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Color Television Here, Kesten Tells FCC

Shift to High Band Urged at Rules Hearings

By JACK LEVY

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DECLARING flatly that full-color television in the higher frequencies is already an accomplished fact and was successfully demonstrated in 525-line pictures across the New York skyline only the past Wednesday, Paul W. Kesten, CBS executive vice-president, proposed to the FCC last week that programming schedules be gradually stepped up as set ownership is expanded.

Appearing before the Commission hearings, held Thursday and Friday, on rules and regulations and standards for commercial service, Mr. Kesten offered a formula as a temporary solution to the problem of channel scarcity and as an incentive to quality programs, pending a shift upstairs to the high frequencies.

Sharing the spotlight with the CBS testimony was a plan offered by the Television Broadcasters Assn. which would, through the use of directional antenna installations, make more channels available for metropolitan centers and assure the possible location of full power stations in every major market



PAUSING for a photograph just before the FCC began hearings Thursday on television rules and regulations and standards of good engineering practices were (l to r): Paul W. Kesten, CBS executive vice-president; William A. Roberts, TBA counsel; Chairman Porter; Mark Woods, American Broadcasting Co. president; Niles Trammell, NBC president; J. R. Poppele, WOR chief engineer.

area considered by the Commission.

The TBA plan, offered by William A. Roberts, counsel, and described by Dr. T. T. Goldsmith Jr., research director for Allen B. Dumont Labs Inc., and William S. Dutera, NBC allocation engineer, was given support by industry representatives, including Niles Trammell, NBC president, and Mark Woods, president of the American Broadcasting Co.

Of significance in connection with the CBS testimony on its color process were disclosures made by Dr. Peter Goldmark under questioning by Commissioner E. K. Jett. Dr. Goldmark revealed that:

1. While the video process is

electronic, color is transmitted through use of the mechanical "flywheel" system utilizing a three-color blade.

2. A 30 w transmitter was employed to beam the signal from the Chrysler Bldg. tower to the CBS studios on 485 mc.

3. A 1 kw video transmitter using the ultra-high band is equivalent in output to a 10 kw transmitter on the lower band.

It is expected the FCC will make every effort to revise its rules and allocations governing lower band television within two or three weeks. The TBA proposal, it was thought, would be given most serious consideration in view of the admitted desire for more than four fulltime assignments in the larger centers, particularly New York, which would be increased to seven. Adoption of some variation of the proposal is considered likely.

Cost \$3,191,000 Yearly

Although the testimony centered mainly on objections to the present allocations and the 42-hour rule, the Commission heard considerable criticism of the proposed regulations regarding limitation of station ownership by a single licensee, the rule limiting time of network agreements with affiliates, the requirement that announcement be made of mechanical reproductions used in television, and the provision calling for "time sharing" of frequencies.

Mr. Kesten told the Commission that Rule No. 1, requiring six hours per day of television programming, "would virtually serve notice on prospective licensees that they'd better stay out of television for quite a while unless they have mil-

lions of dollars to earmark for it at once."

Based on the experience of CBS, he estimated it would cost a minimum of \$3,191,000 a year to do 42 hours a week of programming. This means less than \$1500 an hour for studios, lights, cameras, engineers, camera men and all other personnel including the performance itself. "No appreciable amount

PROPOSALS for diverting more stations to large metropolitan centers pending change to high frequency color television, time-sharing of channels and lower operating schedules for stations highlighted FCC hearing last week on rules and regulations and standards for commercial television.

of this sum could be recovered from advertising revenue during the first year or two of operation," he said, "because the audience, even under optimistic estimates, will not be large enough."

The alternative of sharing wavelengths, he contended, would be equally discouraging. Few broadcasters would want to carry television until an audience has been built only to find they could not expand into other hours of the day when that time arrived. The choice of six hours of programming to an audience not yet created or losing half one's license to a newcomer at a later date would seem to many, he said, "an impossible choice" and would retard rather than advance the development of the medium.

Mr. Kesten therefore proposed that until television set ownership has reached 10% of the homes in the area only one hour of broad-

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TBA PLAN ADDS 59 TV STATIONS

FIFTY-FIVE metropolitan districts would gain 62 television station assignments and three would lose one each under the Television Broadcasters Assn.'s channel-allocation proposal as compared with the FCC plan, according to a table submitted by TBA to the Commission.

FCC's tentative allocations [BROADCASTING, Sept. 24 Oct. 8] give Worcester, Sacramento, and Portland, Me. one more station each than TBA's plan provides. Table shows the following districts would gain under TBA proposal (listed according to sales rank):

New York, gain 3; Chicago 2; Los Angeles 1; Philadelphia 1; Boston 2; Detroit 2; Pittsburgh 1; Cleveland 2; St. Louis 1; Washington 1; Buffalo-Niagara Falls 1; Milwaukee 1; Cincinnati 1; Portland, Ore. 1; Indianapolis 2; and one each to Dallas, Columbus, O., Springfield-Holyoke, Louisville, Birmingham, Lowell-Lawrence-Haverhill, Syracuse, Norfolk-Newport News, Richmond, Fall River-New Bedford, Wilmington, Flint, Utica-Rome, Peoria, Reading, Tacoma, Chattanooga, Saginaw-Bay City, San Jose, Wheeling, Atlantic City, Waterbury, Lancaster, Racine-Kenosha, Johnston, Roanoke, Austin, Sioux City, Stockton, Lincoln, Hamilton-Middletown, York, Manchester, Waterloo, Topeka, Charleston, S. C., Galveston, Asheville, Columbus, Ga., Augusta.

Total allocations to other markets would not be changed.

TV Hearing

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casting be required, that only two hours be required until it has reached 20%, three hours until it has reached 30%, four hours until it has reached 40%, five hours until it has reached 50%, and six hours after it exceeds 50%.

He said he favored the proposal only as long as the inadequacy of channels in the low frequency band made it necessary, expressing confidence that use of the high frequencies will permit a great increase in metropolitan stations. "The future use of the higher frequencies will ring the curtain down on the stage we are setting here," he said, disclosing that only last Wednesday he had seen 525-line television successfully broadcast and received with "superb clarity."

Television pictures on the higher frequencies are no longer a theory but a fact, he said, apart from final propagation studies, "not 10 years, nor five years, nor even one year after the war, but less than two months after V-J Day."

Indicative of the public desire for color television, Mr. Kesten cited a survey by a department store chain which showed that if receiving sets for this type of reception could be obtained for an additional 15% the sales would be 10 times as great.

When he was asked by Chairman Porter how he saw the prospects for returns from television programs, he replied: "We see them in color—red."

To further questioning regarding programming, he said: "Ultimately, if there isn't a happier marriage between the television broadcaster and the advertising agency, the medium will be in very bad shape."

One to Ten

When Mr. Kesten declared it would be better to have one good television program broadcast than ten hours of "dull, lack-luster programs," Chairman Porter drew laughter from the audience with the question: "Would you apply that to standard broadcasting?"

Mr. Kesten got a round of laughter when he declared that while the industry was pessimistic on the time required for better television, "CBS adopted the rule of saying as little as possible" until it could show results. Noting the audience response, he remarked that nevertheless "CBS has not issued a public statement on color television in seven months."

Goldmark Describes Tests

Dr. Goldmark described tests made by CBS of color television broadcasting last week and the type of equipment used. He said the results were "amazing" and far surpassed what was expected. He said the pictures showed "excellent detail". Broadcasting was done on 485 mc over a distance of a quarter of a mile using a signal

corresponding to 1/100 of a watt. If the distance had been 40 miles it would have required only 250 w., he calculated. While he said he did not want to make any predictions in view of the recency of the tests, he asked for the cooperation of the Commission on tests over the next three or four months. He was assured the Commission would cooperate.

Joseph H. Ream, CBS vice-president, testified in support of the Commission's proposal for allocation of low-definition, low-frequency channels "because we believe that the Commission does with respect to these channels will set the basic pattern for allocation of high-definition, full-color television in the high frequencies."

He interpolated his prepared testimony to say he favored the TBA allocation plan if it provides more stations for the metropolitan centers without depriving the contiguous areas.

Mr. Ream opposed the rule preventing a network from owning a station in a town where the station is in a dominant position, pointing out that CBS was forced to sell WBT Charlotte under this rule. If applied to television, he said, the rule would prohibit a network from pioneering in a town.

He also opposed the rule limiting ownership by a licensee to five stations, suggesting it might retard nationwide television as much as any other single factor.

Woods Differs

Differing with Mr. Kesten on the 6-hour rule, Mr. Woods said the great demand for frequencies between 44 and 216 mc makes it necessary that they be used 25% of the time. While it would impose difficulties for some companies in the beginning, he said, it would stimulate purchase of receivers and hasten the time when better programs are provided and make possible commercial television on a sound basis.

He agreed that television must eventually go to the higher frequencies and declared that the sooner this is done, even with limited operating power, "the quicker will it be possible to have a truly competitive television system with the attendant benefits to both the industry and the public."

Mr. Woods proposed that operation in the 44-216 mc band be permitted for a temporary period, perhaps two years, after which the service be transferred to the 480-920 mc band, and that temporary grants be made during this time. Licensees would be required to carry on developmental work on the higher frequencies.

He further proposed that the public be given adequate notice of the projected shift and that plans be formulated within the industry whereby purchasers of receivers could be assured of liberal trade-ins on sets equipped for the high band. He suggested that consideration be given to requiring licensees to operate commercially on both

bands during the interim period.

In addition he suggested that the present bands 5 and 6 (76-82 mc and 82-88 mc) be earmarked for future use by FM.

Mr. Woods told the Commission American plans on filing applications for experimental wide-band television as soon as possible.

Asked by Chairman Porter how long it would take to get equipment for television operation, Mr. Woods said the network would be able to start a station within a year after Jan. 1.

Capt. W. C. Eddy, representing Balaban & Katz Corp., owners of WBKB Chicago, opposed the 6-hour day rule on ground it would result in sacrificing quality which he regarded as the most important factor in television development.

Capt. Eddy, who was in charge of radar for the Navy in the Chicago district, said the experience of the military with radar during the war indicated that, with further development, television could be operated in the high frequencies.

TBA Proposal

The allocation plan proposed by TBA provides 59 more television stations than the FCC proposal. Cutting community channels from three to one, its exponents testified, it would permit 401 metropolitan power stations in 135 of the first 140 market districts of the U. S., compared to 342 in 120 districts under the FCC plan announced Sept. 20 and revised Oct. 3 [BROADCASTING, Sept. 24, Oct. 8]. Both plans call for community stations in practically all districts omitted in metropolitan assignments.

FCC's plan designates Channels No. 1, 12, and 13 as community channels; TBA's would set aside only Channel No. 1 for community coverage. Simple antenna directivity in "a few" (48) cases, TBA said, would help provide competitive high power assignments in more markets.

Dr. Goldsmith explained that the FCC plan specifies 40 definite and 88 possible additional community assignments, "with the understanding, of course, that many other assignments can be made in smaller communities than the 140 metropolitan districts listed." He said the TBA plan "primarily shows the metropolitan station assignments, while no exhaustive analysis as to assignment of community stations has been made."

Antenna Directivity

Regarding use of antenna directivity, TBA submitted a chart showing three kinds of directivity: a minor amount of directivity was indicated as a means of improving assignments in 14 cases; a simple dipole was indicated for 14 others, and a dipole and ground sheet for 20 cases.

"The industry plan," said Dr. Goldsmith, "provides high power stations in greater quantities in areas which can initiate and sustain a television service. It also supplies all of the smaller metropolitan districts with one or more stations.

Further assignments may be made on community frequencies as well as on variously modified metropolitan power assignments to establish a thoroughly practical television industry."

City Plans

Mr. Roberts, outlining TBA's views, said "it is fully understandable that every city would desire an allocation program" permitting it to secure a television station "if it saw fit", but that "it is an unfortunate fact that the reservation of frequencies for possible authorization of such stations can not be accomplished without serious disservice to prospective television viewers in many of the same cities."

"If the public is going to be hurt by having a channel allocated and left vacant," he declared, "then that's not in the public interest." FCC Commissioner Jett replied that there has been no feeling that a channel would be left open indefinitely for the community to which it was assigned, "if the community didn't apply within a reasonable time."

Reviewing TBA's position on proposed rules, Mr. Roberts suggested a minimum of 28 hours of regular programs per week for television stations after six months' operation instead of six hours per day as proposed by FCC. He said the six-hour daily minimum would be "beyond the practical and financial capacity of newly licensed stations" but

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