

Spot Radio News

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By RADIO & TELEVISION NEWS'
WASHINGTON EDITOR

WITH COLOR TV's historic mammoth probe now at a temporary halt, after the longest single session on record, involving nine months of hectic hearings, members of the Commission have begun to pour over the 10,000 pages and 250 exhibits of testimony offered, and attempt to arrive at a series of conclusions which will undoubtedly set a route for the ultimate direction of the video art.

In preparing their verdict, the seven communications jurists will have to weigh carefully the thousands and thousands of opinions on the books, citing the variety of merits of the three systems, over which the wordy battle began. Reviewing the record, they'll find the remarks of those who appeared last, the boys from *CTI*, particularly intriguing. For it was here that the proponents of the system were able, after three disappointing attempts, to demonstrate their idea of a solution to the color problem and then proceed to pepper the Commission with seething remarks about their position in the race to fame. Appearing for *CTI*, as a color expert and as a patent attorney, Colonel Donald K. Lippincott, told the officials from Washington that the Pacific Coast system was better than the *RCA* or *CBS* types because of its synchronizing signal which was most applicable to select the line or field sequentials, which might be employed in color work. It was also his belief that the interlace shift, which *CTI* used, offered the best pattern. In this method, there is a double shift in which each picture line appears in all three primary colors—red, green and blue—in the course of six field scanings. Thus, each color appears in successive frames, as closely as is geometrically possible, halfway between its appearance in the preceding frames. In further testimony, *CTI's* Prexy Arthur S. Matthews, criticized the *RCA* system as . . . "too complicated for the average serviceman to handle or the average viewer to adjust successfully and certainly for television's largest audience, the children, to operate." Reporting on the *CBS* method, the *CTI* Headman claimed that its adoption would render . . . "the transition from black and white to color most impractical from the standpoint of the public." Matthews then added that the use of the setup

. . . "would also prove financially difficult, if not disastrous to all but the largest television manufacturers."

Commenting on the demonstrations, which were held in the St. Francis Hotel, the *CTI* execs said that they were extremely successful. (The colorcasts, originating in the *CTI* laboratories, were microwaved approximately two miles to the transmitter of *KPIX* and then broadcast over Channel 5. Standard monochrome and *RCA* color receivers, with dichroic mirrors, were used for pickup. The tests were viewed by two members of the Commission, Chairman Wayne Coy and Commissioner Rosel H. Hyde, as well as by E. M. Allen, FCC technical research head and Wilmar K. Roberts of the FCC labs. Also at the viewing was assistant general counsel Harry M. Plotkin.)

As this hearing neared its conclusion, the subject of interference was raised, and *CTI* entered its opinion on the problem. A roar of objections to the admission of the testimony followed and the Commission decided to review the subject. After a detailed probe of the report, Chairman Coy came up with a reply which rocked the room. Overruling the objection and permitting the testimony to be received in evidence, the FCC Chief-tain declared: "I would like to comment . . . that this exhibit brings into sharp focus the difficult problems that the Commission faces. It is apparent that a successful television system cannot be maintained unless a sound allocation is established. A sound allocation is not possible unless the Commission has adequate interference data. It has been the consistent experience of the Commission in this and other proceedings that it is virtually impossible to get the parties to submit adequate interference data. And I address these remarks not only to . . . this exhibit . . . but to all the parties in this proceeding. So far as the parties are concerned, no adequate interference data was offered by any of the parties at the outset. Moreover, when, after extensive prodding by the Commission, the parties did produce some interference data, it is apparent that not nearly as much effort and ingenuity went into the preparation and presentation of such evidence, as compared with other aspects of the parties' cases. It is merely a

repetition of the situation where the industry appears to be perfectly willing to have the Commission allocate on the basis of inadequate interference data in the hope that things will work out well. However, when things do not work out well, strong pleas are made to the Commission, particularly by that portion of the industry which at that time happens to be favored by existing authorizations, to relieve the situation by not licensing any further stations that would aggravate the interference problem. . . . I hope that our experience in this proceeding will teach all of us the importance, not only to the Commission, but to the industry and the public, of securing and offering adequate data on interference, so that sound decisions can be made on an allocation basis, under which the industry can build with reliance . . . on the fact that unforeseen interference conditions will not severely limit the service areas which had been anticipated and thus deprive many rural listeners of service. People who live in rural areas are important people."

There is little doubt that the blast by Coy will ever be forgotten by those engaged in the frequency tangle, on either side of the fence, the furious indictment reemphasizing the extreme caution which the Commission has adopted and will follow before that final allocation edict is offered.

Continuing their review of the encyclopedic volumes of testimony, the FCC will find reference to the complex color-tube developmental situation and the fact that now there are four tubes to consider, instead of one. For during the closing days of the sessions, *Du Mont* had reported that they had received a patent on a tri-color single-gun tube, *Paramount* revealed that their subsidiary, *Chromatic Television Labs*, was engaged in the development of a new tube (which would eventually be produced by *Machlett Labs*), and *Don Lee Broadcasting* announced that they had filed application for patents on a *Color-Vision* type tube, developed in conjunction with a stereoscopic project under the supervision of Harry R. Lubcke, director of research and color at *Don Lee*.

The *Du Mont* tube appeared to have quite an interesting background, for the tube had been conceived shortly after the war ended and a patent applied for at that time. Thus, a span of five years had elapsed before its disclosure, a span of years which indicated that color research had been activated long before the present three-hue talkathon had begun, those sessions many stated were responsible for all the activity in color work.

Describing the tube's construction, Dr. Thomas T. Goldsmith, Jr., said that the tube featured a new form of fluorescent screen. Instead of having a coating of fluorescent material, which produces a black and white picture when struck by an electron stream, this new tube has a screen

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composed of tiny fluorescent dots which give forth red, blue, and green colors, respectively. The tiny dots are arranged so that each dot of one color is adjacent to adjoining dots of another color. In operation, as the electron beam of the tube passes over the tiny color spots successively, it is turned on and off rapidly in accordance with both the brightness and color of the picture to be reproduced. It was claimed that the tube could be used with any of the three systems proposed; sequential, dot sequential, or line sequential.

The 10,000-page report will also disclose that startling testimony of CBS Prexy Frank Stanton, who in the course of a fiery cross-examination by RCA General Counsel, John T. Cahill, declared that CBS might enter the set manufacturing business, in the event the FCC approved the CBS system. Also revealed was the fact that a new company, with a credit of \$50,000,000, might be organized to produce or distribute CBS color receivers, if they should become the official means of reception and other manufacturers refuse to make the models.

The fact that other manufacturers would probably make sets to pick up the CBS pictures was also placed on record, as *Du Mont* appeared and testified that color-wheel sets could be produced in their plant, if the mechanical system were approved. Estimates of \$500 to \$600 per receiver were offered for models providing a 7½ by 10 picture.

On the record FCC members will also find the comments of others who were quite upset with the prospect of immediate approval of the CBS system. The situation, according to the president of the *Air-King Products Co.*, could make the market chaotic for a short period of time, and force many set makers out of business. If the non-compatible system were adopted, he declared, a transitional period should be provided, so that manufacturers could adjust their production schedules. A minimum of nine months would be required before there could be wide-scale production of CBS type receivers, according to the *Air-King Prexy*.

FEELING THAT some of the knotty problems which faced the Commission should be reviewed before many in

different parts of the country, several members of the august body have been touring the land, appearing before industry and professional groups and offering comprehensive analyses of the variety of situations which not only appear in the 10,000-page compilation of color briefs, but which are scheduled to come up during the new sessions soon to be heard in the halls of the capital.

Particularly active in this work has been FCC Chairman Wayne Coy who has appeared in Oregon, Colorado, Chicago, and Columbus, Ohio, within a span of a few weeks. His comments in Colorado, before the Rocky Mountain Radio Council, were extremely topical, revealing just what faces the Commission at present. Stating that there are three main problems before them, involving interference and allocations in the very-high band, allocations in the ultra-highs and engineering standards which would minimize interference conditions, and finally six-megacycle color, Coy indicated that the color problem was quite acute. The FCC must decide, he said, not only which system to approve, but whether the interference problems would be the same for color as for black and white. This latter point, he cited, was of great importance in connection with the allocation program. Referring to the hearings, the FCC Headman called them . . . "the longest, most complex, and most controversial in the history of the FCC." And on it he said . . . "hinges the future course of the fastest growing industry in the United States."

Commenting on the moment when the freeze is lifted, Coy declared: "When we proceed with construction in television, when we give the green light to television's coming expansion, an expansion that will involve billions of dollars, we must make sure that we are right . . . We cannot expect people to make costly investments in television stations unless they are assured that the channel allocation plans are based upon the most complete and most competent engineering testimony available . . . To jump the gun and begin by making piece-meal allocations now would not be calculated to insure the stability of what should be one of America's greatest industries."

In Chicago, before the annual meeting of the Radio Manufacturers Association, Coy said . . . "Television must be an affirmative force in our national life." He then went on to state that it was to the interest of the manufacturer to . . . "project his planning beyond circuits, cabinets, inventories. He must plan beyond vacation shut-downs and next season's models. The broad base of radio itself must be of prime concern to him . . . Why are we in a freeze today which already has halted all new television construction for more than a year and a half? Principally because of a lack of basic information. That information must come in large part from radio man-

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ufacturers. It should be produced as the result of a consistent year-round program of research. . . . For example, we are now proposing to quintuple the number of television channels by moving into the u.h.f. Here is a problem involving the expenditure of millions of dollars by the public and the radio industry. This part of the spectrum is relatively unexplored for television purposes. And yet, in all America, there were only a half dozen experimental ultra-high TV stations broadcasting programs last year and they were on the air for limited periods. Another half dozen licensees have carried on propagation studies and other limited research . . . A billion-dollar industry is no place for operation by guess . . . We cannot afford, and the public will not long permit us to plan our radio system on a crisis basis. By allocating a reasonable amount of your energy and your money to such research programs, you will be helping to assure the stability of your industry and you will be serving the public interest."

Continuing his critical evaluation of research, Coy said: "Your responsibility for instituting research programs to help chart a sound course for radio's future cannot be negated by the claim of the stressors of business competition. In fact, the interest of the radio art, the interest of your industry and the interest of the public would be best served by a healthy competition that would extend not only to products and prices, but to fundamental research that will pave the way for consistent expansion. . . . Armed with this modern weapon of scientific research and operating in the public interest concept, the radio and television manufacturers of America will be prepared to push on to greater heights of achievement in the great days that lie ahead."