no over-scan. The leading left Wing or pillar and the right Wing or pillar becomes the new TV frame edges horizontally when viewing 4:3 in winged HD. As such, theoretically we can afford to crop the 4:3 image to eliminate the black pillars or bars.

I experimented with settings on the 7710ARC-F and had mostly good success with two approaches:

1. selected "crop" mode (0-25 range) and found that a setting of 10 worked for most everything.
2. Selected "manual scaler" mode, imported AR preset ARC settings as basis, then custom tweaked input H Start, Stop & V Start, Stop.
3. If labor was not an issue we could tweak the crop as needed to avoid generic (over)-resizing to accomodate all material as above in 1, 2,.
4. Drop the idea of wings and just have black edges to avoid highlighting or correcting the blanking issues.
5. 4:3 material inserted into 16:9 could be treated more like an OTS key or mask instead of trying to maximize its size.

With the Evertz 7710ARC-F there remains a slight left edge bar most of the time, likely an Evertz issue. A separate down-stream keyer approach would be cleaner.

Caveats:

- Cropping is like zooming in on the 4:3 image - the same viewing effect as over-scan on a tube set. The problem is that ABC's present production strategy would take this resized corrected output and center cut that - zoom on the zoom - especially for tube folks.
- Squeezing, unsqueezing, zooming and re-zooming likely has some impact on image quality. Normally it's best to minimize processes and generations.

- Down Stream Keying would be cleaner and allow masking w/o resizing the source 4:3. However you may then get wing edges from the mask on some less over-scanned sets when doing the Center Cut

Thoughts:
Putting 16:9 letterbox on a 4:3 SD channel would allow corrective 4:3 insertion sizing or masking with less processing and effective secondary resizing since you would not do a Center Cut to produce 4:3. Crawls and banners could then go in the letter box areas at top and bottom leaving more room for active picture. Top banner could say things like; "Go to sub-channel 6.1 or Cox channel XXX for HD" or "go to KSBY.com/freeDTV for how to receive NBC6 HD free over-the-air". (PVR commercial zapping less likely) Most all consumers with wide screen sets stretch the SD channel (to fill the screen) which makes for extreme fat distortion. They are less likely to stretch down-converted HD on 4:3 letterbox and will know where to go to get non-distorted screen filling native HD. Legacy 4:3 viewers would get a proper 16x9 aspect. Note: Letter boxes and pillars do not have to be the same width. You can even have one large box or pillar, top or bottom, left or right. You could choose to have a generous lower third area.

Duane Dunn
duane_k_dunn@mac.com
Blogs:
Apple Bytes
MaxDTV

DTV Transition Still in a Vacuum

By Dale Cripps

The following press release contains some disturbing information about the transition to all digital terrestrial TV. There are still far too many over-the-air viewers who know nothing of what is coming upon them (shut off of analog on February 17, 2009). We, who already have these digital services, need to think of how we can individually advance the understanding of the transition to those who still don't have a clue. It is important work and we thank you in advance for doing what you can for the cause. The nation needs the spectrum back to be then reissued by the FCC to Homeland Security first responders, among other things. There is a coupon subsidy program for ATSC decoder boxes designed to help those who simply cannot afford to make the transition, so no one is being led into a blind corner. The solutions are there for those dependent upon over-the-air services but the education needed to successfully engage those solutions is not._Dale

APTS Survey Finds Majority of Americans Remain Unaware of DTV Transition

APTS Will Ask Congress for Additional Funding for DTV Outreach Initiatives

The majority of U.S. households that receive their television signals over the air are still unaware of the digital TV transition even though an estimated 22 million over-the-air homes need to make some kind of digital decision by February 17, 2009, according to a Association of Public Television Stations (APTS) survey.

Return to Index

The bulk of the survey participants, 61 percent, had no idea that the DTV transition was taking place. Ten percent said they had limited awareness, while 25 percent said they were somewhat aware or very aware. While some respondents were aware of the digital transition, 53 percent had no idea when analog transmissions were scheduled to be turned off.

In order for the DTV transition to be successful, consumers must be well-informed and primed to adapt successfully to the new technology. This cannot occur unless there is a comprehensive, coordinated national consumer outreach effort. Therefore, APTS is urging Congress to designate targeted funding for consumer outreach on the switch from analog to digital. During APTS Capitol Hill Day 2007 February 13-14 more than 200 executives and volunteer board members of local Public Television stations are scheduled to ask Congress to recognize Public Television's unique outreach ability in the community and provide funding for those efforts.

"There are more than 21 million U.S. households that get their TV exclusively free and over the air, and we know these homes are heavy viewers of Public Television," APTS President and CEO John Lawson said. "That puts us, working with our partners, in a strong position to provide information about the digital transition to the people who need it most."

APTS is spearheading a coalition of trade and interest groups to compete for the $5 million Congress set aside for consumer education in last year's DTV transition bill. The diverse group includes the Leadership Conference on Civil Rights, Consumer Electronics Association, American Library Association and Women Involved in Farm Economics. In addition, APTS is now a part of the DTV Transition Coalition, a separate but related effort led by the National Association of Broadcasters.

What to Opt For

The need for vigorous outreach efforts is evident when looking at analog consumers' attitudes and awareness toward their options for digital TV reception after the transition. Roughly 45 percent of respondents to APTS' survey said they will either "do nothing" or "don't know" what option they will take to obtain digital signals. Nineteen percent will purchase a converter box, 17 percent are likely to sign up for cable TV service, and 9 percent will sign up for satellite TV. Another 9 percent indicated they would buy a digital television set so that they can continue to receive over-the-air broadcasts.

The survey also found that at least 38 percent of analog households would "definitely not" or "probably not" select a particular video service provider if they didn't offer Public Television channels after the DTV transition. This suggests that the lack of Public Television offerings by video providers will cause a serious barrier to these analog households in choosing cable or satellite to receive digital television.

The survey results are based on an overall sample of 2,000 U.S. households conducted in the third quarter of 2006. Approximately 19 percent of these households said they receive television programming solely over the air - not having a subscription to either cable TV or satellite TV services. The survey was conducted for APTS by research firm ICR, Media, Pa.

Floppy disks, anyone?

Floppy disks fade into the past

Floppy disks are said to be nearing their demise, with only a small number of PCs still being sold with the disk drives. U.K. computing superstore PC World said it would no longer stock shelves with the storage devices. Are we here in the US next? http://r.smartbrief.com/resp/gdaklmebBnlrrvlHPb

Reader Input

Sorry – None this time.

Order of the Iron Test Pattern

For those of you don't know, here's what the Order of the Iron Test Pattern (OITP) is all about:

Order of the Iron Test Pattern

Creed of the Order

Through snow and glitches, dropouts, ghosts and now cliff-effect, we survive - undaunted.

Dedicated to "hanging in" under all circumstances, we unsung heroes of the broadcast and cable industries are on the working end of the "show-must-go-on" button -- even if it means using our own finger in place of the fuse (ouch!).

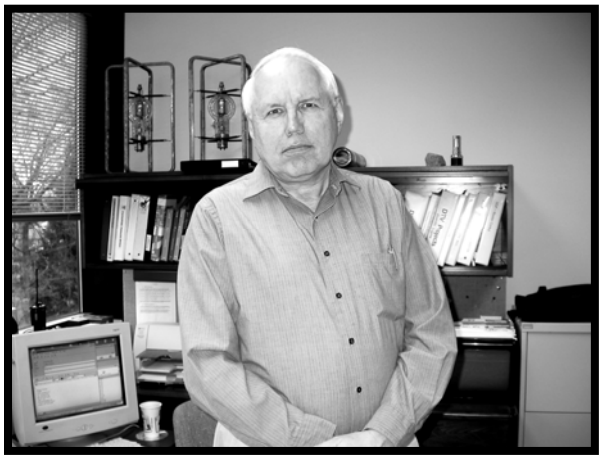
Our association serves no purpose other than to recognize one another for what we are - ***survivors!***

The Order of the Iron Test Pattern will have their annual gathering and awards ceremonies during NAB 2007 this year in the ESE booth, C1839, in the upper part of the Central Hall at 4:30 PM on Tuesday, April 17th. In case you have a hot date, things should be over with by 5 PM. (Thanks to OITP General Brian Way of ESE).

The Sagacious Pixel, the somewhat *dubious* leader of this **august** group, is asking for any ideas on who to nominate for one of their most prestigious and also somewhat dubious awards to please submit them to awards@oitp.org no later than Saturday, March 31st. (You know the Iron This, the Iron That or the Iron Whatever award – you make it up.) Membership is free. Check out their website at; http://www.oitp.org

Obituaries

Michael A Tondreau



It is with the deepest regret that we convey to you the passing of Michael A Tondreau, Vice President of Engineering of Oregon Public Broadcasting (OPB) this past Tuesday, January 30th after his battle with cancer over the last several months. He had been at OPB, or it's predecessors for 42 years.

Mike's accomplishments were many: He was active in the expansion of Oregon's public broadcasting service from its humble roots at KOAC in Corvallis to the present facilities that include 5 TV and DTV stations, 40 TV translators, 6 full service FM stations, 1 AM station, 18 FM translators, and almost 1,000 miles of terrestrial microwave. He guided the Engineering department during the difficult transition from a State agency to the successful private non-profit organization we all recognize today.

Mike was instrumental in the construction of one of the first digital television stations in the country, which was built on an Experimental license in 1997. Of his accomplishments, Maynard Orme, President Emeritus of Oregon Public Broadcasting said: "Mike was really the architect of technology infrastructure of OPB." (Orme was President & CEO of OPB from 1986 to 2005)

Mike served many years on the PBS Engineering Committee, was well liked and respected by all of his peers and a genuinely nice guy. He had a special ability to take a complex subject and explain it to non-technical people in a clear and understandable way.

He held an Amateur Extra class operator's license, W7BBR, and was a trustee of the OPB Amateur Radio Club call sign, K7OPB... Mike really enjoyed CW and was a "true" Amateur Extra having passed the 20 wpm code exam years ago.

Mike was host to the Taste of NAB 2005 Road Show in his facilities in Portland. We here in Oregon, and those who knew him, will truly miss him...

No firm Memorial Service plans have been issued, but would expect something to occur within the next two weeks.

Ron Benson

Ron Benson passed away Friday February 9, 2007.

He was a long time Phoenix Engineer and member of the Society of Broadcast Engineers. He is survived by his mother and father and daughter Corina.

Ron, a native of Chicago, came to Arizona to study at A.S.U. He met and married his wife Peggy here. After graduation, they decided to make their home in Arizona. For the past twenty years, he has been a trusted employee of Audio Video Resources (AVR) in Phoenix. In addition to his many engineering talents, he was an accomplished musician and band member, a science teacher, and great friend to many.

Ron was very instrumental in hosting the Taste of NAB Road Show at AVR for the Phoenix Chapter 9 of the Society of Broadcast Engineers since the beginning of the Road Show in 2002. He was certainly a good friend of ours and will be greatly missed.

Services were held on Monday at 4:00 pm at Best Funeral Home 9380 W. Peoria Ave. Ron's family wanted no flowers. Instead, they requested that anyone wishing to make a donation contribute to the American Cancer Society.

The following quote from Mark Temen, President of A.V.R., pretty much sums it up for all of us: "Farewell my friend…You were one of the good guys!!!"

This picture (compliments of Mark Temen) is from Ron's vacation to Kauai, HI in the summer of 2006.

Richard “Dick” DeBeradinis

Richard “Dick” DeBeradinis, a 35-year professional in the broadcast industry, died on Nov. 12, 2006, at his home in Ormond Beach, Fla., from pancreatic cancer. He was 72.

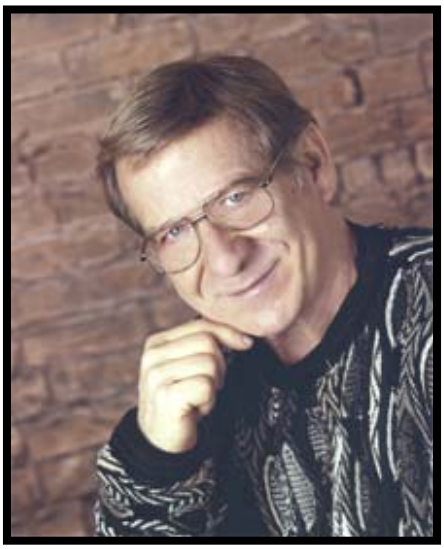
Dick was an industry fixture in the Northeast, based in and around New York City since 1962 and servicing customers on the East Coast and in the Caribbean. In his sales management roles, he worked in all parts of the industry, including production, post production, government, and network broadcast for such companies as Central Dynamics, CMX, Ross Video, Utah Scientific, and Vela Research.

“Dick touched so many lives in this industry,” said Utah Scientific CEO Tom Harmon. “He was a unique individual and impacted everyone he worked with, whether coworker or customer, with his energy and positive attitude. It has enhanced my life to know him, as I know it has the lives of so many others. He will be greatly missed.”

Born in Ossining, N.Y., Dick is survived by Marilyn, his wife of 34 years, and two sons, two daughters, seven grandchildren, and two great-grandchildren.

To send condolences or share memories, please e-mail deberadinis@utahscientific.com. The messages will be compiled and sent to Dick’s family.

Return to Index



Jim Somich

(1941-2007)
By Frank Foti

Previously in his series, Jim Somich wrote:

"I think back to the 1980's and a young engineer I hired who had a certain gleam in his eye. He did not have much experience but his enthusiasm was almost boundless. Little did I know that he would go on to become a true rock star in the processing world. This article is for you, Frank."

Well, this one is for you Jim, as you are still bigger than a rock star in my life. With a very heavy heart I must share the news that Jim has passed on to the big audio processor factory in the sky, at the young age of 65.

A MULTIFACETED ENGINEER

Jim was a very successful broadcast engineer, as well as product developer. His career spanned radio, television, photography, movies, and just about any form of media imaginable.

Over the years, Jim worked at KFI, KMET, KIQQ, WMMS, WGAR, WHK, WHTZ, and WJW, just to name a few stations. He also built quite a number of UHF TV stations for Malrite Communications, where, at one time, he was Director of Radio Engineering.

He was also involved in a number of ventures: Somich Engineering, MicroCon Systems, and a host of others. Jim kept a private life and his curious mind ventured into some interesting and alternative areas, both inside and outside of broadcasting.

A MENTOR

And yes, he was also the person who took a chance on a goofy, long-haired, 22 year old kid. Stuck him under his wing and taught him the ropes of radio engineering. If not for Jim sticking his neck out for this

passionate over-achiever, then Frank Foti would never have seized the opportunity to follow an exciting path in this industry.

They say that turn-about is fair play, and in 1987 I was able to return the favor. Malrite had promoted me to become the Director of Radio Engineering. The first assignment was to find my replacement for the Chief Engineer position at WHTZ-FM (Z-100) in NYC, at the time probably one of the top five radio engineering jobs in the country.

Jim was out in Los Angeles, working at an Hispanic UHF TV station, but was bored to tears. One evening, while out in LA, we hooked up for dinner. He told me he was considering getting back into radio. I asked him if this was an idle thought or for real. Upon realizing that he did want back into radio engineering, I said “Have I got the offer for you!” My first hire in the new position was my friend and mentor, Jim Somich.

A FRIEND

Jim was never at a loss for ideas about gadgets for the world. Whenever we got together, he would spout off at least half-a-dozen ideas; I only wish we could have made them together.

During the development of Omnia.fm, Jim would pop down to our office at least once a week to have lunch. He was an early supporter of the effort and an excellent advisor on the project, offering honest feedback that helped me tune the beast. He would bring in a bevy of CDs to see if he could break it and, when he could not, his enthusiasm overflowed!

He was truly an inspirational person, and one who never offered a cross thought, or negative belief. I have him to thank for the 100% optimistic outlook on life. He was never one to give in, no matter what the odds. Together, he and I overcame some crazy situations in broadcasting, and always on top. Suffice it to say, that there is a piece of Jim Somich in every Omnia, if by way of his inspiration alone!

But most importantly Jim was - and will always remain - my friend. While there are many wonderful memories of him, sadly, we will not be able to create new ones.

Be at peace, Jim. Life and our industry have lost a great friend.

Private services were held. The family would appreciate any memorials be sent, in his name, to the Northeast Ohio SPCA (pet rescue), 9555 Brookpark Rd., Parma, OH 44130.

Stephen R. Miller
of Kirkwood, NY

Stephen R. Miller, 54, of Kirkwood, passed away unexpectedly on Sunday, February 4, 2007. He is survived by his loving family; wife of 23 years, Dorinne; one son, Dan Miller, Kirkwood; one sister, Jacqueline Miller, Long Island; his parents-in-law, Michael and Lois Badner, Pa.; two sisters-in-law, Michele Badner, Maryann and Robert Matoushek, all of Pa.; and several cousins.

He was a loving family man who was especially supportive of his son regardless of the activity involved, he also enjoyed hunting camp during deer season with his in-laws. He was very dedicated to his Catholic faith, he was a First Degree member of the Knights of Columbus in Kirkwood and was always up to date with the latest church doctrine. He remained active for over 40 years with the Boys Scouts and was a member of the Onteora Alumni Association.

Stephen graduated from Hofstra University and started with WCDC in Carbondale, Pa., where he met his future wife, he also worked for WRAK/WKSB in Williamsport, Pa., following which he became a dedicated employee at WICZ-TV 40 for over 21 years as the Chief Broadcasting Engineer. He was also the Broadcast Engineer for Trinity Broadcast Network. He enjoyed Polka, Country Western, and Bluegrass music attending the German Festival annually. Though known by his wrestling name "Evil Dr. Miller" in high school, he loved to read and was better known as being easy going and jovial. He will be sorely missed by his loving family and friends.

Funeral services were held Saturday, February 10, 2007, at the Savage Funeral Home, in Binghamton, followed by a Funeral Mass at St. Mary's Roman Catholic Church, in Kirkwood, with Rev. Thomas F. Catucci officiating. Condolences may be expressed online to the family at www.savagefs.com.

CHARLES S. SWARTZ

By Jim Mendrala

It is with great sadness that I share with you the peaceful passing of Charles S. Swartz on Saturday, February 10, 2007.

Charles was an innovator and key member of the filmmaking community. Until the summer of 2006, he served as the Executive Director and CEO of USC's Entertainment Technology Center, an organized research unit at USC within the School of Cinema-Television. He was the editor of "Understanding Digital Cinema"; a teacher and mentor; and a longtime producer and writer of films and television productions.

In his final weeks, Charles remained upbeat and active in planning upcoming events for the industry. He brought more than 25 years experience in the entertainment industry as head of Charles S. Swartz Consulting, which provided strategy solutions for the entertainment industry; Director of Integrated Strategy for Media and Entertainment at Sapient, focusing on the global entertainment industry; and Director of Business Development for the entertainment industry in the Media & Entertainment business unit at Andersen Consulting (now Accenture).

Prior to consulting, Charles was Continuing Education Specialist and Program Manager for UCLA Extension's Department of Entertainment Studies and Performing Arts, where he developed the largest and most comprehensive curriculum of digital media and entertainment management courses offered by a major university. His numerous contributions to the entertainment management and digital media field at UCLA Extension, Society of Motion Picture & Television Engineers (SMPTE) and the Technology Council of the Motion Picture/Television Industry, earned him a slot on the Los Angeles Business Journal's list as one of the 100 leading technology leaders.

Before joining UCLA Extension, Charles attended the University of Southern California's graduate School of Cinema-Television, then served as a story executive and Associate Producer at Warner Bros. Television, as Head of Production at New World Pictures, and as Executive Vice President at Dimension Pictures.

He produced eight feature films and shares screen credit for writing six of them. He was a frequent speaker at international symposiums on digital media and global cinema and television. Charles was a magna cum laude graduate, Phi Beta Kappa, of Yale University.

DR. FRANK STANTON DIES AT 98

Former CBS President Dr. Frank Stanton, who helped mold the company into a symbol of excellence reflected in its "Tiffany Network" nickname and whose public stances on broadcasting issues, especially broadcast journalism, critically shaped an entire industry, died December 24, 2006 at home. He was 98 and lived in Boston.

Stanton is regarded as one of the greatest executives in the history of electronic communications and one of the television industry's founding fathers. He was the master builder of CBS, turning an also-ran radio network into a broadcasting powerhouse under company architect and founder William S. Paley, who appointed him president in 1946. Stanton held the title for 25 years – longer than any network television head. Stanton was also a pioneering advertising researcher, inventing the first radio advertising audience counting device – a precursor of today's "people meter" – to give CBS an early competitive edge with sponsors. But his biggest contributions to the industry and the society it served were his staunch efforts to defend freedom of speech whenever it was assailed and assuring that the new medium of television fulfilled its responsibility to broadcast in the public interest.

Stanton's most public fight for free speech came near the end of his tenure as president when he stood up to the U.S. government in a First Amendment battle that became a landmark case. He defied a U.S. House of Representatives subpoena for outtakes of a CBS News documentary in a move that solidified his status as the leading defender of broadcast journalism's equal status with print under the First Amendment. Likening them to print reporters' notebooks, he told the full U.S. House in front of a television audience that he would not turn over outtakes from "CBS Reports: 'The Selling of the Pentagon,'" a 1971 report that exposed a massive propaganda campaign by the Pentagon to foster support for the Vietnam War. It was a risk that could have put him behind bars, but after two days of hearings, House members in a roll call voted 226-181 not to hold CBS and its president in contempt. Stanton was cited with his fifth Peabody award for this vigorous defense of broadcast journalism.

"Like the CBS Eye logo that he unveiled in 1951, Frank Stanton was an American icon, recognized and

Return to Index

respected around the world," said Leslie Moonves, the President and Chief Executive Officer of CBS.

"Dr. Stanton was a broadcaster who established CBS's long history of programming innovation, dedication to news and to progress in the communities we serve. He was a communicator, the standard bearer for our industry in any fight against limiting a free press or the flow of information. He was an educator, and never lost his zeal for the preservation and strengthening of the democratic process.

"Frank will be sorely missed by his friends and colleagues, and those of use who have succeeded him at CBS, but his legacy will always be with us -- in our nation, in our company and in our hearts."

"Broadcast journalism thrives today, to a large extent, because Frank Stanton defended our rights under the First Amendment and guided us through the most dangerous crisis this industry ever faced," said Sean McManus, President, CBS News and Sports. "This alone assures his place in history, but this was just one of many crucial triumphs, the benefits of which broadcasting and the society it serves continue to enjoy. That Frank Stanton worked at CBS should make us all immensely proud."

Stanton had several run-ins with Washington over the years, but the one in 1959 over the quiz show scandals established him as television's leading statesman. The allegations of staging in America's popular game programs attracted the glare of government and prompted him to take drastic measures to convince politicians that the new medium could police itself. Stanton investigated, took responsibility for problems, and then, risking lawsuits from sponsors, canceled all of CBS' high-stakes and high-profit game shows. He also demanded that everything broadcast by CBS News be exactly as it purported to be, laying down the foundation for the CBS News Standards still followed today. The industry avoided government control, mostly because Stanton prosecuted the issue so vehemently himself.

Even while Stanton was establishing the new CBS News documentary series "CBS Reports," there was still skepticism about television promulgated by critics like the Federal Communications Commission's Newton Minnow, who called the medium "a vast wasteland." Stanton proved them wrong by initiating the first televised presidential debates -- the famous Nixon-Kennedy "Great Debates" of 1960 -- winning a Peabody Award for his efforts. He also surprised critics when he allowed CBS News to broadcast commercial-free for four straight days after Kennedy's assassination in 1963. The bold move peaked the ire of profit-minded competitors who may have felt shame later, when the CBS News coverage was credited with helping to hold the nation together.

Later in the 1960s, he withstood intense pressure from the Johnson White House for allowing CBS News to report critically on the Vietnam War, including Morley Safer's groundbreaking report in 1965 showing soldiers burning the huts of Vietnamese villagers.

Taking stands was nothing new for Stanton, who went public on broadcasting issues soon after becoming CBS president. He spoke out in 1948 for the right of broadcasters to present editorials. In 1967, he supported public television in testimony -- and in deed -- making a $1 million CBS contribution to the Corporation for Public Broadcasting. He fought a 1969 effort by a U.S. senator to have all television entertainment cleared by the National Association of Broadcasters.

Throughout Stanton's years at the head of CBS, the Tiffany Network dominated the primetime three-network television landscape. An average of 58 percent of each season's Nielsen top 10 programs from

1950 to 1973 were broadcast on CBS. Stanton's evening line-up success began on the legendary talents of Lucille Ball, Arthur Godfrey, and Jackie Gleason and continued into the '60s and early '70s with Red Skelton, James Arness and Andy Griffith. Chairman Paley was always known for his involvement with CBS' talent, but it was Stanton who signed Gleason and Ball. He is also credited with persuading Godfrey to join CBS in New York.

"Stanton recognized the role that broadcast news would play in providing the American public with the essential news of what its governments were doing in its name. He faced jail to challenge a federal suit brought by Congress demanding the news sources that CBS had used in a news documentary. But Stanton's unflagging courage and the overwhelming justice of the case won the day and considerably strengthened the free press rights of broadcast as well as print news sources. Frank Stanton lived and died and a genuine hero of the fourth estate."

Don Hewitt, news pioneer and 60 MINUTES creator who witnessed Stanton in his heyday, said "If broadcasting had a patron saint, it would be Frank Stanton. If CBS is the Tiffany Network, Frank Stanton deserves the lion's share of the credit."

Stanton, always referred to as "Dr." for the Ph.D. he earned in psychology from Ohio State, joined CBS in the Research Department shortly after receiving that degree in 1935. His groundbreaking work in audience research techniques made CBS a leader in the field and him director of the department in 1938, which he helped build to over 100 staffers. He was promoted to director of advertising in 1941, but soon became involved in all aspects of CBS. During World War II, he consulted for the Office of War Information, the Secretary of War and the Department of the Navy, and at the same time, served as CBS vice president and general executive. In 1945, he was elected a director of CBS and made general manager; the next year he was named president and chief operating officer when Paley was elected chairman. Stanton served in that position until 1971, when he was named vice chairman. He left CBS in 1973 at the then-mandatory retirement age of 65.

Born in Muskegon, Mich., on March 20, 1908, Stanton grew up in Dayton, Ohio, and attended Ohio Wesleyan University as a pre-medical student. He put himself through college by working in the advertising department of a Dayton retailer. He was graduated from Wesleyan with a B.A. in 1930 and taught typography for a year at a trade school before accepting an offer from Ohio State to teach psychology. There he earned his masters and doctorate, both in psychology, before resigning his post to join CBS in October 1935. He married the former Ruth Stephenson in 1931; she died in 1992.

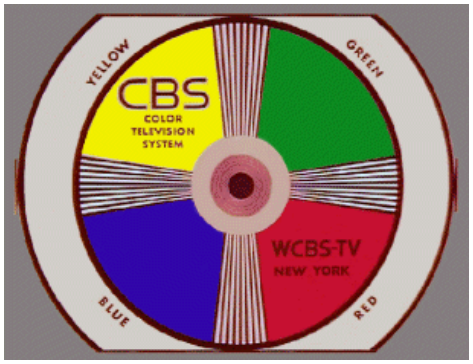
Stanton was recognized with awards from many organizations, several for his defense of press freedom. Indeed, an internal 1965 CBS document used eight pages to enumerate just the awards bestowed on him over a 12-year period. Some of the more recent and noteworthy include: lifetime achievement awards from New York Academy of Television Arts and Sciences and the Deadline Club ('99); elected to the Advertising Hall of Fame ('98), Hall of Fame of the Academy of Television Arts and Sciences ('86) and Radio Hall of Fame ('90); and First Amendment Award of the Radio and Television News Directors Association ('93). Stanton was the only person besides Cronkite to win the RTNDA's most prestigious honor, the Paul White Award, twice ('57 and '71). He also won five Peabody awards for excellence in broadcasting and two Emmys.

Stanton pursued a myriad of opportunities in business, education, government and the arts when he left CBS. His affiliations were numerous and include: chairman of the American Red Cross (1973-79); overseer of Harvard College (1978-84); member of the President's Committee on the Arts and Humanities (1983-90); chairman of the U.S. Advisory Commission on Information (1964-73); founding chairman and, then, trustee of the Center for Advanced Study in the Behavioral Sciences in Stanford, Calif. (1953-70); trustee of the Museum of Broadcasting; and chairman of the Rand Corporation (1961-67).

His corporate directorships included: CBS, Atlantic-Richfield, American Electric Power, Pan American Airlines, The Interpublic Group of Companies, New York Life, The (London) Observer, and the International Herald Tribune. Stanton was a trustee or director of the Carnegie Institution of Washington; Educational Broadcasting Corp.; Lincoln Center for the Performing Arts; President's (Bush) Committee on the Arts and Humanities; the Rockefeller Foundation; and the American Association for the Advancement of Science.

A special citation from the National Association of Broadcasters, given to Stanton along with a leather-bound set of the papers of James Madison, who he quoted in his famous stand in front of the U.S. House, sums up Stanton's critical contribution: "For his leadership and his wisdom and his devotion to the objectives of the American democratic society; for his tenacity, boldness and courage in furthering broadcasting's capacity to achieve those objectives; for his uncompromising rejection of encroachments on freedom and his determination to advance the public interest…"

Stanton had no immediate survivors.



Parting Shots

By Larry Bloomfield

Two things: First, we here at Tech-Notes commend the dozens of sponsors who have introduced into legislation to make the Internet Tax Moratorium permanent. Led by Representatives Eshoo and Goodlatte, this bill will protect consumers from new and burdensome state and local taxes on Internet services. Maintaining a tax-free environment for broadband services allows cable and other broadband providers to provide more affordable high-speed Internet service to millions more consumers in an environment unfettered by unnecessary taxation. We urge Congress to enact a permanent moratorium on Internet taxes before the temporary ban expires later this year. We also thank the National Cable Television Association for bring this to our attention.

Now own to my second rant for this edition: It would appear that there is a changing of attitudes toward things of value. Probably the most valuable thing in our industry is SPECTRUM. Without it, a broadcaster would be **nothing**: Just ask the guy who lost out in a bid for a station CP. And, the more SPECTRUM a broadcaster has, the more they can do their thing: Just ask the group owners who like to approach the 39% cap on ownership – they'd probably wished the cap was even higher.

In retrospect, remember when a group, be they network or otherwise, could only own five stations? Then it was raised to 7 and now it is 39% of the households in the US: a slightly different view on ownership.

Some broadcasters see the value of extending their prime coverage areas into places where their main transmitter is unable to reach and have elected to use translators to do that job to fill in their DMA. Exploring that concept further, I had one broadcaster in the Albuquerque/Santa Fe area (market #49) tell me that if it weren't for their translators, they'd be a market somewhere around #99. (To see all the market sizes are, click here.) I'm also of the understanding that the market #101, El Paso, TX, reaches over 250,000 of their viewers via translators.

Since a station's revenue is based on the number of households (eyes and/or ears) they can deliver to their advertisers, you can see why the ability to deliver signal as far and as wide as possible is very important, irrespective of how much spectrum it takes to do it. Just look at the translator network in the state of Utah.

There are ten states that have 300 or more TV translators in them and three of those have 600 or more: Alaska, Colorado and Utah. There are many states that approach, but don't go over that 300 mark. Compared to the 1,756 full power TV stations reported on the FCC's website as of 12/31/07 on the air, there are 4,518 licensed translators and 2,227 LPTV stations (some serving as translators) on the air. This is not to mention the 567 Class A TV stations, some of which are used as very powerful translators. Add to this the number of "slave" full powers that do nothing more than rebroadcast a parent company's program material and you'll uncover more full power stations that operate as what could be called pseudo-translators. (A few cases in point – one TV station in Eugene, OR feeds two full power stations, one licensed to Roseburg and the other licensed to Coos Bay and the same is true of the stations in Salt Lake City, UT feeding full power stations licensed to St. George – the list could go on.)

It's a no brainer to know that there are alternatives to FREE over the air television: Cable & Satellite, but you have to pay for them! In many places, cable uses the local translators to feed their subscribers, so translators play a major roll in keeping the numbers of "household penetration" up and remember that the "penetration, no matter how slight is sufficient for conviction" (remembrances of the UCMJ from back in my military days). There are places in Utah where the local cable company takes their feeds from third and fourth translator hops to serve their cliental. All this go to counting households and keeping the numbers as high as you can so a station can charge more for their commercial time. It's the way it's done.

With all the new portable/mobile services surfacing (ie: Verizon Wireless recently launched a broadcast TV service for cellphones in about 20 Midwestern and Western U.S. markets, charging $15 to $25 a month for the initial lineup from eight leading networks), it will be interesting to see how the rating services will be able to count heads or partial households when it comes to sweeps.

Stick with me – I'm going somewhere with all of this. In a recent financial trade journal, the story headline read: "Satellite TV Destined for Doom?" It would appear that partners with both Dish Network and DirecTV are considering their own methods of distribution of television content from "broadcasters." I put the term broadcasters in quotes as it would seem that the concept of FREE over the air is something that may go away in the distant future. Case in point: AT&T recently reiterating its intentions on sticking with IPTV for video. Add to that Liberty Media's asset swap for DirecTV entering an arduous and lengthy midpoint in Washington that could last for several months or more. What's left is a satellite TV sector limping through slower (and slowing still) subscriber growth rates and surviving an increasingly competitive market.

Here's my bone of contention. I'm the current president of the local translator association: West Lane Translators (WLT). We serve approximately twenty percent of the Eugene, OR viewing audience. As an engineer, I have been aware that the four licenses our non-profit organization owns (airing ABC, CBS, Fox & NBC) are on "out of core" channels (channels above 52) and we will have to move to "in core" channels. We've applied for them and they've been granted.

Shortly after we entered into this action, the FCC announced that translators, like their full power counter parts could have companion channels, we've decided to "flash cut" the new in core channels and ask the FCC for STAs of the out of core channels until Feb. 2009. In any event, we'll eventually have to make the new channels digital, no matter what.

Since the equipment associated with our licenses is owned and maintained by their respective content providers in Eugene, we would certainly expect them to come up with the equipment necessary to make this transition: this would include not just the new transmission equipment, but participation in a combiner and common antenna that would be mounted atop a new 240 foot tower to be erected by Sprint/Nextel as part of a long term rental/user agreement wherein the cellular companies will donate the new tower to WLT. (This new tower is 100 ft higher than our current tower.)

The problem that is rising its ugly head is that the stations are now crying that they don't want to belly up to the bar as they did with their main transmitters and fund this twenty percent of their viewing audience saying that sooner or later the two satellite services will carry their digital content and they won't need the translators. The questions are many: Will the satellite services carry all the digital content – standard def,

high def and the additional channels when multicasting? If they're anything like what we've seen with the cable companies, the answer is an unquestioned NO!

So the question is: If they don't with to go digital to twenty percent of their viewing audience, should we, as license holders offer these frequencies to other content providers, notifying the advertisers on those to be vacated translators that they should ask for a 20% deduction in the cost of their advertising due to the loss of coverage and household penetration?

So What do you think?

The opinions expressed herein are those of the individual authors and do not necessarily reflect the opinions or positions of their friends, employers, associates or publishers of the Tech-Notes. Material in this edition may be used with proper attribution and notification.

How to subscribe

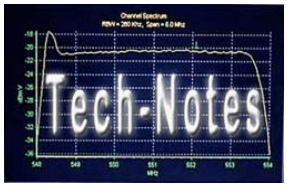
Tech-Notes are available two ways:

1. *Tech-Notes are available on our website in PDF (Portable Document File) format with pictures, drawings etc. These can be rather large files and are not recommended if you have dial-up service or travel.* Click Here *or go to* technotes-on@tech-notes.tv to subscribe. You will be notified when each edition is posted. (We no longer just send the Tech-Notes out as an attachement.)

To unsubscribe, Please visit our website and follow the directions: Click Here *or* *http://www.tech-notes.tv/Subscription/un-subscription.htm*

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

Return to Index



Thanks.