

The LPTV Report

News and Strategies for Community Television Broadcasting

Vol. 6, Issue 8

August 1991

CBA Petition On Its Way

—by Jacquelyn Biel

On August 13, the Federal Communications Commission began action on the Petition for Rule Making filed June 11 by the Community Broadcasters Association (see *LPTV Report*, June 1991, page 1, for the announcement and text of the Petition). The public release is the first step on the way to a rule making for the Petition which seeks to improve the regulatory status of LPTV stations that originate local programming. Comments are due September 13; reply comments, September 30.

CBA officials were pleased at the rapidity of the Commission's action. Said executive director John Kompas, "We're delighted that the FCC has recognized the
continued on page 9



Ted Tucker of K43CW in Tucson, AZ checks his station's "Blaster" antenna from Antenna Concepts.

The Gospel According To RGT Those Marvelous Antennas

—by Robert G. Truscott

Back about a hundred years ago, I was a member of a Toastmasters Club in Milwaukee. Those of you who are familiar with Toastmasters know that it is a self-improvement type of organization where members are required to write and deliver speeches before their peers, after which they are evaluated by those peers. On more than one occasion, I was accused by my evaluators of being too "preachy." They must have been right, because I still can't suppress the urge to do just that when, from my narrow perspective, there appears to be a need.

And so, brothers and sisters, I'm here to tell you that if ever there was an industry with need to be preached to, it's our own. It was never planned, it just happened. From an engineering point of view, it happened in a most irresponsible and chaotic manner, literally programming many stations for failure or mediocrity even before they received their initial construction permits.

Having said these things, I have arrived at the subject of today's sermon — namely, antennas and their use.

The Wonder of Antennas

An antenna is a wonderful device. It is the connection between your transmitter and the TV sets in your viewers' homes. It can deliver a beautiful picture that will encourage viewers to punch up your channel number periodically, or it can deliver a very bad picture that will encourage them never to punch your number again. It all depends upon how you "program" your antenna.

I use the word "program" because antennas can be likened to computers: computers are dumb, dumb, dumb; but they will respond accurately to the directions given them by their operators — which gave rise to that famous old saying, "Garbage in, garbage out."

Antennas are every bit as dumb as computers and will respond to your "programming" directions in the same man-

continued on page 16

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In Our View

August is a slow month. Congress is on vacation, and so are many of us.

So it's a good time maybe to leave LPTV issues for a while and share with you a very interesting article I came across recently.

It's entitled "Peak Performers vs. Workaholics" and was written by Charles A. Garfield for the Summer '91 issue of Northwestern Mutual Life's *Creative Living*, a quarterly magazine with some of the best "quality of life" articles around. Garfield is chairman of Performance Sciences Inc. in Palo Alto, CA.

The term "workaholic," as it is commonly used, is somewhat confusing. Workaholics are considered to be admirable, as long as they're working for a good cause — or for you. There is even a bit of heroism in the connotation; workaholics expend themselves — hurt themselves even — for the apparent benefit of someone or something else.

But Garfield makes a distinction between the self-destroying workaholic and the self-building peak performer.

• "Peak performers derive their motivation from commitment to a very personal set of goals."

While workaholics are motivated primarily by fear of failure and tend to avoid creative work in favor of details, peak performers "derive their motivation from a very personal and passionate commitment" which allows them to be replenished and nourished by their work, even if the hours are long.

• "Peak performers understand the need for systematic relaxation and reflection."

They view the times away from work as "sources of much creative effort," and they get away from the office much more than workaholics do. Garfield doesn't mention this, but I'd suspect that peak performers also know the efficiency of allowing the subconscious to work on a knotty problem rather than trying to force a solution consciously.

• "Peak performers are frequently deeply committed to some physical activity."

Garfield says that these people understand the innate connection between the mind and the body and care for their bodies so their minds can be most effective.

• "Peak performers develop and nurture strong family and friendship networks."

While workaholics work at the expense of friends and family, peak performers

work at building nourishing personal relationships.

• "Peak performers practice mental rehearsal."

They work through the details of an important event beforehand, trying to visualize the various possible courses the event might take.

This reminds me of something I read once about Aristotle Onassis: From his early days selling — cigars, was it? — in South America until he died a billionaire shipowner, whenever he had an important deal to make, Onassis rehearsed for it by imagining all the possible questions that might be asked or obstacles that might appear, and then preparing answers and counter-strategies ahead of time. He was rarely caught off-guard in a deal.

• "Peak performers challenge popular notions and their own limiting beliefs."

Garfield says, "They are fond of 'turning the world on its head,'" and they challenge popular opinion, trusting instead in their own "personal cues."

• "Peak performers develop the 'core competencies' necessary for excellence and success in their fields."

• "Peak performers have a keen sense of the use of time."

They prioritize activities and tasks according to their personal goals, delegating when possible and spending most of their time on "important activities that can be done only by the peak performer."

• "Peak performers know how to commit."

Peak performers, says Garfield, "are dreamers and bold do-ers." They take risks, "not foolish risks, not uninformed risks, but risks in the direction of higher levels of performance and productivity. They are not paralyzed by perfectionism; rather, they tend to displace indecision and fear of failure by assessing 'the worst thing that could possibly happen.' They also tolerate chaos and ambiguity (Garfield's emphasis)," realizing that a sensitivity to changing conditions and the ability to adapt to them is important in a world of change.

Well, I have probably completely over-extended whatever quotation privileges I have as an editor. But this article was too good not to share. If you want to read the original, you can get a copy of *Creative Living* from any NML agent, or by writing NML, 720 East Wisconsin Avenue, Milwaukee, WI 53202.

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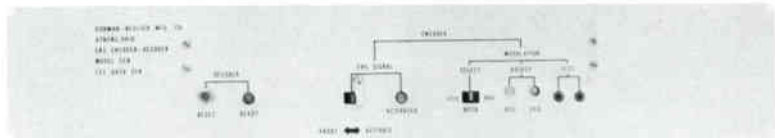
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Creative Local Programming Helps Idaho Station Spread The Word

—by John Scott Lewinski

In Lewiston, ID, community broadcasting may be scoring points with the divine! Channel 66 (K66CE), in northwest Idaho near the Washington state border, devotes its 24-hour broadcast day to local, regional, and national religious programming. The station, which signed on in April 1984, reaches about 50,000 people in 17,000 households, said general

manager David Tucker during a telephone interview earlier this month; and it will reach an additional 30,000 people in 5,000 homes to the south of Lewiston when it launches its repeater station, K39CT.

"Our programming is mainly religious," Tucker said. "We receive some programming from national networks — Keystone Inspirational, Home Entertainment, and

Trinity — and we sell time to regional and local broadcasters."

With its combined network and regional suppliers, Channel 66 airs a great deal of news and magazine-style programs. But Tucker credits the station's home-grown, local shows for generating audience.

Local Shows Strong

Three days a week, the station airs "Route 66," a news program of solely community interest. The show has highlighted some in-state celebrities, including the governor and representatives of the region's most important business, the timber industry.

Every Sunday, a church service from one of the area congregations is aired. And "Ministry Minutes" is a regular 15-minute program featuring thoughts from any one of the community's pastors. Most of the pastors lack the funds to pay production costs, so Tucker has found another way to allow them their time.



David Tucker,
general manager,
Channel 66,
Lewiston, ID.

"The pastors bring in volunteers to run the equipment and produce the program," Tucker said. "We train the volunteers ourselves and let them produce the 15-minute shows. The system helps the station because once the volunteers get involved, they keep on supporting us."

The station also produces a 15-minute weekly program of local gospel talent. The show includes three gospel videos of about five minutes each. And another 15-minute program, "Main Street Youth," discusses ideas and issues important to young people from churches around the area. The program's teen host is able to bring a lively, youthful point of view to the issues.

Finally, Channel 66 does a mailbox-format program that features letters from viewers and previews the next week's programs, special events, and guests.

Besides all these shows for its own air, Channel 66 also produces "Straight

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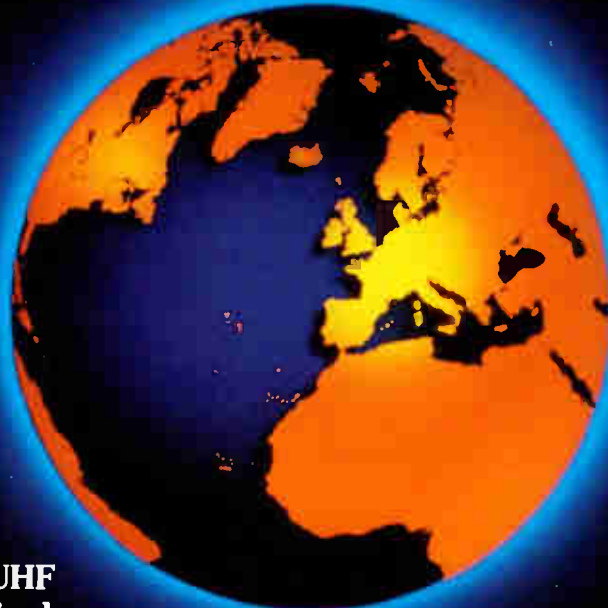
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Streetwork," which concerns groups with dependencies, for another community station, K49CN in Richland, WA.

Market Competition

Its local programming is the best way for Channel 66 to compete in its market, Tucker said. The area is served by a CBS affiliate as well as four network translator signals out of Spokane. Three PBS signals

also reach Lewiston.

"What we try to do is get everybody in town to watch us once a week," Tucker explained. "We can't compete with the networks, but if we can get them to watch once a week, we think that's doing pretty well and can lead to greater success down the road."

He added that one way to increase the competitiveness of his station would be

to gain access to the area's cable service—something he has been trying to do for some time now.

"This area has cable service carrying 30 channels with commercial advertising," Tucker said. "We have been promised a spot, but we haven't got one yet."

"Our relations with the cable system have been pretty good. They told us they didn't have room for us, but that they would expand to include us."

But, according to Tucker, expansion decisions are made higher up in the cable's ownership, and for now, another station is carried in the slot Channel 66 was promised.

"We're hoping for the best," Tucker said. "We're not going to stop trying to get on the cable system."

Ad Revenues Rising

During its early days, Channel 66 was assisted by area churches. One parish allowed the station to call one of its old buildings home, and the station still uses that building. The churches also helped with the payroll.

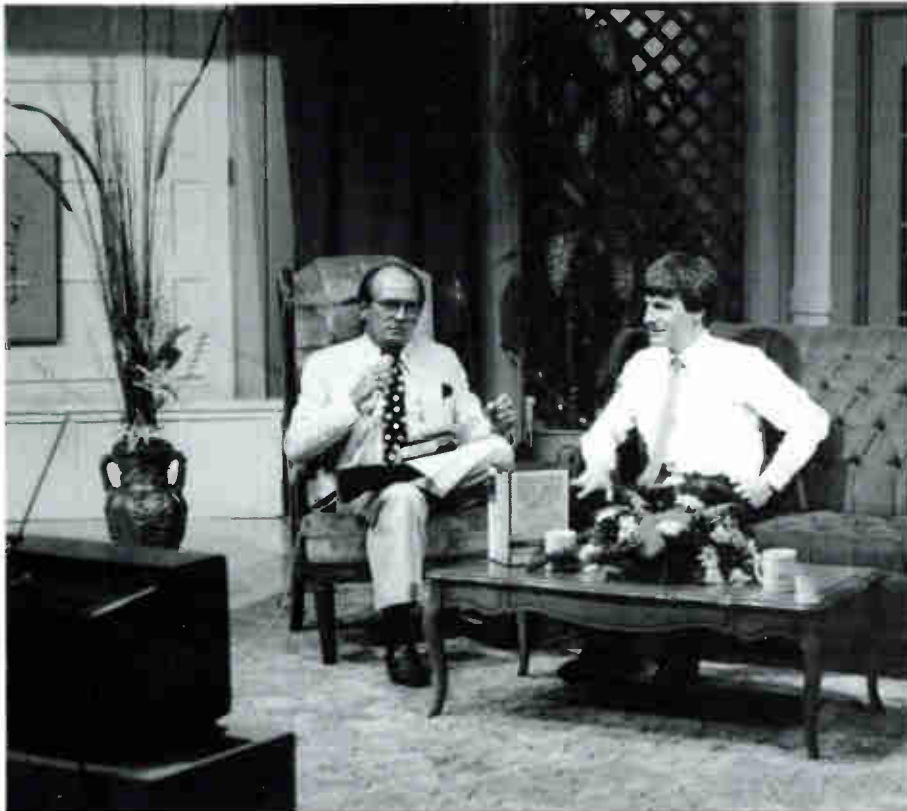
Start-up costs were about \$110,000, Tucker said, and the present monthly operating budget is around \$4,300.

"We spend some months in the black and some in the red. It's sort of up and down, so we just about break even."

To raise its money, Tucker said his station relies on advertising revenue, paid program time from regional religious broadcasters, and a yearly community telethon.

"One of our main priorities now is to try to expand our advertising sales and make enough money to really make this thing go profitably," he added.

To that end, the station has taken unusual care to stay in touch with its audi-



On the set of the Channel 66 "Summer Telethon": Rev. Raymond Tucker, station president (l), and David Tucker, general manager (r).



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ence, performing two viewer surveys every year.

Thorough Audience Research

"We're very thorough in this research," Tucker said. "We try to find out what's being watched, what's not being watched, and why."

And if ministries can't pay for program time, Tucker taps them for promos. "Some ministries won't pay for their time because they can't," he said. "So all the people who do those shows and have them aired must do station promo ads:

"I'm so-and-so from such- and-such parish, and I support Channel 66."

With all of his creative methods for generating revenues and viewership, Tucker has very basic advice for anyone else in the community broadcasting environment.

"If you want to be successful, you must be part of the community. In this day and age, if a community broadcaster is not part of his or her community, they just don't have a chance."

As for Channel 66, it might just have the extra advantage of a little help from upstairs, too.

CBP

Future Of Broadcast TV Dim, Says FCC Report

But Study Omits LPTV Industry's Prospects

—by Jacquelyn Biel

The future belongs to the viewer. That is the ultimate conclusion of "Broadcast Television in a Multichannel Marketplace," a working paper on the future of broadcast TV released in June by the Federal Communications Commission's Office of Plans and Policy.

The economic and technological changes of the past ten years have substantially increased the number of video choices, making it possible for viewers to signal their preferences far more precisely than ever before, says the study. In response, programmers are offering ever more targeted programming, and advertisers have gone from mass market advertising to increasingly targeted demographic group buys.

"These trends will continue producing a diverse, viewer-centered video marketplace. Broadcast television will have its place in this new world but as one player among many," the study asserts.

The study analyzed the growing amount of video programming available to the public since 1975 — new program networks, a 50% increase in the number of full power stations, and the introduction of home satellite dishes and VCR's which now serve 3% and 69% of homes, respectively.

And it concluded that free, over-the-air television is in an "irreversible" decline that will continue into the next century. Small market stations, UHF independents, and weak independents in larger markets will find it increasingly tough to compete and "some are likely to go dark," according to the study.

LPTV Stations Not Studied

The study, which was prepared by Florence Setzer and Jonathan Levy of the OPP staff, does not address the impact of the LPTV industry on the television marketplace since its birth in 1980, or its likely effect in the next decade.

During a telephone interview, Setzer said that when preparing the report, she and Levy "did not think of considering LPTV stations explicitly." However, she hypothesized that "the fragmentation of the marketplace may favor [LPTV stations]. They appear to be comparable to cable television channels in their economics."

During the next decade, television broadcasters will face increasing compe-

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tition from cable programming, home satellite dish systems, and possibly direct broadcast satellite (DBS). Home dishes and DBS, specifically, not only will offer even more viewing options, but also are likely to exert competitive pressure on cable, resulting in lower cable rates and improved service.

Large market full power stations will probably remain profitable, although they may scale down on local programming — mostly news and public affairs. "Overall, by the end of the decade, fewer broadcast television stations will serve a shrunken, but nevertheless substantial, audience."

Network Audience Erosion To Continue

Major network audiences will continue to erode, but at a slower rate than in the past decade. The networks may shore up their declining revenues by supplying directly to cable or other media rather than to broadcast affiliates.

Video advertising will shift toward cable and national syndication, continuing its trend away from network and national spot ads and, consequently, further eroding broadcast television's share of ad revenues.

The ultimate result of these competitive changes, the authors speculate, may be a society of viewer haves and have-nots — those who can afford cable or other pay services, and those who cannot.

But the technological development with the greatest impact on the video marketplace, predicts the study, will be digital video signal compression — which will not only increase the number of programming outlets available, but will also provide "time diversity," that is, allow a program to be shown on several channels and/or at multiple times so that viewers have a greater choice of times to watch it.

The authors recommend further broadcast deregulation to allow broadcast television stations to compete more easily with other video providers. CBP

CBA Petition

continued from front page

value of the local programming being done by many community stations and that the Commission is concerned enough to request public comment on how to improve community broadcasting across this country."

D. J. Everett, III, CBA president, was also pleased: "The Petition deals with the problems that our members have told us exist in the industry. We hope that all CBA members — and non-members — will file comments in support of the Petition."

After comments are filed, the Commission will formulate and release a Notice of Proposed Rulemaking. How soon that happens will depend on the number of comments the Commission receives, said

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CBA general counsel Peter Tannenwald.

Sherwin Grossman, a CBA director and permittee of an LPTV station in Miami, FL, urged CBA members to support the Petition with letters and — if possible — personal visits to FCC officials and Congressional representatives in Washington.

"I'd like to see two people each week go to Washington," said Grossman, who personally financed the initial draft of the Petition and has already spent much time lobbying for it in Washington. "When you walk into a Senator's or Congressman's office and see their staff, that means more in getting your word across than any number of letters."

At Kompas's direction, letters from the CBA were sent in June to all White House communications policy makers requesting their support and asking them to urge the FCC to act quickly. Responses were received from, among others, Janice Obuchowski, assistant secretary for communications and information in the Department of Commerce, and the office of Vice President Dan Quayle, who chairs the President's Council on Competitiveness. The Council is presently working on a report identifying regulatory barriers in the communications industry. CBP

Pry Resigns As CBA Director

Citing personal reasons, James W. Pry, III has sold his interest in Allonas Communications, licensee of W22AE and W54AF in Bucyrus, OH, and has resigned from the Community Broadcasters Association board of directors.



Pry was elected a CBA director last November and has been an active CBA member for several years. Last year, he was instrumental in persuading Congressman Mike Oxley (R-OH) to co-sponsor, with Rep. Jim Slattery (D-KS), the amendment to HR-5267 directing the FCC to study the feasibility of must carry for community LPTV stations (*LPTV Report*, August 1990, page 1).

The Bucyrus stations are among the oldest operating LPTV stations, having signed on the air in 1984 and 1986, respectively. CBP

"They do what they say they'll do."

Larry Boyd is the engineer for LPTV channel 57, serving Crawford County, Ill. Their BEXT 1000W transmitter has been on the air since January.

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Getting Good Coverage

Some Tips On Antenna Engineering

— by Warren L. Trumbly and Don Garlick

As an LPTV broadcaster, you want to deliver the best possible picture to the most viewers in your market. This optimum coverage is primarily a function of four factors involving the transmitting antenna: 1) location, 2) height, 3) horizontal and vertical patterns, and 4) effective radiated power (ERP).

• **Antenna Location:** Deciding where to put your antenna is easy. Find out where the other TV transmitting antennas in your area are located, and then mount your station's antenna in the same place. The viewers' receiving antennas are already pointed toward the existing antenna site, and they will be able to receive your signal more easily if your transmissions are also originating from that site.

• **Antenna Height:** LPTV signal coverage is strongly affected by obstacles in or near the line of sight between the transmitting and receiving antennas. Ideally, your LPTV transmitting antenna should be mounted on an elevation such as a nearby hill, a tall building, or an existing tower in

order to obtain a clear path to the viewers' receiving antennas.

Four to five hundred feet of elevation above the coverage area is minimum for UHF. This should clear most obstacles in the propagation path. Time spent looking at your propagation path is time well spent.

• **Antenna Pattern:** The transmitting antenna radiates a signal in three dimensions. We view this pattern by looking at two "slices," called azimuth (horizontal) and elevation (vertical) patterns. Understanding these patterns is a key element in good coverage, so let's look at some simple analogies to see how these patterns are related to gain.

Picture a doughnut lying on the table with a very small hole in the center and a matchstick in the hole. The matchstick represents the antenna; the doughnut represents the pattern. Imagine a knife cutting downward through the matchstick and doughnut to produce a vertical slice through the doughnut. This slice, viewed from the center, would look like a figure eight lying on its side. The figure eight shape represents the vertical, or elevation, pattern of that particular antenna.

Now, using another doughnut, we'll cut a slice parallel with the table. This horizontal slice represents the azimuth, or horizontal pattern. Viewed from above, the slice would look like a circle. This circle represents an omnidirectional pattern.

Now let's eat the doughnut (it was getting messy anyway) and use a balloon shaped like a doughnut and filled with water. We choose water rather than air because air will compress and water won't. The laws of physics tell us that an antenna cannot amplify a transmitted signal. However, the water in the balloon helps us see that signal (power) can be redirected in order to achieve gain.

By placing a flat object (say, a dinner plate) on the water balloon and pressing down, we can make the balloon spread outward, and the pattern larger. This spread corresponds to antenna gain. (We avoid the physical problem of drawing larger and larger patterns to represent increases in gain by drawing the patterns the same size but labeling the increased gain on the drawings.)

On the antenna itself, greater gain is achieved by adding more bays to the antenna system.

If we were able to fold the water balloon in half and press down just as hard, we would see the pattern expand even more. But this time, the pattern covers only half a circle. In other words, we have taken the

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COLORADO	20	32
CONNECTICUT	2	5
DELAWARE	1	1
WASHINGTON, DC	2	0
FLORIDA	48	125
GEORGIA	20	31
HAWAII	3	33
IDAHO	19	25
ILLINOIS	12	36
INDIANA	16	24
IOWA	13	31
KANSAS	11	28
KENTUCKY	13	33
LOUISIANA	17	41
MAINE	8	16
MARYLAND	2	8
MASSACHUSETTS	8	14
MICHIGAN	12	24
MINNESOTA	47	39
MISSISSIPPI	12	21
MISSOURI	20	25
MONTANA	30	36
NEBRASKA	4	8
NEVADA	22	20
NEW HAMPSHIRE	3	4
NEW JERSEY	3	13
NEW MEXICO	15	35
NEW YORK	31	42
NORTH CAROLINA	13	31
NORTH DAKOTA	9	12
OHIO	23	45
OKLAHOMA	22	30
OREGON	25	30
PENNSYLVANIA	17	54
RHODE ISLAND	0	2
SOUTH CAROLINA	3	20
SOUTH DAKOTA	8	17
TENNESSEE	31	36
TEXAS	63	100
UTAH	20	8
VERMONT	1	8
VIRGINIA	9	23
WASHINGTON	17	23
WEST VIRGINIA	1	8
WISCONSIN	16	14
WYOMING	25	17
GUAM	1	0
PUERTO RICO	6	7
VIRGIN ISLANDS	1	2

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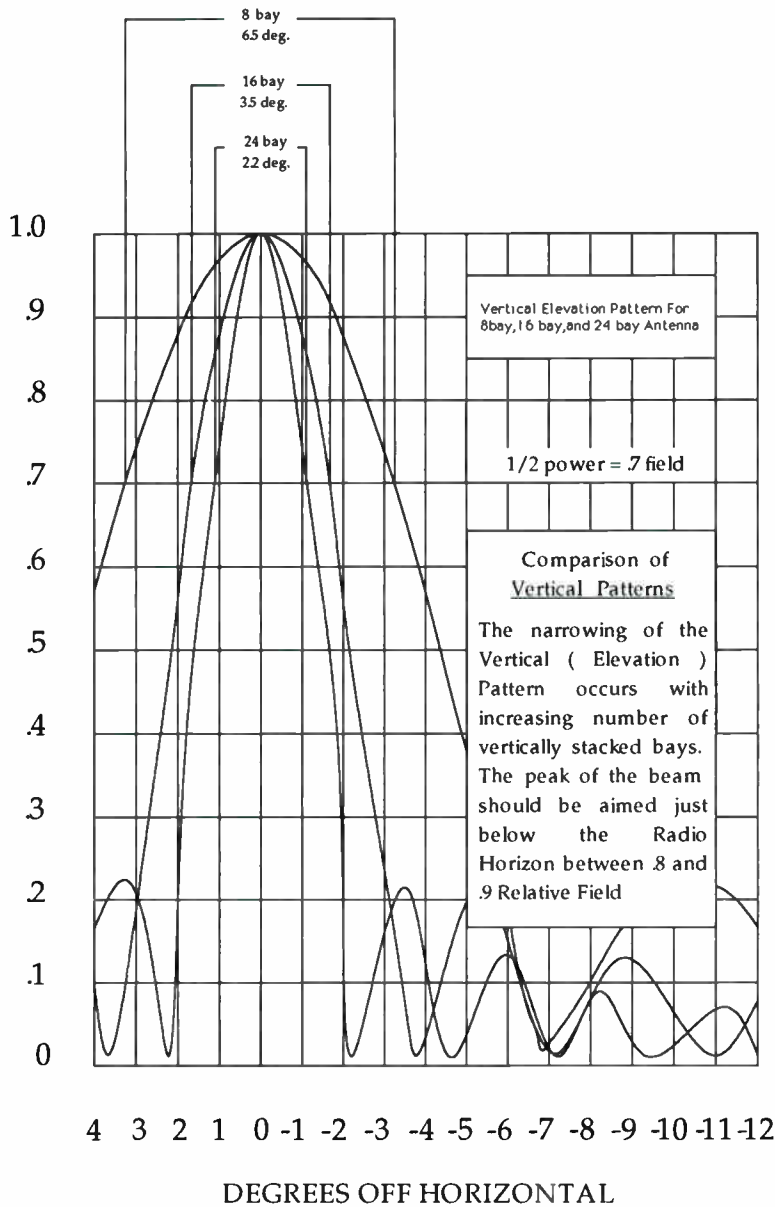
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power from one side of the circle and redirected it to the other side of the circle.

Directional antennas use the same idea to direct the power to your LPTV market. If we folded the balloon one more time (the balloon is now in quarters), we would have an even greater increase in gain. However, caution must be exercised with either of these approaches to increased gain. Carried to excess they will cause coverage problems.

Beam tilt means bending the pattern downward below the horizon. If your transmitting antenna site is well above your market area, you could be putting most of your power over the heads of your viewers — and their receiving antennas — unless you use beam tilt.

Null fill is used to fill any gaps in coverage in the area close to the transmitter site where the angle down from the horizon is large. The greater the gain of the antenna, the more this should be considered.

The antenna pattern should be chosen based on what will provide the strongest signal to the largest number of homes in the market area. In addition to providing standard (off-the-shelf) patterns, an antenna manufacturer should be able to custom design a pattern that fits your LPTV station's market and gets maximum signal to the homes in your coverage area.

• **Effective Radiated Power (ERP):** A broadcast station's effective radiated power (ERP) is directly related to both the azimuth and the elevation patterns of your antenna (the antenna gain). The transmitter power multiplied by antenna gain multiplied by transmission line efficiency gives the ERP.

$$(\text{Transmitter Power}) \times (\text{Antenna Gain}) \times (\text{Line Efficiency}) = \text{ERP}$$

Because the ERP at the radio horizon isn't always the same as the ERP at your

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viewers' houses, downward beam tilt may help to direct the signal to your viewers. Except in very small market areas, it's worthwhile to use the maximum power permitted. This provides the best possible signal to your viewers but generally will not extend the boundaries of your coverage area.

Due to the nature of LPTV rules, the location and/or height of the transmitting antenna may not easily be controlled, but antenna pattern choices and the ERP allow great flexibility in market coverage.

Improving An Existing System

But what if you have already received a construction permit or license, and you're locked into a set of antenna specifications? Let's say that you want to change your antenna system in order to boost signal strength and reception quality. If you are working with an existing license or CP, you will also want to stay within the "minor modification" rules of the FCC so that you don't have to wait for a window to file.

It is possible to accomplish this and at the same time increase the ERP *below* the radio horizon as well as implement circular polarization with very rewarding results. Here's how.

...With Beam Tilt

The FCC uses the signal radiated at the *radio horizon* in horizontal polarization to calculate the effective radiated power (ERP) of broadcast stations. We can use beam tilt to move the peak ERP down from the radio horizon to ensure that the ERP at the horizon or on any radial does not exceed that specified on the original license or CP.

For example, you could change from a specified 8-bay to a 16-bay antenna, doubling the ERP rating. Then, using electrical beam tilt, you can redirect the power downward from the radio horizon, resulting in no change in ERP or coverage area. The only difference is that your viewers now receive twice the signal strength that they did before.

...With Circular Polarization

Adding vertically polarized radiation to the horizontally polarized signal with the right phase relationship produces circular polarization. The circularly polarized signal has a complete 360° rotation of polarization — that is, the received signal is both vertically and horizontally polarized or polarized on any diagonal.

(HPOL) + (VPOL) with 90° Phase Shift =
Circular Polarization

Circular polarization penetrates obstacles far better than the standard horizontally polarized signal. This means that it is

better able to deliver a solid, stable picture to indoor loop or monopole receiving antennas. The loop antenna receives twice the signal to pass on to the receiver with the circularly polarized signal as it does with the horizontally polarized signal only, and the orientation of the loop is far less critical.

An added bonus to circular polarization is that a station can double its signal density with a only minor modification to its CP. This can be accomplished in one of two ways, or both.

The first method is to change to a 2 kW transmitter. With a circularly polarized signal, 1 kW is used for HPOL and 1 kW for VPOL. Since the FCC uses only horizontal polarization for purposes of ERP rating, the rating is still 1 kW. Admittedly, economic considerations may prohibit the capital and operating outlay for a 2 kW transmitter.

The second approach may be more cost effective, depending upon your circumstances, because it does not involve changing the transmitter. Instead, you would switch from an 8-bay antenna to a 16-bay circularly polarized antenna. Again, since half of the power is converted to VPOL, your ERP rating remains the same as with the 8-bay antenna.

Ideally, you would combine optimum transmitter power, a doubled number of antenna bays producing a circularly polarized signal, and electrical beam tilt to focus that signal on the homes in your market. It is possible, by using all of these methods, to produce a major increase in signal intensity in your coverage area. Coverage is the foundation of economic success in LPTV. Therefore, the homes in your market must be reached with the best possible signal utilizing both the optimal propagation path and sufficient power density.

Prepare Applications Carefully

What we have just discussed are the most important fundamentals of good engineering for the LPTV broadcast station. Selecting the appropriate transmitting power and antenna specifications is vital to the success of your station. The higher the signal density at the homes in the market area (not at the radio horizon), the stronger the received signal, and the better your station's image in the community you serve.

If you are contemplating equipment changes, you will find the people at the FCC's LPTV Branch very informative. Minor changes, such as the transmitter or antenna changes discussed in this article, can usually be accomplished very quickly and easily, but be careful to be thorough in your preparation of the tabulations and engineering exhibits in your minor change application.

Many equipment manufacturers are happy to help with minor change applica-

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tions as a courtesy to those using their products.

Warren L. Trumbly is vice president of marketing for Antenna Concepts, Inc., a firm that designs, manufactures and sells broadcast transmitting antennas for both domestic and foreign customers.

After tens years as manager of engineering for Scala Electronic Corp., Don Garlick is now an engineering consultant. He has recently developed a new computer program for choosing antenna patterns. 

Channelmatic Opens Eastern Region Customer Service Center

Channelmatic, Inc. has opened an Eastern Region Technical Operation Center in Jonesboro, AR. The Center is headed by Michael Neal, who has worked with Channelmatic as a customer service engineer for the past four years and was honored as Channelmatic's 1990 Employee of the Year.

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What's Going On

September 25-28, 1991. Radio-Television News Directors Association Annual Convention. Denver, CO. *Contact:* (202) 659-6510.

October 3-6, 1991. Society of Broadcast Engineers National Convention. Houston, TX. *Contact:* (317) 842-0836.

October 10-13, 1991. Women in Communications National Professional Conference. Atlanta, GA. *Contact:* (703) 528-4200.

October 15-16, 1991. Broadcast Cable Credit Association's 26th Credit & Collection Seminar. Palmer House Hotel, Chicago, IL. *Contact:* Mary A. Ghiselli, (708) 827-9330.

October 26-30, 1991. Society of Motion Picture and Television Engineers Annual Conference. Los Angeles. *Contact:* Ann Cocchia, (914) 761-1100.

October 27-30, 1991. Association of National Advertisers 82nd Annual Meeting & Business Conference. Phoenix, AZ. *Contact:* Cynthia Roberts, Meeting Manager, (212) 697-5950.

November 6-8, 1991. 13th Annual Billboard Music Video Conference & Awards. Hotel Sofitel — Ma Maison, Los Angeles, CA. *Contact:* Melissa Subatch, (212) 536-5018.

November 22, 1991. University Network (U-NET) Annual Affiliates Conference. Brown University, Providence, RI. *Contact:* (401) 863-2225.

November 22-24, 1991. Fourth Annual National Conference of College Broadcasters, Annual Convention of the National Association of College Broadcasters (Trade Expo, November 23-24). Brown University, Providence, RI. *Contact:* (401) 863-2225.

November 23-25, 1991. Community Broadcasters Association Fourth Annual LPTV Conference & Exposition. The Riviera, Las Vegas, NV. (1992 CBA Conference: November 20-22, also at The Riviera.) *Contact:* John Kompas, (414) 783-5977, or Eddie Barker, (800) 225-8183.

December 11-13, 1991. Private Cable Show. Westin Resort, Hilton Head Island, SC. *Contact:* (713) 342-9655.

January 8-10, 1992. Association of Independent Television Stations Annual Convention. San Francisco, CA. *Contact:* (202) 887-1970.

January 20-24, 1992. NATPE International Annual Program Conference. New Orleans, LA. 1993 Conference, January 26-29, San Francisco, CA. *Contact:* Nick Orfanopoulos, Conference Director, (213) 282-8801.

January 25-29, 1992. National Religious Broadcasters' 49th Annual Convention. Sheraton Washington Hotel, Washington, DC. *Contact:* E. Brandt Gustavson, Executive Director, (201) 428-5400.

February 7-8, 1992. Society of Motion Picture and Television Engineers 26th Annual Television Conference. Tutorial on new computer technologies, February 6. Westin St. Francis, San Francisco, CA. *Contact:* Ann Cocchia, (914) 761-1100.

February 18-19, 1992. Broadcast Cable Credit Association's 27th Credit & Collection Seminar. Town & Country Hotel, San Diego, CA. *Contact:* Mary A. Ghiselli, (708) 827-9330.

February 29-March 2, 1992. ShowBiz Expo West. Los Angeles Convention Center. *Contact:* Live Time, Inc., (213) 668-1811.

April 13-16, 1992. National Association of Broadcasters Annual Convention. Las Vegas, NV. 1993 Convention, April 19-22, Las Vegas. *Contact:* (202) 429-5356.

April 22-24, 1992. Broadcast Cable Financial Management Association/Broadcast Cable Credit Association Annual Conference. The New York Hilton, New York City. 1993 Conference, April 28-30, Lake Buena Vista, FL. 1994 Conference, April 20-22, Town & Country Hotel, San Diego, CA. *Contact:* Cathy Lynch, (708) 296-0200.

May 3-5, 1992. National Cable Television Association Annual Convention. Dallas, TX. 1993 Convention, June 6-9, San Francisco, CA. *Contact:* (202) 775-3669.

September 9-12, 1992. National Association of Broadcasters Annual Radio Convention. New Orleans, LA. *Contact:* (202) 429-5356.

September 23-26, 1992. Radio-Television News Directors Association Annual Convention. San Antonio, TX. *Contact:* (202) 659-6510.

October 14-17, 1992. Society of Broadcast Engineers National Convention. San Jose, CA. *Contact:* (317) 842-0836.

November 10-14, 1992. Society of Motion Picture and Television Engineers Annual Conference. Toronto. *Contact:* Ann Cocchia, (914) 761-1100.

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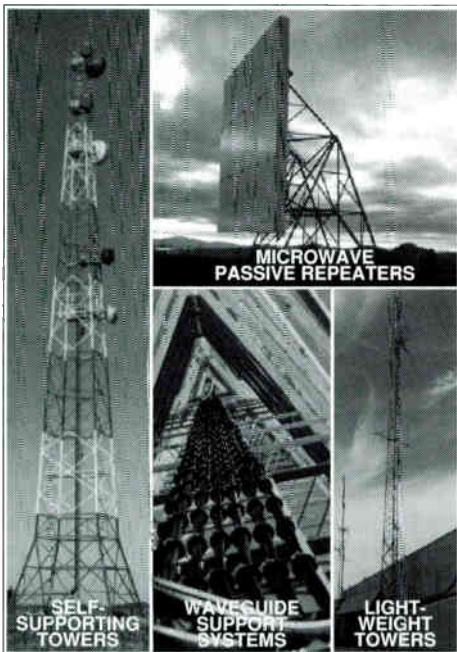
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Those Marvelous Antennas

continued from front page

ner. In other words, when planning your antenna system, you have to punch the right "button" or you're liable to get "garbage out."

So let's take a look at these "buttons." They are:

- The location of the antenna relative to the population center(s) and to existing TV stations;
- Antenna height above ground, taking terrain variations into consideration;
- The radiation pattern required to serve the desired area;
- The required antenna gain.

If each of these criteria is satisfied, the chances are good that you will serve your area well. If any one of them is ignored, you're probably back to "garbage out." However, in the real world, compromises from the ideal often have to be made — in which case, the goal should be to keep them at an absolute minimum. If the compromises become too severe, the solution is very simple:

Don't build a loser. Look to another community instead.

Some Horrible Examples

In the short period of a year and a half

since I became interested in LPTV, I have become aware of many instances where construction permits have been issued and stations built with no consideration whatsoever of the above criteria. These stations haven't the chance of a snowball in Hades of ever achieving their full income potential.

Perhaps the best way to illustrate the importance of these criteria is to share some horrible examples with you.

Try this one. A 10-watt VHF station, intended to serve community "X," located its antenna on a 50-foot pole about 10 miles from the city and pointed the main lobe of its directional antenna away from the city. The gophers and rabbits close to the antenna will be well served, but the people in "X" will never know the station exists.

Or this one. A UHF station, intended to serve community "Y," located its antenna on a short tower on the opposite side of "Y" from the full power stations already serving that community. The receiving antennas in viewers' homes were all pointing at the full power stations (and away from the new LPTV). This, of course, made them essentially useless insofar as receiving the new LPTV station was concerned.

The LPTV people further complicated their situation by choosing an antenna radiation pattern that favored the gophers more than it did the people of "Y."

These stations and all others like them are programmed for failure or, at best, mediocrity.

The Question of Cable

At this point, I believe it would be appropriate to dispel the commonly held belief by LPTV operators that antennas are not important if your station is carried on the local cable system. Consider this: 60% cable penetration is considered to be quite good in most communities. This leaves 40% of the population that you will never be able to compete for unless you

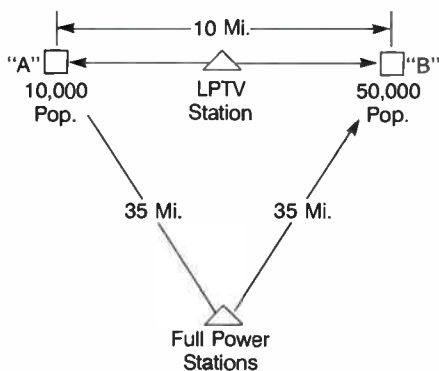


Fig. 1

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install a well-engineered antenna system.

What this means to management is simply that your city of 100,000 people has suddenly shrunk to 60,000 — and your income potential has decreased accordingly. This can be especially troublesome if the DEF auto dealership has a huge TV budget but the owner won't give you any of it because she can't get your station in her country mansion where cable is not available.

Since this sermon is aimed mainly at owners and managers, I'll not go into the details of determining antenna height, radiation pattern, terrain analysis, etc., but will leave that to qualified consultants who know these things. I will, however, give you some "do's" and "don'ts" related to antenna location.

KISS

Your goal in selecting an antenna location must always be to make it easy for viewers to receive your station. Do not make it necessary for them to turn their antennas or to install a separate antenna for your station. THEY WON'T DO IT!

Figure 1 illustrates a bad antenna location, and Figure 2 illustrates a good one. In both cases, the LPTV station is licensed to community "B" with a population of 50,000. "A" and "B" are each located about 35 miles from the local full power stations.

In Figure 1, in an effort to maximize the population count within his service area, the licensee has opted to locate his antenna midway between "A" and "B" so that he can serve 60,000 people instead of 50,000. Mathematically that is a sound judgment. In the real world, however, the numbers are deceptive because the receiving antennas in the viewers' homes are all pointed at the full power stations, thus making them virtually useless in the direction of the LPTV station, and resulting in noisy pictures and ghosting. Pity the sales manager who has to try to put

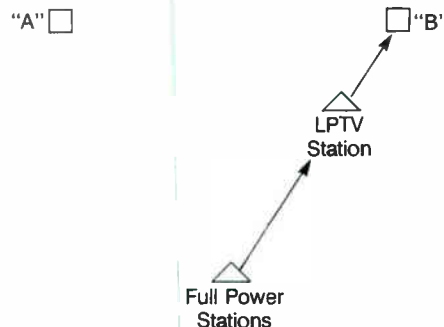


Fig. 2

black ink in that station's books.

In Figure 2, everything is the same, except that the LPTV antenna has been located in a direct line between the full power stations and "B." Thus, every receiving antenna in the community is pointed directly at it. In this particular arrangement, with adequate tower height and careful selection of antenna radiation pattern and gain, the LPTV signal can be the dominant signal in community "B" — a sales manager's dream. We have, of course, sacrificed community "A," but it is better to give excellent service to 50,000 people than poor service to 60,000.

No More Losers

The problem illustrated in Figure 1 is typical of why our industry is not so healthy and prosperous as it could be. It's unfortunate that so many stations were built with the flawed expectation that their coverage would be as good as the

consultants' maps indicated. This could be true only if the full power stations did not exist. If we, as an industry, ever expect to get our fair share of the TV "pie," we must avoid those kinds of mistakes in the future. Let's not build any more losers. End of sermon.

And so, brothers and sisters, I have introduced you to one of the several industry problems that need to be addressed. Some of the others are technical in nature; some are not. In my next sermon, we'll continue the antenna discussion and I'll show you how an LPTV station can be made to appear equal to or better than the full power stations in a hypothetical market.

Robert G. Truscott is a television engineering consultant. After 35 years as chief engineer with three major market full power stations, he opened Truscott Broadcast Services, Inc., a Bolingbrook, IL consulting firm. He can be reached at (708) 972-9658.



FCC Clarifies Children's Television Rules

Early this month, the Federal Communications Commission reaffirmed and clarified its April Report and Order implementing the Children's Television Act of 1990 (see *LPTV Report*, April 1991, page 14).

Relying on what it interpreted as the intent of Congress, the Commission decided that short-segment programming, including vignettes and public service announcements, may be considered part of the educational and informational children's programming that stations are required to air. But such programming, by itself, cannot fulfill that requirement entirely.

The Commission also clarified that TV stations and cable operators may use program logs or tapes of children's programs to record the number of minutes of commercials that have been aired during children's programs. The limits are 10.5 minutes per hour on weekends and 12 minutes per hour on weekdays.

Stations may also submit either 1) lists of the number of commercial minutes per hour or 2) certified documentation that the station (and/or network or syndicator) airs children's programming containing only the allowed number of commercial minutes as a standard practice, as well as a detailed list of any overages. Such lists and statements are acceptable as long as they are reviewed regularly by station or cable system officials. Stations may also rely on network records or other information, as long as they meet these requirements.

The Commission also extended the

commercial limits to programs lasting five minutes or more. Such programs are subject to a pro-rated portion of the permissible hourly commercial minutes.

In regard to program-length commercials, the Commission reaffirmed its earlier definition — a program associated with a product within which commercials for that product are aired. But instead of requiring a 60-second separation between the program and the commercial, the Commission is now requiring the two to be separated by unrelated program material.

It also is modifying its earlier decision not to require noncommercial stations to follow the programming provisions of the Act, instead saying that all broadcasters must meet children's educational and informational needs. But there will be more lenient enforcement criteria for noncommercial stations. They must keep sufficient records to demonstrate their compliance, but only if they are challenged at renewal time or in response to specific complaints.

Finally, for children's programs airing on barter contracts made before April 12, 1991, the Commission extended the effective date of the new commercial limits rules from October 1, 1991 to January 1, 1992. The first full power TV license renewal applications to be affected by the new rules will be those due February 1, 1992 for licenses expiring June 1, 1992.

LPTV stations are not bound by the rules, although the Community Broadcasters Association encourages its members to follow them.



Women, Minorities Gain In Broadcast Employment

Total employment for broadcast stations having five or more full-time employees declined from 1989 to 1990, but the proportion of minorities and women working at those stations increased during the same period, according to a report released last month by the Federal Communications Commission.

Of all full-time broadcast employees, women increased from 38.6% to 39.4% and minorities from 17.0% to 17.5%. In the upper four job categories (officials and managers, professionals, technicians, and sales people), the gains were slightly greater—from 31.1% to 32.1% for women and from 14.9% to 15.4% for minorities.

The 1990 national labor force comprised 45.3% women and 21.8% minorities.

Complete state-by-state reports can be ordered by calling (202) 452-1423. For more information, contact the FCC's Equal Employment Opportunity Branch at (202) 632-7069.



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LPTV and the LAW

—by Peter Tannenwald

Satellite Television Stations

No, I'm not writing again about the dishes that look up at those relay stations up in space. I did that earlier this year. This time I am talking about conventional television stations in small markets that rebroadcast all or nearly all of the programming of a TV station in a nearby larger market.

There are several of these "satellite" stations around the country, and the FCC recently amended its rules to make it easier to build more. These rules are worth understanding, because the smaller markets where satellites are most likely to be built are often fertile markets for LPTV stations. If satellites become too popular, they may become serious competitors to LPTV, especially because the FCC has removed the limit on the amount of local programming that satellite stations may broadcast.

The reason that satellite stations came to be involves the FCC rule that prohibits anyone from owning two conventional TV stations with overlapping Grade B contours. Many times, however, a TV station serving one market would want to build a rebroadcast outlet in a smaller market fairly close by. This, of course, meant that the Grade B contours of the parent and satellite would overlap.

Case-by-Case Authorizations

The old rules allowed satellites on a case-by-case basis—which means that the FCC made an individual decision every time a satellite station was proposed. When they did approve satellites, they limited them to a maximum of 5% local programming, all the rest being rebroadcast from the parent. If the satellite

wanted to exceed 5% local programming, the FCC would have to give permission anew; and when it did, it would usually not allow the parent and satellite to be sold to a new common owner.

A satellite station has advantages over an LPTV station in that it may operate with higher power and is protected against displacement. However, it has disadvantages in that costs are higher (sometimes too high for economic survival), applications may be filed only for channels listed in the TV Table of Allotments, all conventional TV engineering and operating rules apply, and no new satellite applications may be filed within 175 miles of large markets because of the advanced television systems (HDTV) freeze.

In June of this year, the FCC decided to change its rules to eliminate two problems. First, because it was receiving an

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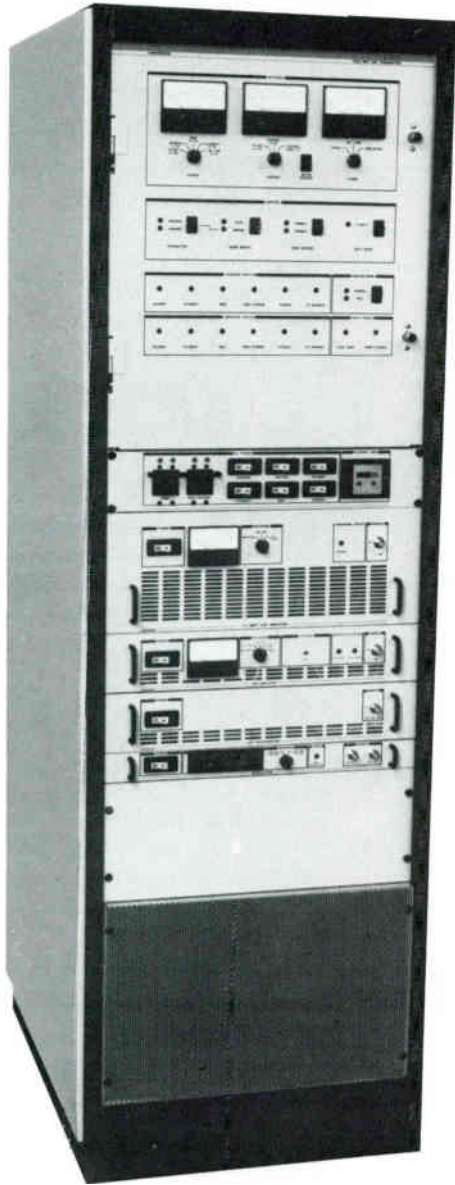
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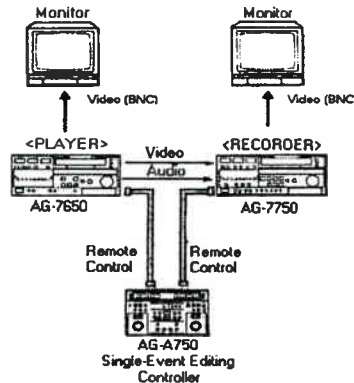
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increasing number of satellite applications, the FCC wanted to establish uniform rules that would make it easier to evaluate those applications. Second, it was uncomfortable with any rule that restricted local programming, so it wanted to drop the 5% restriction.

The New Rules

The new rules establish presumptions as to when a satellite application will be approved, although the presumptions are rebuttable if sufficient evidence is presented in a Petition to Deny to show that

a satellite would be against the public interest. A satellite application must make three showings:

1) While Grade B contour overlap between parent and satellite is permitted, there must be no overlap of city grade contours.

2) The satellite must provide service to an "underserved" area, defined in either one of two ways:

a) Either the satellite community of license has two or fewer TV stations licensed to it, including both commercial and public stations, but disregarding LPTV stations and translators; or

b) At least 25% of the area within the satellite's Grade B contour and outside the parent's Grade B contour receives four or fewer signals, this time including LPTV's and translators. A received signal is defined as a Grade B or better signal from a conventional station or a protected signal from an LPTV station or translator (74 dBu for UHF LPTV's).

3) There must be no one ready and able to build a non-satellite station when a new satellite is proposed, or no one willing to buy the satellite and convert it into an independent outlet if the station already exists. For an existing station, a showing must be made of substantial efforts to sell to an independent operator.


Exemptions

Once a satellite is authorized, it is exempt not only from the FCC rule prohibiting Grade B overlap of two commonly owned stations but also from the rule that limits a single owner to 12 stations nationwide (up to 14 when the two extras are controlled by minority group members). Also, under the new rules, there is no longer any 5% local programming limit for the satellite. However, the owner of a satellite does not have the right to sell the parent and satellite together. If a sale is desired, a new showing justifying satellite status must be made; and if it is not made successfully, the parent and satellite must be sold to separate owners.

Now that the 5% local programming limit has been eliminated, the FCC is no longer sure that the exemption from the 12-station nationwide limit is appropriate. Therefore, it is considering a further rule change that would count satellites toward the 12-station limit and might count them toward other nationwide limits, such as the percentage of the national audience one owner may reach.

Meanwhile, two new satellites were recently approved: WZZM-TV, Grand Rapids, MI was permitted to buy WUHQ-TV, Battle Creek, and convert it into a satellite; this was an attempt by WZZM-TV to reach all of the geographically extended Grand Rapids-Kalamazoo-Battle Creek market with ABC network programming.

Also, KFBB-TV, Great Falls, MT was granted a construction permit for a new satellite in Helena, over the objection of KTVH-TV, Helena, which does not operate as a satellite and was concerned about the economic impact of a second local station in so small a market (209th Arbitron ADI with only 18,900 households). In the Helena case, the FCC required the satellite to begin originating local programming no later than one year after it goes on the air.

Peter Tannenwald is a partner in the Washington, DC law firm of Arent, Fox, Kintner, Plotkin & Kahn. He is general counsel to the Community Broadcasters Association. 

Slattery To Introduce LPTV Amendment To House Cable Bill

—by Jacquelyn Biel

Congressman Jim Slattery (D-KS) has sent letters to each of the members of the House Energy and Commerce Committee, asking them to support an amendment he expects to offer to H.R. 1303, Rep. Ed Markey's cable re-regulation bill. Slattery's amendment would provide must-carry status to LPTV stations that originate local programming.

Slattery's amendment is identical to an amendment to the Senate's companion bill, S.12, adopted last May by a unanimous voice vote of the Senate Committee on Commerce, Science, and Transportation (LPTV Report, May 1991, page 1). That amendment, offered by Senator Wendell Ford (D-KY), requires cable sys-



Rep. Jim Slattery (D-KS)

tems to carry LPTV stations that air a minimum amount of local programming and are within a certain distance from the cable headend.

In his July 24 letter, Slattery said, "I

firmly believe that enactment of such an amendment would help community cable systems to respond to the need for localism in provision of video programming services."

Earlier this summer, Markey pulled H.R. 1303 from the floor to redraft it, apparently to make it more acceptable to Republican members of the House. The bill contained a section directing the FCC to study the feasibility of must-carry status for LPTV stations offering local programming, a section that reflected a study amendment to last year's cable re-regulation bill. That bill was passed by the Energy and Commerce Committee last July but never made it to the floor of the House.

According to *Broadcasting* magazine (September 2, 1991, page 14), a Senate vote on S.12 could occur as early as late September. If S.12 — one of whose key provisions is retransmission consent — passes the Senate, broadcasters could use the momentum to push for a House bill containing retransmission consent, speculates *Broadcasting*. Presently, H.R. 1303 does not have such a provision, and CBA would have to begin a new push for LPTV provisions if a new bill were offered.

NACB Missed

The National Association of College Broadcasters was inadvertently omitted from the list of broadcast organizations in our May issue. Here is the information:

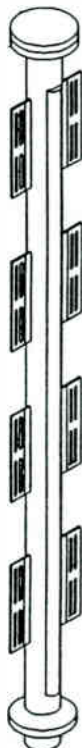
National Association of College Broadcasters (NACB)

P.O. Box 1955, Brown University
Providence, RI 02912

Contacts: Glenn Gutmacher, Executive Director; Joann Forgit, Association Director; Richard Smith, Publications Director; Jeff Southard, U•Net Director
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FAXed Signatures No Good, Says FCC

Early this month, the Federal Communications Commission upheld a decision by the Mass Media Bureau dismissing four commercial FM applications that had been filed with electronically transmitted—or FAXed—signatures instead of original handwritten signatures.

As a way to deal with the large number of carelessly prepared FM applications they had been receiving, the Bureau recently adopted a "hard look" approach, similar to the "letter-perfect standard" demanded of LPTV applications. The Hard Look Order specified that certain

portions of an application — including the applicant signature block — must be complete, or the application would be dismissed.

Four of the resulting dismissals were appealed, one applicant arguing that it had submitted the FAXed signature on the assurance of an FCC employee. But the Commission said that broadcast applications must bear original signatures (though copies may have FAXed signatures), because only an original signature ensures that the applicant has personally reviewed the application and can there-

fore be held accountable for its accuracy.

The Commission also noted that, in law, the government cannot be held accountable for erroneous information given by a federal employee, even though such a defense does apply in private lawsuits. It said that anyone relying on informal advice given by FCC staff does so at their own risk.

It also said that a snow storm that delayed an overnight courier, causing a delay in delivering the application for review and signature, was not enough reason to waive the rules. CBP

Women In Communications Fall Conference Set

Judy Woodruff of "The MacNeil/Lehrer NewsHour," Cathleen Black, president and CEO of the American Newspaper Publishers Association, and Ron Martin, editor of *The Atlanta Journal & Constitution*, are among the speakers to be featured at the 1991 National Professional Conference of Women in Communications, Inc.

The conference will be held October

10-13 at the Hyatt Regency Atlanta. Open to both WICI members and non-members, the conference is expected to attract more than 500 attendees, and will feature seminars on advancement techniques for women, negotiating skills, entrepreneurship, and non-profit communications.

For registration information, call (703) 528-4200. CBP

BON MOT

The world globes itself in a drop of dew. The microscope cannot find the animalcule which is less perfect for being little.

Emerson, Compensation

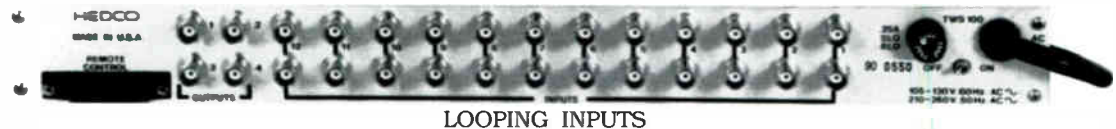
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Money Launderer Could Lose Four CP's

Timothy S. Brumlik, and two corporations that he owns and controls — NewSouth Broadcasting, Inc. and NewSouth Media Corporation — could lose the license for a Georgia full power station, along with four LPTV construction permits, because of Brumlik's January 1990 felony conviction for laundering money gained from illegal cocaine sales.

Brumlik had pleaded guilty to the money laundering charge and was sen-

tenced to four years imprisonment and fined \$75,000. He and the NewSouth companies own WFXL-TV in Albany, GA and construction permits for W13BO, Valdosta, GA; W12CD, Altamonte Springs, FL; W07BZ, Orlando, FL; and W12CC, Cocoa, FL.

After his conviction, Brumlik petitioned the FCC to allow him to transfer the license for WFXL and three of the construction permits under the terms of the Com-

mission's minority distress sale policy. However, he noted that only the proposed buyer for WFXL was a member of a minority group.

The Commission denied Brumlik's transfer requests, citing the fact that only one of the stations met the criteria for a minority distress sale. In addition, it said that the seriousness of Brumlik's drug-related misconduct substantially outweighed any public interest benefits to be gained by the sale of any or all of his stations to qualified minority applicants.

The Commission has repeatedly stated that it regards illegal drug activity as a serious offense and that it intends to reinforce private and governmental anti-drug efforts with its own policies. CBP

New Home Shopping Service To Debut

ValueVision International, Inc., a firm formed by one-time Cable Value Network executives in Minnesota, MN, has announced plans to produce and distribute a new home shopping service for LPTV stations.

On June 28, the executives completed a \$4.2 million initial public offering, trading as VVTV on the NASDAQ market.

The home shopping programming will be distributed via satellite to community broadcasting stations across the country 24 hours a day, seven days a week, as of this fall. ValueVision has signed contracts with at least six community stations around the country that it either owns or affiliates with.

Bob Johander of ValueVision would not identify the six stations or give any specific details about the service as of early August.

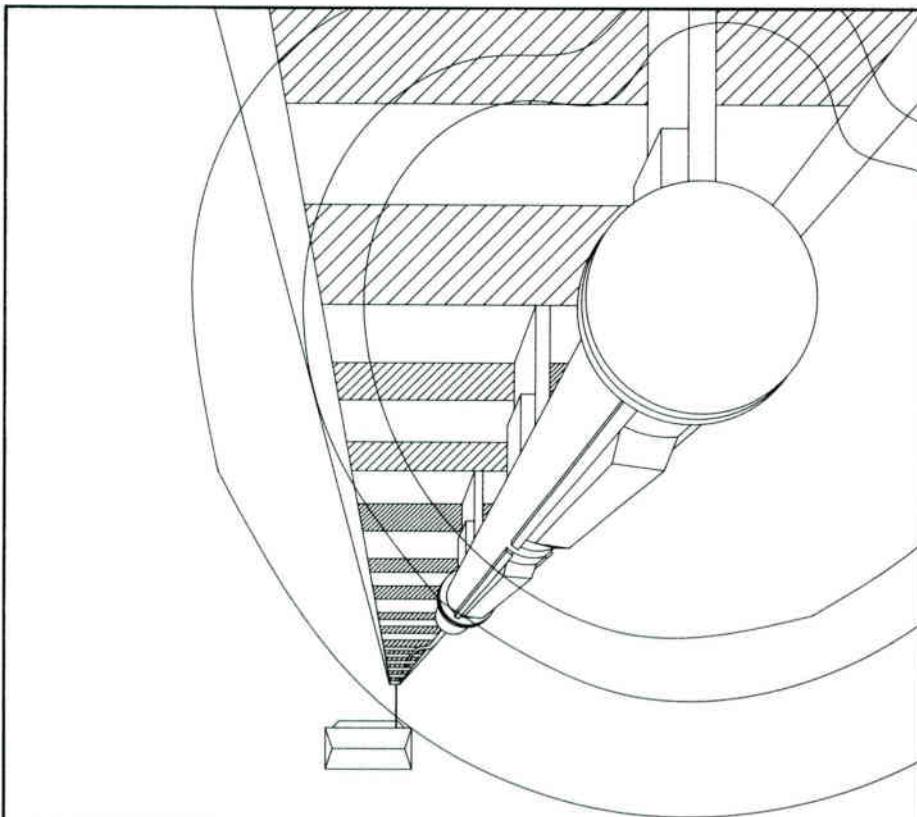
"We're still technically in our quiet period," he explained. "It might be another couple of weeks until we'll be able to add any information."

Johander said the quiet period should be completed by mid-to-late August when more information about the new service will be available. CBP

BON MOT

Nobody grows old merely by a number of years. We grow old by deserting our ideals. Years may wrinkle the skin, but to give up enthusiasm wrinkles the soul.

Samuel Ullman, quoted by James H. Quello at the swearing-in ceremony for his fourth term as FCC Commissioner, July 12, 1991.



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HDTV System Testing Begins

The FCC's Advanced Television Test Center has begun testing the six transmission systems competing for the position of America's new high definition television broadcast standard. The testing begins the final phase of establishing an HDTV standard — which the FCC says will be selected by June 1993.

During a special ceremony July 12 in Alexandria, VA, Commission chairman Alfred C. Sikes pushed the computer key that powered up the special HDTV testing equipment. The \$15 million package of test equipment and procedures — like the HDTV systems it will evaluate — has been under development for about three years.

Of the six systems scheduled for testing, one — ACTV or Advanced Compatible Television, from the David Sarnoff Research Center — is an enhanced definition television technology based on current NTSC television.

The five remaining systems utilize a simulcast HDTV technique that would operate independently of today's television service on currently vacant TV channels. Of these five systems, all use digital signal processing; but one (Narrow-MUSE from NHK, Japan Broadcasting Corporation) would transmit analog signals, while the others would broadcast digital signals.

Each prototype system to be tested is a full TV transmission system — both video and audio — operating in real time, with no simulations. The prototype hardware represents all the elements needed to encode and modulate a TV signal for transmission by a station, as well as hardware representing the TV set that would be needed to receive the signal.

The testing for each system will take about seven weeks and will yield data about the system's performance under controlled, laboratory conditions. The tests will help determine how and where high definition TV channels can be used in North America and what the practical implications are for each system if it were adopted as the new standard.

One factor to be tested is how each system operates in conjunction with the present NTSC system. Under the FCC's simulcast scenario, HDTV signals will be transmitted simultaneously with the current NTSC signals until such time as most consumers own television sets capable of receiving the HDTV signal — a period of about ten years, according to FCC estimates. Testing will include co-channel, adjacent channel, and UHF "taboo" conditions, as well as the effects of various kinds of electronic and environmental noise that can occur in broadcasting.

Digital videotapes will be made of each HDTV system's performance under the different interference and impairment

conditions, and then viewed by a group of ordinary viewers with no engineering training to determine how the systems would be perceived by the general consumer.

After the lab tests are completed, one or more of the systems will be field tested — via both over-the-air broadcasting and cable transmission — to verify the lab

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findings. The FCC will then make a recommendation on the system and standard. The Advanced Television Test Center, itself, will not recommend a system.

Cable Television Laboratories, a research and development consortium of cable system operators, will also be testing the HDTV systems for cable use.

Below is a schedule of the tests:

SYSTEM

TEST DATES (1991-92)

ACTV: Advanced Compatible Television
David Sarnoff Research Center/ATRC
(Advanced Television Research Consortium —
NBC, Philips, Sarnoff, Thomson)

July 12-September 3

Narrow MUSE
NHK, Japan Broadcasting Corporation

September 10-October 24

DigiCipher
General Instrument Corporation/ATVA
(American Television Alliance — General Instrument, MIT)

November 14-January 7

DSC-HDTV: Digital Spectrum Compatible HDTV
Zenith Electronics Corporation/AT&T

January 14-March 2

ADTV: Advanced Digital Television
N.A. Philips Consumer Electronics Co./ATRC

March 9-April 22

ATVA Progressive System
Massachusetts Institute of Technology/ATVA

April 29-June 5

Supplier Side

AKG Acoustics is offering the new C407 miniature condenser microphone as part of its MicroMic series of miniature, studio-quality condenser microphones.

The C407 features a vocal flattering frequency response and an omni-directional capsule. It can be used for spot micing, live recording, and other on-camera applications.



The C 407 lavalier condenser microphone from AKG Acoustics.

The .3" diameter microphone comes with a detachable tie pin and clip, and a removable windscreen. Several models are available for use with various power sources. Prices range from \$55 to \$145.

Circle (174) on ACTION CARD

An 8-channel audio/video switcher, the AVS-8, is now available from FSR, Inc.

The AVS-8 is part of the new FSR Gold Standard of rack-mounted control equip-



FSR's AVS-8 audio/video switcher.

ment. Eight channels of silent audio switching with video vertical interval switching are available in the system's single-rack space. Audio outputs are 600 ohm transformer-coupled, eliminating ground loop problems. A UL-listed power supply is included.

Circle (199) on ACTION CARD

Tektronix is offering a new multi-format generator, the TSG-130, which provides signals for servicing Betacam, MII, S-VHS, Hi-8, NTSC, and monochrome 525/60 video equipment. The lightweight, compact unit tests video levels, linearity, frequency response, phase response, clamp performance, chrominance noise, picture monitor alignment, and channel timing.



The Tektronix 1720 SCH vectorscope.

Also from Tektronix are the new 1720-SCH NTSC and 1721-SCH PAL vectorscopes, with SCH phase indication and color frame matching. The units are used in production and editing applications when SCH phase and color frame relationships are crucial.

Circle (197) on ACTION CARD

The Blue Feather Company has added two new items to its line of teleprompting products.

Prompt Box Jr. is a new, simpler product that eliminates the extra features of the original Prompt Box software. Prompt Box Jr. includes one font size, forward and reverse scrolling, a word processor, a simplified prompt box and a 12" camera-mounted display with monitor. The Jr. model does not include the Prompt Box features of simultaneous editing, word search, reverse text and field options, three fonts or a computer. It does come at a lower list price of \$2,500.

In conjunction with Magic Teleprompting, Blue Feather is also offering MagicScroll™, smooth-scrolling teleprompting software for the Macintosh.

MagicScroll features an icon-driven control panel; font variations with bold, italics, or underline options; the ability to open multiple documents at one time; a "Find and Replace" feature for making changes more rapidly; continuous looped scripts; up to ten "bookmarks"; and "Cut/Copy/Paste" functions.



Blue Feather's MagicScroll™ teleprompting software.

The software requires a Macintosh II, IIcx (with NuBus adapter card), or IIfx with available NuBus slot, and a minimum 2 Mb of RAM. A hard drive is recommended. List price is \$3,500.

Circle (152) on ACTION CARD

Nucomm, Inc., manufacturer of microwave and radio communications products, has introduced the PT3 Series portable ENG transmitters. The units can be configured for any portable situation from tripods and backpacks to helicopters and trucks.

The PT3 Series transmitters are available in single or multi-band models. Features include fiber optic camera-to-transmitter interconnects; a remote control module for controlling high and low power, frequency and stand-by status remotely; and a video-activated remote on/standby control to allow the transmitter to operate in remote standby with no video or with full video.



The Nucomm PT3 Series portable ENG transmitter.

There is also a quick-connect antenna mount, a video output monitor, internal power supplies, and auxiliary battery input connector.

The rugged transmitters are sealed in die-cast aluminum enclosures to protect them from weather and hard use.

Circle (157) on ACTION CARD

JVC Professional Products Company has announced the addition of the new BR-S822U S-VHS editing recorder to its Professional S line of products.

The unit features a luminance comb filter, a drop-out compensation circuit, and a noise reduction circuit for good picture quality even after several generations of dubbing. It is easily connected to other editing equipment by means of its 9-pin RS-422A serial remote control, and

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its composite and Y/C 358 inputs and outputs.

The BR-S822U is the first professional S-VHS editing recorder to accept both full-size and compact "C" cassettes without an adapter. Available via optional plug-in cards is a TBC with a field memory and component output, a time code reader/generator, a 45-pin remote control, and a Y/C 688 output processor.



The JVC BR-S822U.

The recorder's editing functions include search/jog dials up to 32 times normal speed, preview, review, edit point entry, menu-driven set-up, and on-screen mode check and warning indication. Other features include an 8-digit time counter and lap timer, external sync input for reference video, a tiltable control panel, and a luminance frequency response control.

Circle (109) on ACTION CARD

Leitch has introduced the Still File Gateway Graphics and Film Transfer Still Store.

The 4:2:2:4 digital component still store is suited for general purpose storage and management of digital component images. Its D-I interfaces allow first generation stills to be recorded along with their full linear key signal. Optional software provides features for use in film transfer, such as comparison wipes, windows, cut and paste, and pixel value determination.



Leitch's Still File Gateway.

Two users can operate simultaneously yet independently from one system, making the Still File very cost-effective. Basic storage capacity is 380 4:2:2 frames, expandable up to 2700 4:2:2 frames, or even more if the unit is operated on-line.


Circle (159) on ACTION CARD 

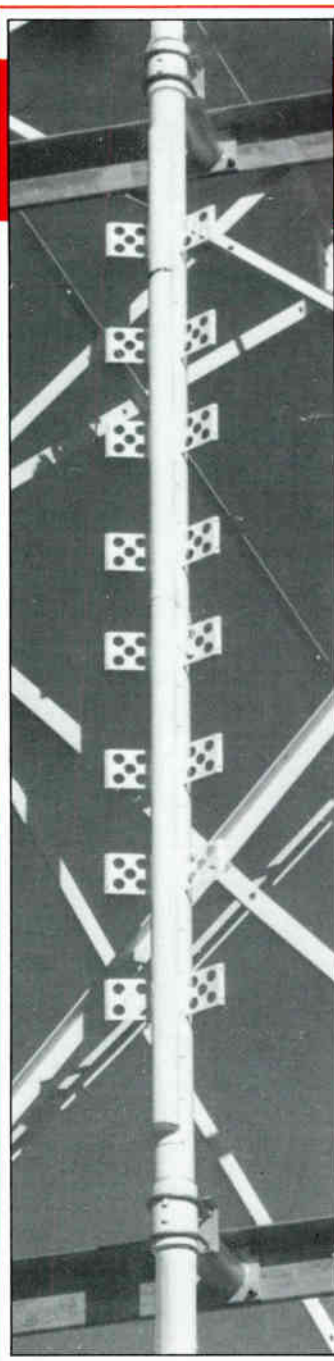
ENG Crews To Enjoy Better Security

The Federal Communications Commission has amended its rules to allow electronic news gathering crews to scramble their voice transmissions so that competing news teams cannot intercept the signals and possibly "scoop" the story.

The Commission had received several applications for permission to use the F3Y digital voice emission in the remote pickup broadcast service. Broadcasters maintained that, although it was prohib-

ited for third parties to pick up and use the ENG signals of a station, competition to be first with an exclusive news story sometimes tempted other stations to "eavesdrop."

In its May action, the FCC said that stations using the encrypted digital signal must transmit analog or Morse Code ID's at 15-minute intervals so that anyone receiving interference will know where it is coming from. 



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—by Susan Campbell

Many LPTV broadcasters invest a considerable amount in transmission and production equipment, while their traffic logs are still being produced manually. Often, traffic automation falls on the back burner, even though this one investment could be the catalyst that turns a new station into a solid profit center.

When it comes to sales revenues, the flow of data is what rules the station. At any time, you should be able to track the data from sales rep through billing and to the general ledger quickly and with total accuracy. The problem is deciding which of the many broadcast software packages on the market is right for you.

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The difference in Summit? We listen! Summit has developed its software packages by utilizing suggestions from traffic operators and sales managers, and by constantly monitoring industry trends. And Summit offers several levels of software applications. So no matter what your financial situation is now, you can afford a Summit system and build on it as your station grows.

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The Traffic System has four levels: Basic, Intermediate, Standard, and Enhanced. Each level builds on the previous one, giving you added traffic control and additional reports. Upgrading your sys-

tem to the next level requires no special conversions or re-installation. When you are ready to expand your traffic programs, Summit sends you the new program disks with an automated installation program. There is no disruption to previously entered data.

The Accounting System includes Accounts Payable, Payroll, and General Ledger. These packages also can be used independently or as a fully integrated accounting system. An added feature is Corporate Consolidation, a series of special programs that allows you to combine accounting data from remote divisions and to print combined financial statements.

The accounting module has received many high marks from bookkeepers and CPA's for its ease of use and completeness in audits. It has a full complement of federal and state government tax reports and user-defined financial statements that allow for budgets, variances, and comparative financials.

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On the Enhanced System, the Media Database tracks commercials, films, or both. It will number your tapes and print the labels, keeping track of the completion date for each tape and automatically making it available for re-use based on a disposition date. The module also includes an array of continuity reports to help ease the confusion that can occur with complex copy orders.

Customization and Security

Each menu in the Summit system includes a selection called Customization. Customization provides from one to more than thirty pages of user-defined parameters pertaining to that menu. Innumerable reports can be compiled by the simple manipulation of the report's customization feature, and each use can have a virtually unlimited number of standard selections stored for later use. Summit's Customization is elaborate enough to offer multiple alternatives, yet flexible enough to permit you to define it once and never choose it again.

If flexibility is the word for Customization, simplicity must be the word for security. It's easy to establish and provides complete password/access level security from the point of entering the system to locking out individual program selections. All access is controlled through individual user passwords and access levels of 0 to 99. For example, the system can allow sales reps to print their own sales and avail reports, but prevent them from changing or removing existing records. Entire menus like Payroll and G/L can be locked to those without the correct password.

System Layout

All of Summit's programs are menu driven with complete keyboard functionality. On-line help and global search capability is available throughout the system. Your reports can be directed to a printer, a local spooler, a console, or a delimited ASCII file. Reports printed to a file can be imported to spreadsheet programs, database programs, or a word processor for use in form letters or business reports. The entire system can be run on a stand-alone PC with a 30 Mb or larger hard drive. Or it can be supported by a local area network such as Novell ELS with 2 to 100 work stations.

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Circle (19) on ACTION CARD

offices in Colorado, or training via modem. The length of the training depends on the modules purchased. It normally runs from two to five days, with modem training delivered on an hourly basis as necessary.

Many users who have purchased the basic system train themselves utilizing the context-sensitive help available through the F1 key and by referring to the user manual. The manual offers field-for-field explanations for all data entry programs and report prompts.

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Susan Campbell has been manager of customer service for Summit Broadcast Systems since 1987.



Classifieds

FOR SALE

For Sale: LPTV Broadcast Equipment. Affordable used prices. Excellent condition. TTC 10-watt transmitter, Catel color TV modulator, Spotmatic Jr. commercial insertion system, Monroe 18-event program timer, Monroe audio video relay timer. Will sell all or part. Call (814) 432-3128, 8 a.m. to 5 p.m. EST.

For Sale: Complete Local Power (LPTV) station currently on the air in a medium midwest market. Turnkey situation. Call John Schaller at (708) 304-0426.

For Sale: Complete field and post-production operation situated in a new leased facility in a medium midwest market. Everything oriented towards shooting and editing in the economical yet professional S-VHS format. Turnkey situation. Call John Schaller at (708) 304-0426.

FOR SALE: JVC Super VHS Demo Units. LIKE NEW CONDITION. 1 each KY15 3CCD camera with BRS410 docking recorder & HZ 416 zoom lens; complete with battery pack, microphone, tripod/dolly, and carrying case: \$7,500. 1 each BY10U 2/3 CCD camera with HZ618 16:1 zoom lens: \$3,500. 1 each AAP250 adapter/charger: \$300. EMCEE Broadcast Products, P.O. Box 68, White Haven, PA 18661, 1-800-233-6193.

WANTED TO BUY

LPTV station in south Florida area. Call or write M. Greenberg, c/o Silvercup Studios, 42-25 21st St., Long Island City, NY 11101, Dept. T, (212) 349-9600.

SERVICES OFFERED

Turnkey site development services include site acquisition, negotiation, and permitting; site construction/installation, and maintenance; transmitter/downlink optimization, and site management. Our reputation is that of being responsible, fair, and professional. We're Shaffer Communications Group, Inc., 3050 Post Oak Blvd., Suite 1700, Houston, TX 77056, (713) 621-4499, FAX (713) 621-5751.

LPTV mailing labels. Reach all LPTV licensees, CP holders, applicants. Accurate, up-to-date marketing lists in your choice of format. Call Katie Reynolds at (414) 781-0188.

BUSINESS OPPORTUNITIES

Let the government finance your new or existing small business. Grants/loans to \$500,000. Recorded message: (707) 448-0330. (OR5)

SITUATIONS WANTED

Experienced broadcaster with recent involvement in a start-up LPTV project in Illinois seeks opportunity to help medium or large market broadcasters succeed. For more specifics, call John Schaller at (708) 304-0426.

Knowledgeable broadcast professional seeks sales/marketing position with stable LPTV broadcast equipment related company. Excellent phone presence and computer skills. Available immediately, (412) 348-4304.

JOB-HUNTERS EMPLOYERS

Looking for a job in television? Need someone for that hard-to-fill position? Use **The LPTV Report** classifieds.

Employers, list your openings for only **\$10 a month**, a savings of as much as \$20 off the regular classified rates.

Job-seekers, advertise **FREE**.

Ads are limited to 50 words. Please send payment with your order. Ads will run once, unless renewed in writing.

Send your ad copy (and payment, if appropriate) to Katie Reynolds, **The LPTV Report**, P.O. Box 25510, Milwaukee, WI 53225.

INDEX TO ADVERTISERS

Use this handy chart to find the ad you're looking for. Then fill out the ACTION CARD bound in this magazine for FAST answers to all your questions.

COMPANY	PAGE	ACTION CARD NUMBER	ADVERTISER FACT LINE
3 dbm	21	75	(800) 279-3326
Acrodyne Industries, Inc.	5	18	(800) 523-2596
Andrew Corporation	27	79	(800) 255-1479
Antenna Concepts	6	181	(908) 277-3438
BEXT, Inc.	9	47	(619) 239-8462
Cablewave Systems	32	32	(203) 239-3311
Channelmatic	7	6	(800) 766-7171
Community Broadcasters Association	4	131	(800) 225-8183
Dielectric Communications	24	162	(609) 435-3208
EMCEE Broadcast Products	15	1	(800) 233-6193
Gorman-Redlich	3	62	(614) 593-3150
ITS Corporation	19	123	(412) 941-1500
Jampro Antennas	31	154	(916) 383-1177
Keystone Inspirational Network	12	48	(717) 246-1682
Leitch/HEDCO	22	128	(800) 387-0233
LPTV Report, The	29	19	(414) 781-0188
Manhattan Production Music	17	143	(800) 227-1954
Microdyne Corporation	23	100	(800) 441-9084
Microflect	16	2	(503) 363-9267
Microwave Radio Corporation	25	134	(508) 250-1110
Riser-Bond Instruments	13	90	(800) 688-8377
Scala Electronic Corporation	28	186	(503) 779-6500
Showcase	20	158	(800) 736-1976
Showplace	10	180	(312) 472-8828
Tel-Test	18	108	(800) 768-0037
Television Technology Corporation	11	7	(303) 665-8000
Texscan MSI	2	26	(800) 367-6011
Three Angels Broadcast Network	26	187	(618) 627-4651
Video Accessory Corporation	9	3	(800) 821-0426
Visual Communications Replay Corporation	8	171	(800) 745-8272
World Satellite Network	14	175	(800) 367-3193

CLASSIFIED RATES: All classified ads are payable in advance. When placing an ad, indicate the exact category you desire.

Classified advertising is sold at the rate of 60¢/word. There is a \$20.00 minimum charge for each ad.

Business Card ad rates are \$50.00 per insertion. Rate is discounted to \$45.00 for three or more insertions. Classified Display rates are \$50.00 per column inch.

To place your order, call Jackie Biel at (414) 781-0188.

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NEW LPTV LICENSES

The following LPTV stations received licenses on the dates shown. Station call sign, location, and the name of the licensee are also given.

- W11BJ Hartford, CT. National Black Media Coalition, 6/28/91.
W04CN Cocoa/Rockledge, FL. Press Broadcasting Company, 7/18/91.
W14AC Lakeland, FL. Lakeland Translator, Inc., 7/23/91.
W63BS St. Petersburg, FL. Henry Esteve, 6/28/91.
W17AZ Johnston City, IL. Three Angels Broadcasting Network, Inc., 6/28/91.
K22CQ Monroe, LA. Telemedia Investors, 6/28/91.
W65BX Springfield, MA. Channel 13 Television, Inc., 7/18/91.
K09VM Joplin/Carthage, MO. Gary M. and Deborah R. Kenny, 7/18/91.
K23CU Prineville, OR. Christ Loves You Broadcasting, 6/28/91.
W66BM Quebradillas, PR. Arzuaga Broadcasting Corporation, 6/28/91.
W56CM Knoxville, TN. Robert H. Shreffler, 6/28/91.
K13VC Austin, TX. Global Information Technologies, Inc., 6/28/91.
K07UD Corpus Christi, TX. TV 50, Inc., 6/28/91.
K47DF Corpus Christi, TX. Diocesan Telecommunications Corporation, 6/28/91.

LPTV LICENSE RENEWAL

The following LPTV station received a license renewal on the date shown. Station call sign, location, and the name of the licensee are also given.

- K23AE Aspen, CO. Recreation Broadcasting of Aspen, Inc., 7/16/91.

NEW LPTV CONSTRUCTION PERMITS

The following parties received LPTV construction permits on the dates shown. Station call sign and location are also given.

- W31BC Daytona Beach, FL. Patricia Van Zandt, 7/9/91.
K47DU Kailua, HI. Alegria Broadcasting Corporation, 7/18/91.
K53ED Kailua, HI. Alegria Broadcasting Corporation, 7/23/91.
W51BV Deer Park, NY. Xenia Renatta Izzo, 7/19/91.
K39CZ Aberdeen, SD. Quanta Communications, 7/22/91.
K60EM Mesquite, TX. Henry J. McGinnis, 7/23/91.

ASSIGNMENTS AND TRANSFERS

- K20CZ Bullhead City, AZ. Voluntary assignment of permit granted from H. L. Jacobsen dba Localvision to Trinity Broadcasting Network on 7/29/91.
K26BF Goleta, CA. Voluntary assignment of permit granted from Goleta Low Power TV to Guy S. Erway, Jr. on 7/2/91.
K23AE Aspen, CO. Voluntary assignment of license granted from Recreation Broadcasting of Aspen, Inc. to W. Russell Withers, Jr. on 7/16/91.
K47AQ Denver, CO. Voluntary assignment of license granted from Marilyn Hickey Ministries to Trinity Broadcasting Network on 7/15/91.
W09BY Jacksonville, FL. Voluntary assignment of permit granted from Turnpike Television to Video Jukebox Network, Inc. on 7/12/91.
W19AQ Palm Beach, FL. Voluntary assignment of license granted from Palm Beach Broadcasting Company to Main Street TV, Inc. on 7/9/91.
K34CP Dodge City, KS. Transfer of control granted from L. Lowry Mays and B. J. McCombs, de jure controlling stockholders of Clear Channel Communications, Inc. to L. Lowry Mays, de facto controlling stockholder of Clear Channel Communications Inc., effective 7/25/91.

K51DN Wichita, KS. Transfer of control granted from L. Lowry Mays and B. J. McCombs, de jure controlling stockholders of Clear Channel Communications, Inc. to L. Lowry Mays, de facto controlling stockholder of Clear Channel Communications Inc., effective 7/25/91.

K55FS Wichita, KS. Transfer of control granted from L. Lowry Mays and B. J. McCombs, de jure controlling stockholders of Clear Channel Communications, Inc. to L. Lowry Mays, de facto controlling stockholder of Clear Channel Communications, Inc., effective 7/29/91.

W61BC Shreveport, LA. Voluntary assignment of license granted from K. Sandoval Burke to Video Jukebox Network, Inc. on 7/2/91.

W05BN Detroit, MI. Voluntary assignment of license granted from Gordon B. Madlock to Video Jukebox Network, Inc. on 7/30/91.

W59CB Atlantic City, NJ. Voluntary assignment of permit granted from John Gerena to Trinity Broadcasting Network on 7/23/91.

K29BD Alamogordo/Tularosa, NM. Voluntary assignment of license granted from Trinity Broadcasting Network to Prime Time Christian Broadcasting, Inc. on 7/23/91.

K52BS Santa Fe, NM. Voluntary assignment of license granted from Penny Drucker to Telco Entertainment, Inc. on 7/30/91.

K55DP Reno, NV. Voluntary assignment of license granted from Reno Entertainment Television, Inc. to Galaxy Broadcasting, Inc. on 7/16/91.

W08BV Columbus, OH. Voluntary assignment of license granted from Howard LP Television, Inc. to CW Consultants, Inc. on 7/5/91.

W07CB Philadelphia, PA. Voluntary assignment of license granted from Harvard Broadcasting, Inc. to Ronald Joseph Caponigro and Dr. Joseph Rovito dba Morton Broadcasting Company on 7/30/91.

K60AX Knoxville, TN. Voluntary assignment of license granted from Knoxville Community Broadcasting, Inc. to Knox County Broadcasting, Inc. on 7/8/91.

W38AQ Lenoir City, TN. Voluntary assignment of license granted from Knoxville Community Broadcasting, Inc. to Knox County Broadcasting, Inc. on 7/8/91.

K34CY College Station, TX. Transfer of control granted from L. Lowry Mays and B. J. McCombs, de jure controlling stockholders of Clear Channel Communications, Inc. to L. Lowry Mays, de facto controlling stockholder of Clear Channel Communications Inc., effective 7/25/91.

K15BV Uvalde, TX. Voluntary assignment of license granted from Minerva Rodriguez Frias to Fourth Man Center on 7/23/91.

K62CY Waco, TX. Transfer of control granted from L. Lowry Mays and B. J. McCombs, de jure controlling stockholders of Clear Channel Communications, Inc. to L. Lowry Mays, de facto controlling stockholder of Clear Channel Communications Inc., effective 7/25/91.

CHANGE OF COMMUNITY

W11BP Syracuse, NY. Modification of construction permit granted to Craig L. Fox to change principal community from Syracuse, NY to Syracuse/Liverpool/Mattydale/Eastwood/Dewitt, NY on 7/9/91.


PROPOSED CONSTRUCTION PERMITS

The following LPTV and TV translator applications have been accepted for filing and are not mutually exclusive with any other pending applications. If no petitions to deny these applications are filed, they will be granted.

New Stations

- Ch. 23 Santa Cruz, CA. Peninsula Communications, Inc.
Ch. 25 McArthur, ID. Mountain TV Network, Inc.
Ch. 42 Alamogordo, NM. Roy E. Henderson.
Ch. 24 Colville, WA. Mountain TV Network, Inc.

Modifications and Channel Changes

- K22DD Ch. 22 Santa Clara/San Jose, CA. Linda K. Trumbly.
K70BC Ch. 51 Twentynine Palms, CA. Morongo Basin TV Club, Inc.
K65DR Ch. 65 Portland, OR. Channel America LPTV Licensed Subsidiary, Inc.
W03BB Ch. 43 Columbia, SC. Norma Levin. 

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