

MARTIN CODEL'S

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ARTS AND INDUSTRY

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# Television Digest

WITH AM FM REPORTS

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*For Color Hearing Report, See Insert Page*

**1950 COULD BE \$2 BILLION YEAR:** Consider what 5,000,000 TV sets -- and it's altogether possible that that many will be made and sold this year (Vol. 6:8) -- would mean to the national economy:

At average retail price of \$250, they would represent total expenditure of \$1,250,000,000 by the American public. Add 10% to account for servicing, antennas, parts, etc., and figure rises to \$1,375,000,000.

Assume, also, that radio-phonos (non-TV) -- they're made by same companies -- will continue to be made and sold at about same rate as 1949 when some 10,000,000 of them were retailed at average price of about \$37.50, or \$375,000,000. That adds up to about \$400,000,000 if we reckon 5% more for servicing and repairs.

TV-radio industry thus would account for \$1,775,000,000 in retail trade, or very nearly 1% of the nation's disposable income of \$192 billion (1949). Figure is probably conservative, for it's conceivable 1950 TV output and sales will go as high as 6,000,000 units, and the percentage factors for servicing, etc. may be too low.

So it's scarcely an exaggeration to speak of the manufacturing-distributing side of TV as a "billion dollar industry." Actually, it looks more like \$2 billion.

Remember, too, that foregoing figures leave telecasting out of account entirely -- cost of building stations, cost of operation, talent, etc. We won't even venture a guess on that, except to note that very few of the 101 now-operating TV stations, to say nothing of those to come, could be built for less than \$250,000 each. As for the nearly 2800 AM-FM broadcasting stations, they represent an investment running into hundreds of millions; and station-network time sales alone ran some \$430,000,000 last year.

Note: March edition of authoritative trade journal Electronics, in article titled "Our Business in 1950", estimates this year's total electronics business at \$1,100,000,000 at factory level -- forecasts 3,700,000 TV and 8,000,000 radio sets plus \$300,000,000 in govt. business.

**A LONG, HARD LOOK AT THE FREEZE:** Nothing in TV is more obvious than the freeze -- yet we constantly get inquiries showing strange ignorance of 2 simple facts:

- (1) Freeze absolutely cannot end in a few months.
- (2) Freeze's end simply does not mean new stations mushrooming overnight.

First, defining freeze: It meant suspension of grants for new stations. "End-of-freeze" means final decisions on color and vhf-uhf allocations, then resumption of FCC's normal scrutiny and granting of applications. But effects of freeze won't really be over until new stations are on the air.

Now here are the apparently unavoidable steps before there can actually be new transmitters, in addition to the remaining 8 pre-freeze CPs due to go on air this year (see TV Addenda 10-H). This time-table is based on best guesses we can get from inside and outside FCC, plus our own:

- (1) End of color and vhf-uhf allocations hearings -- end of summer, 1950.
- (2) Tentative decision -- fall, 1950.
- (3) Final decision -- winter, 1950.

(4) Amendment of all applications to conform with new standards -- by January, 1951. Note: There are 346 applications now pending (TV Directory No. 10), and inevitably many more will be filed.

(5) Beginnings of grants to applicants in cities with plenty of channels -- February or March, 1951.

(6) Beginnings of hearings in cities where applicants outnumber channels, 60-90 days after they're actually designated for hearing -- about April, 1951.

(7) Final decisions in competitive hearings -- first ones in fall and winter, 1951. This is a particularly serious bottleneck. FCC has only 9 examiners; they've been busy with non-TV cases which have, and will have, precedence over TV in point of time. As it is, they feed their proposed decisions to FCC faster than it can handle them.

(8) First stations get on air (the non-competitive ones authorized in Step 5 above) -- during fall, 1951. These won't be too numerous, at first, because channels are generally plentiful only where they're not badly wanted. Also, uhf grants -- which mean pioneering new channels, new reception conditions -- are likely to repeat 1946-47 history of vhf grants. There will be avoidable and unavoidable stalling: "can't get on air yet; equipment unavailable."

(9) First hearing winners get on air (the competitive ones authorized in Step 7) -- during summer and fall, 1952, or 9 months to one year after grants. They'll be the vhf grantees, eager to get going, because they'll generally be in cities with good set circulations already or in big new TV markets. Most will have won their CPs only after bitter, dragged-out struggles -- occasionally protracted by deliberate "delay applications."

That's the picture. If it seems unduly pessimistic, we can only point to the fact that freeze struck on Sept. 30, 1948, or 17 months ago, and FCC willy-nilly hasn't got to climax of it yet. If there ever was a time for "expediting," to use a familiar Washington term, this is it.

**PHONEVISION KICKING UP PUBLICITY SEAS:** It could be trial balloon -- but best evidence seems to be that dealer ad plugging Phonevision, which appeared in Hempstead (N.Y.) Newsday, big suburban daily newspaper published by Alicia Patterson of New York News family, was purely local affair and not prompted by Zenith home office.

Ad captioned "Phone-Vision will soon be here" was first brought to trade's attention by Retailing Daily, which reproduced it March 3 and told about stir created in New York TV circles by Plesser's, Long Island dealer. Retailing said Zenith of New York also is "fuming over the incident."

Ad related how FCC has "agreed to sample operation..." and noted that "your Zenith set already has this feature built-in." Retailing observed:

"Not only does the ad create a false impression by indicating that Phonevision is just around the corner, but it...fails to take into account that the addition of Phonevision requires installation plus an approximate \$10 fee."

Some saw possible makings of another "uhf obsolescence" deal, such as stirred up so much controversy last spring (Vol. 5:11-21). But it's hardly likely Zenith itself authorized it, or even encouraged it, in view of (a) FCC order (Vol. 6:6) forbidding it from seeking to create public impression that Chicago Phonevision tests constitute final authorization; (b) fact that no New York area tests are contemplated as yet; (c) Plesser's assertion he isn't going to run it any more. Best dope is that an enterprising adman sold him idea for angling copy to current news.

Moreover, Zenith isn't likely in today's keenly competitive market to want to create impression its sets cost more because of Phonevision.

\* \* \* \*

If Zenith's intention is to stir up the cats, on other fronts, it's certainly succeeding. Phonevision is getting enormous publicity, has movie folk even more concerned apparently than telecasters, manufacturers or distributors.

Theatre Owners of America executive committee meeting in New York this week called for all-industry confab of producers and exhibitors to consider not only

Phonevision but theatre TV, releasing feature films to TV, advertising via TV trailers. But it's said there's little likelihood of such joint meeting -- for fear of anti-trust and restraint-of-trade charges, if nothing else.

Movie industry attitude seems to be epitomized in these words of a highly qualified spokesman: "No producing company is going to jeopardize its relations with present customers [exhibitors] for future customers who may never materialize."

This week, Zenith's E. F. McDonald reported first outright turndown -- by RKO. To its brief letter stating it would "not be possible for us to make any of our motion pictures available" for experiment, Comdr. McDonald replied in long letter that in effect tells Hollywood to wake and arise. Quoth he, metaphorically:

"The movie industry's distribution system has been traveling in the same old sailing ship for more than 40 years. Even though that old ship served a pretty good purpose, its structure was never completely sound. The sails (exhibitors) have always been too heavy for the hull...Now television has come along and begun shooting the sails full of holes. Moreover, the old hull is beginning to show some leaks, and the sails are too far gone for repair. Your industry had better try out new life boat, Phonevision, before your ship sinks any further and leaves you floundering."

Meanwhile, still no word where pictures are coming from for Chicago 300-family test, though there's still whispering that Republic may make break (Vol. 6:8). Nor is there any dope yet on what Petrillo will rule; his all-powerful union has contract with studios forbidding release to TV of new films with music. That means all musicals and nearly all others (since they usually have musical backgrounds).

Republic is reported offering 50 Gene Autry films to TV for \$1,000,000, with alleged \$750,000 offer from MCA. Autry is said to get \$500 weekly from his radio sponsor, Wrigley, to stay off TV.

**MORE INTERCONNECTIONS, NEW STATIONS:** Memphis' WMCT joined all 4 TV networks via coaxial from St. Louis March 1, heralded by TV-radio plugging of jingle "The Cable Is Coming" to tune of familiar Scotch ditty. Downtown parade, dealer promotions, special newspaper editions culminated in claim that city's TVs leaped to 24,172 total as of that date. "We can sell 3 times as many as they'll send us," is cry.

Next AT&T network extension is into Norfolk, where new WTAR-TV joins all networks as of April 2 via 3-hop microwave relay from Richmond, 87 mi. away, present southern terminus of coaxial. WTAR-TV began tests Feb. 24, but started 10 a.m. to 5 p.m. daily test patterns March 1, will go on 5-11 program schedule every day after April 2. Base rate will be \$200, network rate \$175. It opens up populous Norfolk-Newport News-Portsmouth market to TV.

Lansing's WJIM-TV (Vol. 6:3) is installing own microwave relay at Milford, 35 mi. from Detroit, 45 mi. from Lansing, has ordered audio lines from Detroit as of March 10 when tests may begin.

Kalamazoo's WKZO-TV, aiming for tests latter March or early April, plans own 2-hop microwave located to give choice of network pickups from either Detroit or Toledo. It has asked FCC for channels in 2000-mc band at Manchester, Mich., 51 mi. from Detroit, 45 mi. from Toledo; at Albion, Mich., 40 mi. from Manchester, 45 mi. from Kalamazoo.

WTTV, Bloomington, Ind., is testing conditions for own microwave relay from Cincinnati, hasn't indicated intermediate relay point or points yet.

About 30 towers of AT&T's New York-Chicago microwave hookup, scheduled for summer 1950, are up, equipment in some installed and tested. This will provide 2 more circuits, one each way; coaxial now has 4. Links touch Johnstown (WJAC-TV); Pittsburgh and Toledo (still one-station towns) and Cleveland (3 stations).

Louisville's WHAS-TV, poising for test patterns any day now, possible commercial start March 19 or 20, has signed up with CBS-TV as of that date when WAVE-TV (basic NBC) relinquishes...Denver application of Gifford Phillips will soon be amended to include also Mayor Quigg Newton, theatreman John M. Wolfberg, Harris P. Wolfberg, Richard M. Davis, Morris Shafroth, William Grant. They're hell bent to get TV into that 26th ranking market soon as possible after freeze lifts.

DuMont jumps into industrial color TV field with big splash Monday when it shows closed-circuit field-sequential system at New York IRE convention, offers it for sale to military, industry, schools, dept. stores, etc. Cost is "under \$20,000" for complete chain; one has already been sold. System uses 18-mc video bandwidth, produces 500 lines of actual horizontal resolution (compared with 170-180 for CBS, 320-330 for RCA), currently employs mechanical disc. Tube is 12½-in., no lens; plans include up to 20-in. tube, achieved by putting tube into rotating "barrel" with color filters in sides. Cameras are similar in size to black-and-white field pickup gear, include turret lenses, etc. DuMont emphasizes that system isn't intended for broadcast use (takes too much bandwidth) and that color disc isn't inherent.

Network gross billings for 1949, according to Publishers Information Bureau figures analyzed by *Broadcasting*, were: ABC, \$42,342,854; CBS, \$63,403,583; MBS \$18,040,596; NBC, \$64,013,296. (RCA annual report for 1949 shows NBC accounted for \$70,949,218 gross sales, Vol. 6:8). PIB also reported gross TV billings of networks as follows for 1949: ABC, \$1,391,991; CBS, \$3,446,893; DuMont, \$955,526; NBC, \$6,500,104—total \$12,294,514. For January, PIB reports ABC billings at \$3,537,795 (\$239,069 TV); CBS \$6,133,624 (\$625,072 TV); MBS \$1,678,888 (no TV); NBC \$5,733,893 (\$1,042,153 TV); DuMont \$51,330 (all TV).

Designated as "TV members" of NAB board, reelected in recent mail balloting, are Eugene S. Thomas, WOIC, Washington, and Robert D. Swezey, WDSU-TV, New Orleans. Among 25 directors, 6 operate TV stations, other 4 being: William Fay, WHAM-TV, Rochester (newly elected); Clyde Rembert, KRLD-TV, Dallas; James D. Shouse, Crosley; William B. Ryan, KFI-TV, Los Angeles. New board takes over at April convention.

C. E. Hooper Inc. has sold its national network TV and national radio and Pacific network radio "Program Hooperatings" to competitor A. C. Nielsen Co. for reported \$600,000. Nielsen will replace coincidental method used by Hooper in 36 cities with audimeter method. Hooper will continue to offer TV and radio ratings in individual cities, along with other services such as area coverage index, sales impact ratings, etc.

Excerpt from article on "Harry Truman—The Man" by Edward Lamb, owner of WTVN, Columbus, and WICU, Erie, as published in his *Erie Dispatch* Feb. 26, following his recent interview with the President: "A large DuMont television set is placed next to the President's desk. He is a real TV fan, and I suspect that he occasionally gets in a bit of afternoon watching or relaxation when appointments ease up. He told me that in the remodeled White House they would have a video set 'in practically every room.'"

Manufacturers are the villains holding back color, concludes 18-page report by Television Research Institute, 207 E. 43rd St., New York (John Eckstein, director). Surprisingly, CBS is distributing report, which is valiant attempt to get familiar with unfamiliar subject, contains most obvious errors, shows lots of researching but little reporting.

Matter of diathermy interference to TV came up during color hearing. In corridor banter, during recess, Bell Labs' veteran TV engineer Axel Jensen ventured solution to be called "Jensen's Law": "Every doctor using diathermy must have a wife using a television set." This law, he guessed, would be more fundamental than mere science.

Our newest *Directory of Attorneys Practicing Before the Federal Communications Commission* is sent to all full-service subscribers herewith as Supplement No. 11-C, replacing No. 11-B. List is compiled from FCC bar register, membership of FCC Bar Assn, etc. It is necessarily limited to those handling broadcasting and related cases frequently and regularly. Names, addresses, phone numbers have been checked with the principals. Extra copies are available to subscribers at \$2 each; in quantities of 10 or more, \$1 each.

Telecasting Notes: Baltimore's WMAR-TV claims it has surpassed all Baltimore AMs in evening Hooperatings (first such claim yet), citing 20.2% of total radio-TV audience 6-10:30 daily thru Dec.-Jan.; city's 3 TV stations shown to rate 46.1% of evening radio-TV audience . . . NBC flagship WBNT, New York, adds 2 daytime hours as of May 15, probably 10:30 a.m.-12:30 p.m., including *Kathi Norris* show . . . Pittsburgh still only big league baseball city not permitting TV next season again, though will radio . . . KPHO-TV, Phoenix, appoints Petry as national rep . . . Motorola returning to TV advertising soon, upping newspaper-magazine as well as radio budget 25%.

Network Accounts: Second 2½-hour *Saturday Night Revue* (Vol. 6:7-8) on NBC-TV 8-10:30, March 4, has United Fruit, Swift and RCA Victor as participants; NBC pushing hard to get more sponsors signed . . . Canada Dry expands ABC-TV lineup for *Super-Circus* to 21 stations, Sun. 5-5:30; International Shoe Co. and M&M Candy Co. taking alternate weeks of second half, 5:30-6 . . . Toni takes Wed. 9-9:30 alternate weeks on CBS-TV as of April 5, so *Abe Burrows Almanac*, sustainer, will occupy other alternate periods . . . Crosley drops *This Is Show Business* on CBS-TV as of March 26; it continues sustaining.

Station Accounts: Philadelphia's WCAU-TV premiered *The Robin Chandler Show* March 1, with John Wanamaker Store sponsoring New York fashion editor discussing decorating, sewing, cooking, infant care, marital problems, health, budgets, etc.; Wed. 12:30-1 p.m. show is also piped to WOIC, Washington, sponsored there by Woodward & Lothrop dept. store. Participating spots have been sold to Literary Guild, GE and Morgan-Jones Inc. (rugs, towels, spreads, etc.), and plan is to put it on CBS-TV later . . . Larus & Bros. (Edgeworth tobacco) reported readying April TV spot campaign, thru Warwick & Legler . . . Bunte Bros. (candy) sponsoring *Cactus Jim* on WNBQ, Chicago, 5-5:30, with westerns . . . Packard-Bell Co. (TVs & radios) sponsoring 12 U. S.-Mexico polo matches on KNBH, Los Angeles . . . Among TV spot accounts currently reported on or contemplating use of TV are Cat's Paw Rubber Co., thru S. A. Levyne Co.; Velvet Peanut Products Inc. (peanut butter), thru Simon-Michelson; O-Cel-O Inc. (cellulose cleaning aids), thru Comstock, Duffes & Co., Buffalo; Celanese Corp. of America, thru Ellington & Co.; Skippy Peanut Butter, thru Bascom & Bonfigli, San Francisco; Wander Co. (Ovaltine), thru Grant Adv.; S. J. Wegman Co. (Slendaline girdles), thru Gordon & Rudwick; Carrier Corp., thru N. W. Ayer; Buckeye Potato Chip Co., thru Byer & Bowman, Columbus; Dulane Inc. (Fryryte appliances), thru Ruthrauff & Ryan; General Panel Corp. of California (home builder), thru R. T. O'Connell Co., New York, and Lockwood-Shackelford Co., Los Angeles.

"Get Started in Television Now," urges leading TV rep firm, The Katz Agency, in brochure *Here's Television* just issued—giving capsule data on markets, sets in use, impact, case histories. Copies available on request from New York office, 500 Fifth Ave.

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March 11, 1950

**TIZZY OVER UNFOUNDED COLOR 'DOPE':** Tenseness of industry over color issue was well illustrated by way rumor ricocheted from company to company, all across the country, after Friday's Radio Daily carried gossip that FCC would authorize "multiple standards" in few weeks, lift freeze immediately.

Actually, situation remains exactly as we reported last week (Vol. 6:9): Individual commissioners are exploring all possible color decisions, looking for best one, and freeze can't possibly be lifted before fall or winter.

We checked again with all 5 commissioners in town, found they still haven't even met to discuss matter. Chairman Coy finally got fed up with inquiries, asserted: "We aren't replying to mere rumors."

Quotes from other commissioners: "Pipe dream." "Not an iota of truth." "They must know more than we do." But Jones said "no comment"; he's believed sold on idea. Hennock and Hyde were out of town.

Status of FCC's topside thinking may be indicated by Coy in his speech March 14 at Oklahoma U radio conference.

Our guess about whole affair, started by questions from Comrs. Coy, Hennock and Jones during last week's hearing, is that they're trying to encourage widest possible industry thinking about solutions -- certainly haven't settled on any particular system or "multiple standards."

But some industry people suspected story was "plant," linked it with CBS president Stanton's call on President Truman Thursday, came up with dark suspicions.

**PLUMMER NEW FCC CHIEF ENGINEER:** Young (37) and younger-looking, FCC's TV and high frequency expert Curtis B. (Curt) Plummer was named chief engineer Friday -- filling vacancy left when George Sterling became commissioner in January 1948. At same time FCC picked assistant general counsel Harold Cohen as chief of Common Carrier Bureau, first move toward new functional organization (Vol. 5:52) which becomes effective April 3. Promoted to chief hearing examiner was J. Fred Johnson. Acting chief engineer John A. Willoughby reverts to assistant chief engineer.

Choice is welcome one, not only because post needed filling (see Open Letter to FCC, Vol. 6:6) but because Plummer is capable, popular, deserving. He's noted for photographic mind, is native of Maine (as is Sterling), married, has year-old son, is 1935 graduate of U of Maine. After working with New England stations and Radio Receptor Co., he joined FCC in 1940, has been its TV chief since 1945, has participated in international high frequency conferences in Atlantic City in 1947, Geneva 1948, Mexico City 1949.

New Broadcasting, Safety & Special Services, Field Engineering & Monitoring bureaus will be set up soon. Planned vertical organization means separate legal, engineering and accounting personnel will be assigned to each of the 4 bureaus, doing away with separate law, engineering, accounting bureaus. Affirmed in new posts (with same titles) were Benedict P. Cottone, general counsel; William J. Norfleet, chief accountant; William K. Holl, executive officer -- all of whom with Plummer report direct to Commission as staff consultants. They no longer will have operating responsibilities -- although they'll continue with present functions until other 3 bureaus are established.

**TESTS START IN LOUISVILLE & LANSING:** Louisville Courier-Journal's WHAS-TV, 9.6-kw visual on Channel 9, began testing Friday afternoon (March 10) -- and is now definitely set to begin scheduled operations Monday, March 20. It thus becomes No. 102 on the TV roster, giving city its second outlet. It joins CBS-TV as primary though non-interconnected affiliate, WAVE-TV remaining NBC-TV. Coaxial interconnection is promised next October.

WHAS-TV base rate will be \$250; it will run test patterns and Multiscopes daily 1-5:30 p.m., plans daily program schedule, 5:30-11 p.m. with frequent live shows from 42x64-ft and 30x50-ft studios in big new newspaper-radio building. With GE installation, including 12-bay antenna, it wants to hike its power after freeze to 55.5-kw visual, has applied to FCC for increases.

WJIM-TV, Lansing, Mich., began Channel 6 equipment tests Thursday (March 9) with full 19-kw visual power -- but as yet unannounced are starting and interconnection dates (Vol. 6:3,9).

No. 103 station definitely will be now-testing WTAR-TV, Norfolk, Channel 4, opening April 2. Its AT&T microwave relays from Richmond (Vol. 6:9) will be ready by then, with Philco 6000-mc equipment, and towers at Mt. Pleasant, 18 mi. from Richmond; Newton School, 27.7 mi. from Mt. Pleasant; Longview, 22.2 mi. Good reception of tests is reported from Petersburg, 70 mi.; Lawrenceville, Va., 86 mi.; Wilson, N.C., 100 mi.; Ocean City, Md., 125 mi.

FCC this week extended CP of WSM-TV, Nashville, until Sept. 1; station has indicated it expects to be ready by then.

**THE COMMERCIAL FOLK TALK TV OVER:** Commercial impact of nation's 5,000,000 or more TV sets in use (currently being increased nearly 500,000 monthly) couldn't be missed during March 6-8 second annual conference of Chicago Television Conference -- attended mainly by management, advertising and production executives. And with concentration of sets in relatively few markets ("isolation of the battlefield," one speaker termed it), talk was more about "results," less about "experimentation" and "preempting of time."

TV station operators in the black, such as Toledo's WSPD-TV (E. Y. Flanigan) and Grand Rapids' WLAV-TV (Leonard Versluis) were rather matter-of-fact about it -- as if to say: "Who ever doubted we'd make it?"

"You get circulation in big, sizeable chunks that require no justification," asserted Harry Bannister, WWJ-TV, Detroit, who put characteristic zing into flock of statistics: 58% of population lives in the 58 TV areas, where 2/3 of nation's retail business goes on. TV families own homes, cars, phones, etc. in much larger percentages than do non-TV families. TV families are larger than non-TV, average 2 hours viewing daily.

TV impact on AM will be more and more in news, if Chicago talk is criterion. Robert Swezey, mgr. of New Orleans' WDSU-TV, admitted: "We're going to be hurt in radio before long," cited example of dept. store cutting out radio after notable TV successes. Said heavy AM user L. E. Waddington, Miles Laboratories (Alka-Seltzer, etc.), not yet impressed with TV's coverage: "With our rigidly-allocated budget, giving us extensive radio coverage now, we'd be able to spend more in TV if AM rates were cut to degree that TV has taken away audience." AM salesmen groaned at that.

Neither condescending nor paternal towards TV, panel of admen discussed TV in cold sales terms. Some have been impressed, some disappointed, others still await conclusions. A. L. Johnson, of big, conservative International Shoe Co., reported that premium offers on TV ('Howdy Doody', et al) had pulled 2,000,000 kids into firm's outlets, but that he won't know for some time whether TV expenditures paid off. Budd Gore, Marshall Field, was quite pleased with local 'Uncle Mistletoe' kid show, pointed out profits in "side rights" such as picture books, toys, etc.

Spot commercials seemed to trouble both advertisers and station men. Kraft Foods' J. B. McLaughlin complained:

"We've spent literally millions of dollars to make our one-hour 'Kraft Theatre' good entertainment. But how do you think we feel when we see somebody come along and take advantage of the audience we built? Often, because of his greatly

Heavily-documented TV success stories will soon be tossed at hesitant advertisers, NBC's Hugh Beville and Northwestern U's Dr. Charles Allen revealed during research panel discussion at Chicago Television Conference. In a few weeks, NBC expects to release survey, done in collaboration with Hofstra College, showing how products sold among 800 New York TV families compared with sales among 800 non-TV. Dr. Allen, consultant to Chicago TV Council, plans to publish vital statistics on 40 successful Chicago programs in about 6 weeks. Curiously enough, he said, he's learning that high ratings aren't always first criterion for success, that some advertisers swear by programs with "zero-point-zero" Hoopers. Discussion also revolved around these suggestions for improved research: (1) Ratings to be made every 3 weeks, perhaps, instead of monthly, thus giving quicker report on bi-weekly shows. (2) Researchers "should research their research" to detect shortcomings in techniques. (3) Close check of viewing among non-TV owners.

AT&T has spent \$38,000,000 on TV network facilities, now serving 26 cities via 9000 channel-miles. By end of 1950, total will be \$60-70,000,000 outlay to serve 40 cities via 15,000 channel-miles. This information came out at FCC hearing this week on whether AT&T must connect with Western Union, as part of TV interconnection case resulting recently in FCC decision that phone company had to take signals from privately-owned relays (Vol. 5:37). Western Union told of plans for extension of present New York-Philadelphia-Washington relay to Pittsburgh, Boston, Chicago, St. Louis. Hearing resumes April 10. AT&T also asked FCC to reconsider decision on interconnection as applied to "inward service"; it doesn't think decision should apply where one TV station picks up another's signal off air, then wants to feed it to network through AT&T facilities.

Some new statistical conclusions about TV, as adduced by GE's electronics marketing chief Ernest Vogel: 28,000,000 sets in use in 24,600,000 homes by 1955 (3,600,000 with 2 sets); 404 telecasting stations added during 1951-54, making 513 in all; 146 new TV areas opened up by these 404 stations so that 71% of all U. S. families are served by 2 or more stations; sponsors spending \$1 billion annually on this "medium unequalled in the annals of advertising"—that sum coming mainly from increased national income, enlarged ad budgets, but "perhaps cutting into other media to a minor degree."

Phonevision was called "undemocratic," tending to establish a "caste" system in TV by permitting viewers to pay for exclusive viewing of quality telecasts, in letter to FCC from TV manufacturer John Meck asking it reject proposal that would "restrict the ownership and enjoyment of [TV] by all the people." In Chicago, Zenith's Bonfig told TV conference company would start 300-family tests "in some months."

Use of booster to increase uhf coverage is envisaged by Steinman stations in experimental TV application filed this week to modify KG2XAZ, Easton, Pa. Plan is to move station to Allentown, using 542-548 mc, 4 kw visual radiated power, with directional booster near Easton to pick up and retransmit same signals on same frequencies. Tests have shown Easton cannot be covered properly from uhf transmitter at Allentown.

DuMont has new film projector with fast pull-down mechanism, enabling it to be used with IO camera chain. It also can be used for rear-screen projection to permit outdoor shots to be simulated in studio. Universal model sells for \$2985; heavy duty model, \$4860.

Telecasting Notes: Los Angeles' KFI-TV, after year of daytime-only operation (Vol. 5:14, 17), resumes nighttime operation as of April 1, with Class A rates of \$200 hour, \$52.50 minute spot, \$60 participations; daytime rates remain \$210, \$35 & \$40 . . . April 1 rate raise to \$2000 for Class A hour by WABD puts all 4 New York network keys on same level; WNBT went to \$2000 Jan. 16, WJZ-TV Feb. 1, WCBS-TV Feb. 15 . . . Dick Richards' stations hearing, on alleged mis-use of facilities, starts Mon., March 13, in Los Angeles Postoffice Bldg., before FCC Examiner J. Fred Johnson; Hugh Fulton is Richards' new trial counsel . . . CBS president Stanton's and business v.p. James Seward's visits to Hollywood last week aroused speculation there that it's looking over available movie lots for new TV production studios of own . . . Los Angeles KTTV, owned 49% by CBS, controlled by *Los Angeles Times*, moving entire operations to Nassour studios at 5746 Sunset Blvd., which press statement says "presages an amalgamation between the television and the motion picture industries [with] KTTV planning to produce [own movies] for TV release" . . . NBC-TV has leased 3 floors (76,000 sq. ft.) at 517 W. 56th St., New York, for carpentry and paint shops, wardrobe, furniture, scenery storage, etc. . . . WJIM & WJIM-TV, Lansing, Mich., now testing, have appointed H-R Representatives Inc., new Frank Headley firm (Vol. 6:7), as national rep.

Comic book reading gives way to TV if survey of 7 to 11-year-old group of high IQ youngsters attending New York Hunter College Elementary School is any criterion. Of 375 questioned, 168 chose TV as favorite pastime, 135 chose books—with movies, radio and comics following. Switch to video was thus summed up by one: "TV gives you stories like a book, pictures like movies, voices like radio and adventure like a comic." Approved methods of reducing viewing time, if parents feel TV is cutting into other activities, are (1) rationing, (2) improving child's choice, (3) subtle suggestions on the joys of "good reading."

Teen-agers view TV almost as many hours as they attend school, according to survey of 447 pupils (11-15 years) at Burdick Jr. High School, Stamford, Conn. Viewing among 223 who said they had TV at home totaled 27 hours a week (3.85 hours a day) compared with 27 hours 55 minutes of school schedules. Other answers: (1) 186 said they listened to radio much less or hardly ever after TV. (2) 150 said they go to movies less. (3) 186 said TV had increased their interest in outside events. (4) 197 said TV didn't interfere with time for homework and 159 said TV hadn't interfered with completion of homework—although 126 said parents thought so. School intends to compare scholastic records of students with amount of time they spend viewing TV.

Editor Norman Cousins, of *Saturday Review of Literature*, who has been carrying on one-man (not much heeded) crusade against TV in his own paper, calls it "nation's No. 1 time-trap for children" in Feb. 17 *Public & Education*, published by National Education Assn. He blames TV for juvenile misconduct and delinquency, even more so than terror comics. He calls for "prodigious raising of [program] sights that takes into account the phenomenal rise in the national level of education and, in general, the increasing maturity of people."

Final morning session of NAB convention in Chicago's Stevens Hotel, April 12-19, is set aside for TV—and that's all. Engineering conference runs Wed.-Sat., April 12-15, and Management Conference, Mon.-Wed., April 17-19.

**Station Accounts:** Domestic Sewmachines sponsoring *Adventures in Sewing* on New York's WJZ-TV, 1:30-2, starting March 10; Sulzman Distributing Corp., New York, and Apollo Distributing Corp., Newark, placing thru Fuller & Smith & Ross, Cleveland . . . Case-Swayne Co., Santa Ana, Cal. (fruit packers) sponsoring *The Jonathan Story*, film serial by Will Lankergood Productions, Hollywood, on KFI-TV, Mon. thru Fri. 7:15-7:30; same station also to carry Angels baseball sponsored alternate days by Emerson distributor and Eastside Beer . . . Burry Biscuit Co. sponsoring *Friendship Ranch* on WNBT, New York, Thu. 6-6:15, thru Clements Co., Philadelphia . . . Kaiser-Frazer used New York TV stations this week, including hour show on WOR-TV, to introduce new models. Among sponsors reported using or preparing to use spot TV; Owens Karass Inc., Rochester (Sark card game), thru Hutchins Adv.; Larson Laboratories, Erie, Pa. (Mintglo adhesive balm), thru Yount Co., Erie; Stokely-Van Camp Co., thru Gardner Adv., St. Louis; Helene Curtis Industries Inc. (Suave hair dressing), thru Gordon Best Agency, Chicago; Durkee Famous Foods (margarine), thru Meldrum & Fewsmith; United Airlines, thru N. W. Ayer; Chrysler Dealers of Chicago, thru Olian Adv.

**Network Accounts:** Easter Sunday one-shot on NBC-TV, April 9, 5:30-7 p.m., sponsored by Frigidaire, will feature Bob Hope as m.c. of big-name variety show; he's reported getting paid \$40,000 . . . General Mills sponsoring *Chicago Golden Gloves* finals on 25 ABC-TV inter-connected stations, Wed. March 29, 9:30-conclusion; via kine Sat., April 1, same time, on 6 non-connected stations . . . Gillette to sponsor 3 basketball championships on 26 ABC-TV stations—NIT finals March 18; NCAA Eastern regional finals, March 25; East-West All-Star game, March 25—all starting 10 p.m. from Madison Square Garden . . . Blatz Beer renews *Roller Derby* on ABC-TV for 26 weeks from March 30 . . . New cooperative *Jamboree*, square dance program, keyed from WGN-TV, Chicago, due to go on DuMont Network, Sun. 8-9; Jay's Potato Chips Co. to sponsor in Chicago.

March 1 sets-in-use, reported by stations since NBC Research "census" of Feb. 1 (Vol. 6:8): Cleveland 176,474, up 22,474 in month; Washington 109,360, up 8360; St. Louis 100,100, up 12,500; Kansas City 28,901, up 2000; Memphis 24,172, up 8272; Miami 20,000, up 3100; Omaha 17,720 as of March 3, up 3720; Greensboro 9557, up 757; Utica 9300, up 2100; Davenport 8325, up 725; Ames (Des Moines) 5611 as of March 8, up 4411; Norfolk 4192, up 2292. Note: Number of families for Charlotte should be 171,000, not 107,000 as listed in our Vol. 6:8.

"What will be the result of televising opera? Will it cut down opera performance?" Dr. Franklin Dunham, chief of radio, U. S. Office of Education, asks the questions, answers them himself: "No, it will only multiply its audience a hundred thousand fold. Will it kill efforts to give opera in other cities? No, it will only make the public more avid to see opera in the flesh, just as pictures have made travel more desirable and the great historic places of the world more interesting to millions."

England started TV some 10 years before we did, yet latest Postoffice count of TV receiver licenses shows 285,500 (end of January)—fewer than we have in either New York, Chicago, Philadelphia or Los Angeles. United Kingdom has some 12,000,000 licensed radios.

President's Communications Policy Board (Vol. 6:7) held first meeting at FCC Friday, devoted most of its time to problems of organization and staff, heard representatives of govt. agencies. Next meeting April 20.

**Personal Notes:** In its "Look Applauds" section Feb. 28, *Look Magazine* pays tribute to Crosley's James D. Shouse as "rising new figure in U. S. industry" and "at 46 a man to watch" . . . Roger S. Underhill, ex-WICU, Erie, joins WJIM & WJIM-TV, Lansing, Mich. (now testing) as sales mgr. . . . William R. McAndrew, NBC's mgr. of WRC and WNBW, Washington, elected president of Radio Correspondents Assn. . . . Thomas D. Connolly new mgr. of CBS-TV program sales . . . Scott Donahue Jr., ex-WPIX, joins New York TV staff of The Katz Agency . . . Daniel F. Greenhouse, film man, named director of TV sales of KTTV, Los Angeles, under Frank G. King, sales mgr. . . . Clyde Rembert, KRLD & KRLD-TV, Dallas, is second TV operator (out of 9) elected to CBS Affiliate Advisory Board—other being Richard Borel, WBNS & WBNS-TV, Columbus. . . S. L. Spraggin, wartime plant supt., elected v.p. of Hoffman Radio in charge of plant operations; John A. Rankin, ex-Belmont and RCA License Labs, elected Hoffman engineering v.p. . . . Donald G. Gaines, ex-Hytron, RCA & Zenith, appointed Sentinel chief electrical engineer under W. J. Schnell, engineering director.

Draw your own conclusions from this carbon sent us of letter to Senator Johnson, dated Feb. 28, over signature of Gene O'Fallon, KFEL, Denver: "Last month, in Chicago, Frank F. Moch, president of TV Installation & Service Assn, at a TV meeting stated 90% of today's TV sets are of poorer quality than last year. Thought you might be interested." Carbon was also sent to Dr. Allen DuMont. In statement sent to Chicago TV Council, Dr. DuMont left little doubt he feels many AM broadcasters are trying to delay TV by confusion, intimated they've influenced Sen. Johnson ("It almost seems that his opposition is to television itself."). Regarding color, said DuMont: "By virtue of its incompatibility, the Columbia system would cause absolute turmoil from a broadcasting, manufacturing, sales and reception standpoint. The RCA and CTI systems, by virtue of their compatibility, have promise for future development. They are not ready now in my opinion."

Motion picture theatre attendance problem got closer attention this week as result of (1) Audience Research (Gallup) report showing January attendance down to 64,600,000, or 4% off 67,100,000 for January 1949 (see also Vol. 6:5); (2) report 20th Century National houses played to 10,000,000 less patrons in 1949 than 1948; (c) Wometco Florida chain's report its downtown theatres' business dropped 27% in 1949 under 1948.

Canadian RMA reports 9000 TV sets turned out by 12 manufacturers during 1949, having retail value of \$3,418,500. Target for first quarter of 1950 is 6000. Canada has relaxed ban on radio imports to permit 50% quota, but Canadian manufacturers believe most imports will be parts, not sets.

TV sets owned by families on relief have to be re-returned, Long Island Comr. of Public Welfare Wallace ordered this week. He told 4 families to return their sets, cut relief payments of woman who refused.

Four New York FM grants were made this week—to WINS, WHOM, WEVD and Brooklyn Dodgers—after long stymie due to revision of FM standards. Betting is that most won't build.

Spring schedule of CBS color medical demonstrations: March 26-29, St. Louis; April 17-21, Boston; May 1-3, Ft. Worth; June 26-30, San Francisco.

Largest feasible-size tube would be one giving picture 4x5-ft., Dr. Allen B. DuMont told reporters at IRE press conference this week.



lowered time costs, the spot buyer is able to spend more money on dramatic commercials than we can. He really gets greater impact on our audiences than we do. But if we go into spots, who's going to pay for the entertainment?"

Unexcited about advent of coaxial, due in October, F. Van Konynenberg, WTCN-TV, Minneapolis, pointed out consequent necessary reduction in number of spots. His answer will be increases in spot rates. Incidentally, he warned stations against too heavy dependence on sports, advising them to build programs completely under own control. But little WTTV, Bloomington, Ind., would really be up the creek, currently, without basketball, implied station's sales mgr. Robert Lemon.

\* \* \* \*

Chicagocans' fierce pride in their TV activities, their network originations, their tricks with modest budgets, was evident throughout sessions. Chairman George Harvey, WGN-TV sales chief, was pleased by intense interest in affair, said it offered sort of foregathering of sponsor-agency-station-network people that neither NAB nor TBA provides yet. Registration was about 275, attendance at sessions erratic -- ranging from 25 to 250.

**THE CASE FOR FILM vs. LIVE TV:** Clearer pitch for films in TV programming we've ever heard came from Russ Johnston, v.p. Jerry Fairbanks Films, ex-NBC film chief, during this week's Chicago Television Conference. It's story of radio's "electrical transcriptions," now firmly entrenched, all over again -- but a game played with bluer chips. Johnston cited these advantages:

(1) Elimination of cable costs. He estimated AM line charges now about \$4,000,000 yearly for 150-station network. For same-size TV hookup, 8 hours daily, he figured cost \$25-30,000,000.

(2) Mass production advantages, allowing re-use of film. He pointed out that Fairbanks had bought 52 Grant-Realm (Lucky Strike) films used on network when only some 1,000,000 sets were in use; now there are more than 5,000,000 TV families.

(3) Flexibility. Choice of markets without network limitations.

(4) Talent availability. Shooting can be scheduled when desired. Name stars, getting older, fear "merciless" TV camera but trust films that permit retakes.

(5) Film costs coming down. "Multicam" technique (featured in March 6 Time Magazine) "permits us to shoot half-hour show in half hour, if necessary." Method is that of using several cameras simultaneously, getting angles, long shots, etc. all at once. So impressed were International Silver Co.'s Silver Theatre producers, they've switched from live to film. And Johnston said many big agencies are seriously interested. Biggest problem is Petrillo, who allows music on kines but not on film shot direct -- on principle that kines are one-shot, films available for re-use.

Listing improvements needed in film telecasts, Johnston was particularly griped about poor techniques at transmission end. Iconoscope tube is inadequate, he said, recommending research comparable to that done on image orthicon for live pickups. Projectors are generally poor, he added, are apparently afterthoughts. Sound is bad -- but he didn't blame stations, ventured film makers would probably have to go to magnetic sound-tracks to take advantage of TV's FM sound.

Flying-spot scanner shows promise, in Johnson's opinion, and he's ready to shoot film at TV's 30-frame rate (instead of movies' 24) when warranted.

**COLOR SIMMERS DURING HEARING HIATUS:** Recess of color hearing until March 15, when Dr. Peter Goldmark is due to resume for CBS, doesn't mean color is out of the news (see p. 1) -- though it's true nothing hot has developed. Here's summary of current activity on all fronts:

(1) CTI regained much of its confidence after demonstrating again for FCC Friday. After showing to Comrs. Jones, Sterling, Walker and some 30 staffers, president Arthur Matthews said:

"We're now approximating what we can really do. Brightness, registration, resolution, fidelity -- all are good." One commissioner said he was "very pleased" with improvement, noted "color fidelity is surprisingly good" and that there was no fringing. But, he said: "They still have a problem on scanning methods." CTI still

uses vertical shift, doesn't plan to try horizontal, claimed to be much better, because of scant facilities here. Press and public will see system again next week, at showings 11 a.m. daily.

(2) Evaluation of all systems, by Bell Labs' Axel Jensen during IRE symposium, showed CBS system capable of 55% of monochrome's resolution, CTI's 66 2/3%, RCA's somewhere between 66 2/3% and 100% -- latter impossible to pin down mathematically because of difficulty in weighing contribution of "mixed-highs." But, as moderator Donald Fink later pointed out, FCC's decision isn't likely to be based solely on resolution or even purely engineering factors; it will also weigh social, economic impact, etc.

Coaxial's present limitations shouldn't influence FCC's decision, asserted Jensen. He said that if wider bandpass is needed, AT&T will have it by time color is ready for it.

Controversy really excited engineers, who turned out 2000-strong to hear panel members Goldmark of CBS, Lippincott of CTI, Engstrom of RCA, Goldsmith of DuMont, Smith of Philco, Judd of Bureau of Standards. (Suggestion from floor that TV be started anew in uhf with room for broad-band color and monochrome got huge hand from audience, startled panel and visiting Comrs. Hennock, Sterling, Webster.)

(3) Senator Johnson doesn't want to wait, apparently, long enough even to hear from his own Condon Committee, let alone conclusion of FCC hearings. Here are excerpts from his statement sent to Chicago Television Council which had panel discussion Tuesday on "Color Now or Later":

"I hope the manufacturers, the producers of programs, and most important of all, the advertisers who use this great medium, will not allow themselves to be too greatly persuaded by the more pessimistic views of the timid...

"Color television is a commercial reality today..."

"Programwise, it isn't going to cost a nickel more to produce color..."

[Foregoing quotes are salient excerpts -- but not separated from context, as Sen. Johnson so frequently charges newsmen with doing when they don't print his statements in full. We'll send you full text, if you wish it.]

Will advertisers buy color? Panel member Hugh Davis, executive v.p. of Foote, Cone & Belding, said: "The answer now is 'No.' I've got enough trouble getting them to pay for black-and-white. When color is here, some advertisers will want color, but I don't think they'll pay a great deal more for it."

[Our own address to group is reprinted herewith as Special Report.]

(4) FCC told Celomat Corp. (magnifier maker) to come on into color hearing, said it rated appearance because it offered cost figures on CBS color converter. Company had said it could build it to sell for \$9.95 (Vol. 6:8). At same time, FCC turned down Wells-Gardner and Communications Measurements Labs (Vol. 6:8), saying they had nothing to offer on specific issues Commission raised. Packard-Bell also asked to get in, stating that big companies could weather drop in set sales due to hasty color decision whereas smaller outfits couldn't. It also asked for compatible system, freeze lifting. Chances are it will also get cold FCC shoulder.

(5) RCA has delivered 2 color receivers (10-in.) to FCC, which turned them over to Jones and Sterling, is sending more (though some commissioners feel they're getting crowded out of their homes by so many sets). Nothing new out of RCA on tri-color tube, though it bought option to sub-license Geer tube (Vol. 5:42,45) when Technicolor bought patents from Dr. Geer this week. Money involved wasn't released, though Technicolor said it will spend \$500,000 on developmental program, including research at Stanford Research Institute and USC. It's understood Dr. Geer came out of arrangement nicely, is also retained as consultant. Said one in the know: "I used to feel sorry for him; I don't any more."

Though RCA says it isn't using Geer's principles in its tri-color tubes, to be shown later this month, it apparently saw features it wants to be protected on, will join Stanford research.

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# Television Digest

WITH AM FM REPORTS

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**COLOR & OFF-COLOR—COY SPEAKS MIND:** FCC chairman Coy's comments on color, during his U of Oklahoma speech Tuesday, do so much to show status of his thinking (and that of FCC majority, we believe) that we're reprinting excerpts as Special Report herewith. But don't try to read too much between lines, because this seems obvious:

Coy still hasn't made his decision, nor have his colleagues who haven't even met yet to discuss decision -- this despite rumors and false reports (Vol. 6:10). He's weighing every possible solution, wants everyone to know what he believes basic problems to be, wants reactions to them.

Particularly interesting are his descriptions of CBS and RCA systems, his comment on tri-color tube, his repetition of "built-in" adapter question, i.e., whether manufacturers would build it into sets henceforth and thus start making CBS system compatible (Vol. 6:9) in order to give more time ("perhaps a year or more") for further experimentation and a later decision.

\* \* \* \*

There was much more than "color" in Coy's address (full text available from FCC information dept.), and what got biggest play in press was his warning to broadcasters-telecasters that they'd better clean up "livery stable humor" or Congress might do it for them. He quoted excerpts from letters FCC and Congressmen have received, decrying "risque, ribald, raffish sort of thing we have been getting" as well as crime and horror programs aimed at juvenile audiences. He said:

"When a comedian gets so big that his network can no longer handle him, then we have a case of the tail wagging the dog. The boy who used to express himself with chalk on a wall is now provided with a TV screen. The world has moved from the horse and buggy days to the electronic age, but this type of comedian is still peddling livery stable humor. The radio and TV carry him straight into the home without having taken the precaution to see that he is house-broken. Propriety is sacrificed for profits. The result is off-color TV -- tainted TV."

Everyone seems to think he has a particular comic in mind, but Coy won't name names. Good guess is "composite" of Godfrey and Berle.

**FILM FOLK GETTING PLENTY WORRIED:** You can be sure the movie moguls are plenty worried about TV when Spyros Skouras tells 20th Century-Fox Showmanship Conference in Chicago last week: "We are in a fight for survival." Main theme of his key address was TV's impact on movies. He called on exhibitors "to act together and work feverishly and fanatically for large-screen TV for theatres." Theatre owners were fed this bad news, too, by National Theatre chain's Charles Skouras: In TV areas, movie attendance is down 40%; in non-TV areas, it's down only 12%.

Obverse of pessimism was "use-TV-to-fight-TV" attitude expressed by TOA president Sam Pinanski and Paramount's Leonard Goldenson. Former said he was going to buy all TV time he could "to tell them [viewers] to forget the junk they're seeing and come over to a real show." Latter called TV "greatest medium of selling the world has yet devised...Let's not be ostriches, let's go use it." On another front, Screen Actors Guild called TV both threat and promise to actors; board report to membership states it's one of principal reasons for Hollywood unemployment but sees it eventually providing lucrative employment for actors.

**REPORTS ON STATUS OF NEW STATIONS:** Louisville's WHAS-TV found after sporadic tests that it needs more time for technical shakedown, accordingly postponed scheduled March 20 opening to March 27. Meanwhile, test patterns and Multiscope, with occasional programs, will continue 9 a.m.-9 p.m. daily except Sunday. Manager Victor Sholis says March 27 opening is definite.

Courier-Journal's WHAS-TV will be 102nd station on air, will be followed April 2 by Norfolk Virginian-Pilot and Ledger Dispatch's WTAR-TV (Vol. 6:3,9,10) -- and that will leave only 6 CPs outstanding (see TV Addenda 10-J herewith). It also means 37 newspaper-owned TV stations, for Dallas News this week completed purchase of KBTW (Vol. 6:4) with FCC approval, soon will change call to WFAA-TV. And it means 81 TV outlets owned in common with local AM outlets.

From Lansing comes word that now-testing WJIM-TV (Vol. 6:3,9) is being seen and heard in Saginaw, Flint, Bay City, Jackson, Kalamazoo, Battle Creek, Grand Rapids -- and its enthusiastic owner Harold Gross wires it will "cover one of the largest areas in the country." Formal debut date hasn't been set yet. Norfolk similarly reports excellent test results, huge local interest in area's first station, stimulated by big TV exhibit, 56-page special newspaper section.

Report from Iowa State College's new WOI-TV, Ames (Vol. 6:7) claims 5600 TVs in area 3 weeks after it started Feb. 21, college survey of listeners Feb. 28 showing reception "good" among 80% of interviewees within 88-mi. radius. Des Moines Electric League secretary George Hoover claims central Iowa sales greater than those in Iowa's other TV areas -- Davenport and Omaha -- as of comparable date. Public demand is so great that distributors are clamoring for sets from Eastern suppliers. These brands are most in evidence: Admiral, Arvin, DuMont, Emerson, GE, Motorola, Philco, Raytheon, RCA, Stromberg-Carlson, Westinghouse, Zenith.

**LAST-LAP SPURTS IN COLOR CONTEST:** Hopes for early end of color hearing grew this week as weary participants waded through 3 more days of testimony. Direct testimony should end next week. Participants have asked for aggregate of only 30 hours of cross-examination. Rebuttal testimony shouldn't take too long. Imponderables are time needed for questions by Commission and expected additional demonstrations.

Good guess now is mid-April for windup. Thereafter, there's no estimating when FCC will render color decision -- but it's obviously not inclined to delay freeze hearings a minute longer than necessary. Biggest developments of this week:

(1) CTI's decided improvement, despite its well-justified plaint that it's still "working out of a suitcase."

(2) CBS's announcement it has achieved doubled horizontal resolution by use of sampling and horizontal interlace techniques.

CTI was elated over its pictures, asserted it can do even better, wants to prove it to FCC with demonstrations in own San Francisco bailiwick. Pictures were much brighter, fairly well registered, had excellent color fidelity -- impressed expert and lay observers alike. On debit side, line structure appeared quite coarse, resolution rather low, "boiling" or "jittering" distracting.

Admitting some shortcomings, CTI president Arthur Matthews said confidently that horizontal shift or double shift scanning technique would clean them up. His attitude on "multiple standards" (Vol. 6:10): "I really don't know what to think."

Senator Johnson attended press showing Monday, then stated to reporters: "No one can discount CTI after this demonstration." Asked his current thinking on subject of multiple standards, he said: "As a last resort, it may be all right. I'd like to see a composite of all systems worked out. I know it's not as simple as that. But I'd like to see standards allowing progress and improvement. I know that when I talk about broad general standards I'm indulging in a little doubletalk."

"CBS is farther advanced than the others. It's the older system. It could give good service. With respect to its potential, I wouldn't want to commit myself." He met with full Condon Committee last week; presumably, it's gearing for report.

CBS's Dr. Goldmark popped his development Wednesday, said he just got it to

work satisfactorily, in laboratory, Monday night. Still insisting CBS system's resolution is good enough now, better than RCA's or CTI's in fact, he offered new technique as answer to criticisms about low CBS resolution. Dr. Goldmark testified development requires about 6 more tubes in receiver.

There's little question technique will work for CBS, apparently; in fact, many have wondered why CBS hasn't tried it before. Up to now, CBS has been reluctant to imply that its system could stand improvement.

RCA seized upon announcement, and Dr. Jolliffe issued statement: "At last CBS has admitted weakness...CBS now states it will adopt the principles of 'sampling' and 'horizontal interlace' developed by RCA for its all-electronic system. Despite this latest move, however, the CBS system will still lack compatibility... The flaws of color breakup and flicker still remain in the altered CBS system."

CBS burned up at that, shot back: "The RCA statement is sheer effrontery, a gross distortion," added that CBS system has proved to be highly satisfactory, that RCA's is "unadoptable."

Compatibility remains principal issue, assuming CBS can use new "resolution-doubling" technique and tri-color tube.

How about CTI? Can it use sampling and horizontal interlace? Engineers shrug shoulders, say "maybe." Will FCC hold off decision until it sees both CBS and CTI try it, field test it?

\* \* \* \*

Questions of networks to carry RCA system, which requires some 4 mc, compared with 2.7-mc limit of present coaxial, kept AT&T long lines chief engineer Frank Cowan on stand most of Friday. He testified that:

(1) Following cities could get RCA color from New York, by radio relay, by fall: Boston, Providence, Philadelphia, Wilmington, Johnstown, Baltimore, Washington, Pittsburgh, Cleveland, Toledo, Detroit, Chicago, Milwaukee, Davenport, Des Moines, Ames, Omaha.

(2) Present coaxial will carry RCA color when modified to handle 8 mc. New York-Philadelphia link will be tested with 8 mc next year. It would take about 2 years to adapt all coaxial "extensively" to 8 mc.

(3) By Dec. 1, ten cities could be linked into two RCA-type color networks simultaneously.

He also estimated cost of expanding coaxial from 2.7 mc to 8 mc would add about 25% to AT&T's present \$25-30,000 per mile investment. Operating costs would be about 50% greater.

\* \* \* \*

Balance of testimony brought nothing exciting, though proponents made much over small points. Haggling over CBS's survey of public reaction to Washington demonstrations showed that research is as fertile field for argument as theology. FCC statistician H. H. Goldin testified that far more extensive survey would be needed to produce data on which to base engineering standards.

Philco's David Smith reiterated that no color system is ready yet, recommended CBS system be abandoned, revealed his company is also working on tri-color tube, saw no reason for delaying freeze hearing.

Good session is expected Wednesday, March 22, when hearing resumes in Commerce Dept. Auditorium. To tell how they would program and network color, CBS's Frank Stanton, NBC's Joseph McConnell and possibly CTI's Matthews are due on stand. It's expected FCC chairman Coy, absent all this week, will be back in chair. By next week, too, RCA may announce when it will demonstrate tri-color tube; it still says "before end of month."

FCC has asked Bell Labs' Axel Jensen to repeat his analysis of respective systems, given at IRE convention (Vol. 6:10), at hearing Thursday. His evaluation of CBS resolution should be interesting, in view of latest development.

Zenith's president E. F. McDonald won't tell who's going to supply pictures for his 3-month Chicago Phonevision trials (Vol. 6:6, 7, 8, 10). He did tell more than 150 movie executives who saw pay-as-you-see demonstration in Hollywood March 13 that he had the 90 pictures on tap, that one major producer was cooperating but he wanted "a more representative selection." In discussion with moviemen, McDonald was supported by Cecil B. DeMille, who urged producers to help in tests. McDonald said pictures and producers would be disclosed week before Sept. 1 start of tests. Meanwhile, Phonevision got short shrift at 20th Century-Fox Showmanship Conference in Chicago this week. Century Circuit's Fred Schwartz didn't think there'd be big enough audience to make Phonevision pay, foresaw groups of 500 or more seeing films for single \$1 fee through use of big-screen receiver in clubhouse or recreation hall. He also expressed belief bootleg unscrambling devices would be made and sold cheaply. Century Circuit recently bought RCA theatre-TV installation for 2 of its 34 New York houses (Vol. 6:9).

Likely to spark off greater TV vs. AM controversy, latest New York City Hooperating reveals TV shows taking 9 out of first 15 places in combined TV-AM survey. They ranked in this order: Milton Berle (TV), Godfrey's Talent Scouts (TV), Toast of the Town (TV), Godfrey's Talent Scouts (AM), Radio Theatre (AM), Goldbergs (TV), My Friend Irma (AM), Bing Crosby (AM), Godfrey and Friends (TV), Studio One (TV), Jack Benny (AM), Philco Playhouse (TV), Walter Winchell (AM), Lights Out (TV), Suspense (TV).

Colorado's Senator Johnson takes on another industry—movies. He got big headlines this week with withering blasts on Senate floor against Bergman-Rossellini, even suggested licensing system for actors, producers, distributors (which has about as much chance as the proverbial snowball). Then, Thursday, he made public letter to FCC chairman Coy saying he had read Stromboli couple were planning to make TV movies (news to most of TV industry), asserting it would be "most unfortunate" if American TV industry "were to be unwise enough to deal with such immoral characters."

WCBS-TV will move antenna to Empire State Bldg., joining WNBT, WJZ-TV and WPIX (Vol. 6:6, 7). WABD is still seriously considering move. WOR-TV and WATV will have more pressure on them to move, too, since receiving antennas will generally be oriented to the building. WNBT and WJZ-TV are already installed; WPIX and WCBS-TV await construction of tower and antenna, latter still under design. Empire State's example has drawn attention of big building owners in other cities.

Contenders for \$25,000 general managership of NAB seem to be William B. Ryan, KFI & KFI-TV, Los Angeles; Robert Enoch, ex-KTOK, Oklahoma City; Frank Headley, ex-Headley-Reed, now H-R Representatives Inc.; Ted Cott, WNEW, New York; S. C. Vinsonhaler, KGHI, Little Rock, among others. Chairman Clair McCollough's committee charged with selection has met with President Miller several times, is expected to have name ready for board's approval at Chicago meeting next month.

Broadcast stations can't be sued for libel when uttered during a political speech. That's finding of Federal district Judge William H. Kirkpatrick March 15 in suit by Philadelphia attorney David H. Felix against Westinghouse station KYW, Philadelphia. Local GOP chairman had called Felix a Communist in speech attacking Democratic candidates last October (Felix was not a candidate). In effect, court upheld FCC's Port Huron decision last year—that stations can't censor political speeches, aren't liable to damage suits resulting from libel uttered in such speeches.

Personal Notes: Frank Mullien, ex-NBC executive v.p., nominated president of Radio Pioneers, succeeding NBC v.p. William S. Hedges; he takes over at annual banquet April 4 in Ritz Carlton, New York . . . Harrison M. Dunham, ex-asst. general counsel of *Los Angeles Times*, promoted from acting mgr. to mgr. of *Times-CBS's* KTTV . . . Joseph H. Copp appointed ABC audio facilities engineer, succeeding John D. Colvin, resigned to join Commercial Radio-Sound Corp. as chief engineer . . . Curtis C. Neilson promoted to asst. chief engineer of KSL & KSL-TV, Salt Lake City . . . Irwin Rosten, ex-*Radio Daily*, joins DuMont Network as administrative asst. . . . Harris S. White quits presidency of World Video Inc. to join CBS-TV March 27 as associate director of TV programs under Charles Underhill, director; Jerome Danzig continues under same title, Herbert Sanford is named asst. to director . . . Ben Strouse, WWDC-FM, Washington, elected to represent FM stations for 1-year term on NAB board; Frank Fletcher, WARL-FM, Arlington, Va., has 2-year term.

Network Accounts: Peter Paul Inc. (candy) sponsors *Buck Rogers* "live" on 19 ABC-TV stations starting April 15, Sat. 7-7:30 . . . Armstrong Cork Co. (flooring, building materials) on June 6 starts dramatic show on NBC-TV, Tue. 9:30-10, in addition to its AM network *Armstrong Theatre of Today* . . . Jules Montenier Inc. (Stoptette deodorant) April 12 starts sponsoring *What's My Line?* on CBS-TV, John Daly m.c., alternate Wed. 9-9:30 . . . Mason Candy Bars on March 25 starts *Kuda Bux*, Hindu mystic, on CBS-TV, Sat. 7:15-7:30 . . . Lucky Strike picks up CBS-TV's *This Is Show Business*, now sponsored by Crosley, as of April 2, Sun. 7:30-8 . . . Camels switching CBS-TV *Ed Wynn Show* April 4 to Tue. 9-9:30—too much Sat. night competition from NBC-TV's *Saturday Night Revue* . . . Peters Shoe Co. and M&M Ltd. (candy) starting April 23 & 30 will alternately sponsor final half-hour of *Super Circus* on 14 ABC-TV stations, Sun. 5:30-6 . . . Campbell Soup reported planning TV entry in autumn, has asked agencies Ward Wheelock and Dancer-Fitzgerald-Sample to submit plans.

Station Accounts: Philadelphia's WPTZ begins 2-5 p.m. programming March 20 with 5 hours already sold—Gimbel dept. store, sponsoring *Handy Man* across-the-board 3:30-4 in addition to Fri. 15-min. show; Sylvan Seal Dairy, *Hop-along Cassidy* Fri. 4-5; plus Philadelphia Electric Co., Philco, RCA Victor, Supplee Dairy . . . *Philadelphia Daily News*, itself applicant for TV station, buys time on WPTZ to promote comic strips, features . . . Hotpoint Inc. sponsors *Chicago Daily News Relays* March 18 on WENR-TV, also on Milwaukee's WTMJ-TV . . . Boyle-Midway Inc. Div. of American Home Products Corp. buys 30 partic. weekly in WJZ-TV's daytime *Market Melodies* . . . Philip Morris sponsoring Dizzy Dean handling periods before and after 77 Yankee games on WABD, New York . . . Curtis Candy buys 25-min. on WOR-TV before Dodgers' games, Ehler's Coffee 15-min. after games. Among other sponsors reported using or preparing to use spot TV: Blumenthal Bros. (Goobers, Raisinets, confections), thru Lavenson Bureau of Adv., Philadelphia; Natural Foods Institute (Vitamix food mixer), thru Allied Adv., Cleveland; "42" Products Ltd. (shampoo), thru McNeill & McClery, Los Angeles; Mother's Cakes & Cookies, thru Ralph Jewell Adv., Oakland, Cal.; Axel Bros., Columbia Diamond Rings Div., thru Bayard Adv. Service, N.Y.; Sinclair Refining Co. (new anti-rust gas), thru Morey, Humm & Johnstone; Nash Motors, thru Geyer, Newell & Ganger; Oldsmobile (films by Jerry Fairbanks), thru D. P. Brothers & Co., Detroit.

February spot TV users on 91 stations totaled 438 vs. 399 in January, according to *Rorabaugh Reports*. In February, 70 advertisers sponsored 90 network TV programs vs. 72 sponsors and 93 shows in January.

MARTIN CODEL'S

AUTHORITATIVE NEWS SERVICE  
OF THE  
VISUAL BROADCASTING  
ARTS AND INDUSTRY

# Television Digest

WITH AM FM REPORTS

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March 25, 1950

**5 ATOP EMPIRE STATE POINT TREND:** All TV stations in given city radiating from one tower -- thus making for simpler receiving antennas and better service to the public, let alone more economical telecast operation and reduced aero hazards. That's trend indicated by fact 5 keenly competitive New York stations are now signed up to radiate from tower to rise some 200 ft. above 1255-ft. Empire State Bldg.

DuMont's WABD signed up this week, joining WNBT, WJZ-TV, WCBS-TV, WPIX. That leaves WOR-TV and Newark's WATV, who are exploring idea. WOR-TV likes present coverage from 750-ft. tower on Jersey Palisades, is naturally reluctant to abandon that \$250,000 investment. Yet it doesn't want to be left out in cold when service-men install receiving antennas to simplest, most convenient orientation.

Empire State already has WNBT & WJZ-TV occupying pinnacle, and consultants Kear & Kennedy say there's little doubt 7 TVs, plus some uhf and FM, can be handled.

Joint transmission sites are expected to be commonplace when freeze ends. FCC rules stipulate no station can keep others from choice sites. In Los Angeles, all 7 stations are on Mt. Wilson though each has own tower. Rochester's WHAM-TV offered to share tower, pre-freeze, and Birmingham's WAFM-TV has plans to allow competitor to telecast jointly with it from its 6-bay batwing.

**RADIO FACES UP TO TV IMPACT ON RATES:** It begins to look like AM broadcasters, sooner than they wish, will have to face up to facts of TV's inroads -- via their rate cards. One significant change in broadcasting rate structure, avowedly forced by TV and possibly presaging trend toward revised rather than reduced radio rates, came this week when Philadelphia Inquirer's WFIL announced:

That its \$300 Class A rate will cover whole day from 9 a.m. to 10 p.m., and that \$200 Class B rate will apply to all other hours, effective April 1.

Thus, in effect, WFIL raises daytime rates, while holding night time rates. Based on BMB study, WFIL claimed increase over 1946 audience of 18.5% daytime and 16.1% night. Since it wasn't deemed propitious, in view of TV, to raise rates to account for this increased circulation, manager Roger Clipp (who also runs WFIL-TV) merely adjusted time classifications to give him greater returns from daytime hours.

Said Clipp: "We believe that within the next few years the drawing power of TV will affect the size of the nighttime radio audience to the point where a rate adjustment is indicated. We are doing today what we believe most of the industry will do tomorrow. [Radio's] position will remain unshaken in the morning and afternoon segments for years to come...[it] has undersold itself for years."

Alluding to reports that TV money is "new" money, and that there's enough business for both radio and TV, Clipp noted: "There is a grave possibility that the time will come, sooner or later, when something has to give." [Last winter, Clipp reported WFIL-TV operating at profit; Vol. 5:47. Earlier, he reported that TV was attracting some money away from own and competitors' radio accounts.]

WFIL's action was received with misgivings in New York's radio row, reported fearful he may have added fuel to sponsor demands for AM cuts in TV cities. What made faces even longer was indisputable fact that TV's ownership and expansion is largely being financed by AM profits.

Drum-beating for reduced radio rates in TV cities has gained in intensity in

recent weeks. At Chicago Television Conference, Miles Laboratories' L. E. Waddington asked that rates be cut (Vol. 6:10). Before last week's Chicago Radio Management Club, Kraft's John McLaughlin asked same thing -- said TV has captured 30% of night radio audience in TV cities, predicted it would have 50% by this year's end.

Adding to possible "chain reaction" are such surveys as Hooper's, showing 9 TV programs among top 15 (Vol. 6:11). Nor can the time buyers ignore such current promotion as Baltimore's WMAR-TV claim to having biggest night audience in city, AM or TV -- Hooper of 20.2 vs. next station's 19.7 (AM).

Quick to reject idea of cutting radio rates were spokesmen for broadcasters -- and you'll be hearing from more and more of them henceforth. CBS's William Gittinger told Cleveland Ad Club March 24 that radio is here to stay, that there's plenty of room for both radio and TV--and pointed to CBS's increased radio billings last year. Live-wire Advertising Age March 20 did roundup of sponsor, agency and network thinking on subject. Sponsor and agency men naturally would be for cuts, but significant was defense of status quo by some of them and by networks.

Lever's James A. Barnett said company's analysis hasn't convinced him that TV's impact on radio audiences was sufficient yet to warrant lower radio rates. Kudner's J. H. S. Ellis said TV's cut into circulation was hard to evaluate, likened demand for cut radio rates to asking publisher to cut newspaper rates because he also publishes magazine. Radio and TV, said Ellis, are two different media sold through same people, used in some instances by same people.

CBS's Frank Stanton termed idea of lower radio rates "ridiculous," emphasized they haven't gone up since 1939 yet radio circulation has increased "by leaps and bounds." His thesis has always been that radio rates are extremely low in comparison with other media. "Advertisers are getting a real bonus," said he.

Radio men pointed out that radio homes have increased from 27,500,000 in 1939 to 40,800,000 in 1950.

Subject is bound to get more going over at convention of ANA in Hot Springs, March 29, when TV is subject of panel headed by Procter & Gamble's A. N. Halverstadt and including CBS's Stanton, NBC's Trammell, pollster A. C. Nielson. AAAA meets next day at White Sulphur Springs, with TV among subjects of discussion.

**WORRIES OVER 'TELEVISION CHILDREN':** TV's powerful pull on children is obvious to any parent within range of a signal. Recent surveys (Vol. 5:52; 6:9,10) give an idea of extent of impact. Here are more:

(1) In Stamford, Conn. high school (Vol. 6:10), teachers correlated grades of students from TV and non-TV families, found that grades of former were some 15% lower, that younger children were much more affected than older.

(2) In Dayton, O., WHIO-TV covered 758 children in one grade school, found 271 had TV at home and averaged 4 hours daily in front of sets.

(3) In Cleveland Heights, O., high school principal E. E. Morley surveyed 274 students, found 41% with TV; 86 youngsters said they thought TV interfered with school work. He's making second survey to compare grades of TV and non-TV students.

(4) In Ft. Worth, Tex., Star-Telegram's Ira Cain studied 144 junior and high school children, came up with surprising dissent from other surveys. Of students with TV at home, 60% had higher grades than last year, 40% had lower grades.

Such findings have stirred New York City's United Parents Assn, with some 100,000 members, into starting survey of its own; results are expected in 2-3 weeks.

Parents are concerned, naturally, but they've apparently forgotten anxiety experienced by their own parents, a generation back, when radio was the novelty. It must be conceded, however, that TV penetrates deeper and fascinates children at earlier, more impressionable age.

School surveys finally prompted editorial in New York Times, which said: "Much of [surveys'] usefulness will be lost if their net effect is merely to promote petty bickering over who is responsible for the lot of 'television children'...The parent necessarily must exercise the final disciplinary authority...Television can be enjoyed in healthy moderation in the same way as sports, movie-going or any other



**COLOR CONFLICT POINTING TO CLIMAX:** By fits and starts, color hearing lurched along this week, but hopes for end in April are still high. There's hiatus until April 3, however, while FCC attends to other business. Guesses as to actual decision date vary all over the calendar, but few expect it before late May or June. Some Commission people venture July.

Condon Committee report to Senator Johnson may well come before FCC decision. Dr. Condon says draft is now being prepared, and he hopes to see it completed in 4-6 weeks. Report will be made confidentially to Sen. Johnson, but the Senator has promised to make it public.

FCC got fairly close to heart of color matter this week when it:

- (1) Got first peek at RCA's tri-color tube.
- (2) Heard detailed arguments against "multiple standards."
- (3) Listened to specific color programming plans of CBS and NBC.

FCC reactions to tri-color tube were very favorable -- "extremely gratifying," as one commissioner put it. Thursday evening, Sen. Johnson and Comrs. Jones, Sterling, Webster, plus most top FCC staff, saw color program on a 1-gun and a 3-gun tube, housed in conventional 16-in. table cabinets.

Consensus was that somewhat better pictures are presented by tubes than by dichroic mirrors previously used. Registration was generally termed "very good," colors "fair to good," rendition of black-and-white subjects "quite good." Said Sen. Johnson: "I feel that I've been present at a very historic occasion."

Receivers are much simplified, having only 37 receiving tubes, compared with previous 64. Picture tube is somewhat longer than standard 16-in., gives equivalent of 14-in. picture at present state of development.

Technique wasn't described in detail, but it's said to be based on principles known for some years. Press showing is Wednesday, demonstration for hearing record Thursday.

\* \* \* \*

Multiple standards concept was emphatically rejected by CBS president Frank Stanton. "At first glance," he said, "it seems to be a solution in the best American tradition of free competitive enterprise." But he foresaw this impact on public, telecasters, manufacturers:

(1) Consumer will be choosing programs of particular stations when he buys set geared for particular system. That is, unless inexpensive set, good for everything, comes along -- an unlikely event. If multiple standards are permanent, consumer is likely to wait for reasonably-priced "universal" set. If they're temporary, leading to single standard, public will wait until that standard is chosen.

(2) Telecasters won't be eager, under temporary multiple standards, to "gamble large sums in equipment and programs in the doubtful hope of creating an audience which may vanish in the event that another system wins out."

(3) Manufacturers might sit back and do nothing, enjoy "heaven-sent opportunity" to ignore color, wait for single standard or universal receiver.

NBC president Joseph McConnell didn't speculate about what might happen under multiple standards, simply stated NBC didn't recommend them but didn't fear them. If they're adopted, he said, NBC would pursue exactly same course as if only RCA system were chosen.

Comr. Jones had rather startling news for Stanton, when latter spoke about unlikelihood of inexpensive universal receiver. Jones said he'd seen set that could get both RCA and CTI systems and that engineers had told him it could also be made

to get CBS system -- all in receiver no more complicated than RCA's. Stanton said he couldn't visualize such a set, popularly-priced.

Jones ventured no details about receiver, which Stanton called "this marvelous set." There's speculation that Bureau of Standards may have made it.

\* \* \* \*

CBS would transmit color at least 20 hours weekly, within 3 months after decision, if its system were adopted, Stanton testified. Within 2 years, virtually all CBS programs would be in color, he estimated, assuming everyone got behind system. He wouldn't commit himself to that schedule if another system were adopted, but said CBS would "cooperate wholeheartedly."

Initial 20 hours weekly were broken down to: 3 hours daily, 5 days weekly, before 6; ½ hour daily, 5 days weekly, between 6-8; ½ hour daily, 5 days weekly, after regular monochrome hours.

Stanton believed affiliates would jump at chance to "take the lead in color" and transmit large portion of above schedule; that sponsors would buy time at first for promotional value; that competition would encourage manufacturers to make color sets, color converters, 405-line black-and-white adapters, and to start building new black-and-white sets with built-in adapters.

FCC shouldn't try to force telecasters or manufacturers into color, he recommended, saying that action might "rub salt into such wounds as may exist." Comment was in response to query by Chairman Coy who asked how FCC could encourage color.

Stanton insisted color decision must come soon, or else great mass of monochrome sets will make switch to color impractical.

NBC's color schedule, said McConnell, based on assumption RCA system is approved, would be at least 12 hours weekly from Washington's WNBW, including "commercial as well as sustaining shows, in choice as well as at other hours." Color would be fed to New York via radio relay. In New York, WNBT would transmit at least 12 hours weekly as soon as equipment is installed, would expand to at least 18 hours within year.

"Why not 100% color within a year?" asked Coy. It depends on availability of studio equipment and sponsors' desires, McConnell answered.

He wouldn't commit himself about NBC plans in the event other systems were adopted, said no decision had been made for such eventuality.

\* \* \* \*

#### Other facets of week's testimony:

CBS waived cross-examination, counsel Samuel Rosenman stating CBS is eager to expedite decision, is only proponent fulfilling FCC's requirements. CBS was trading advantages of cross-examination for impression it hoped to make on FCC.

RCA counsel Joseph Heffernan countered that since his witnesses had always preceded CBS's, RCA's case had been predicated on cross-examination. Chairman Coy finally stated that cross-examination "is natural," that no one had to justify waiving it or not waiving it.

Cost of producing color programs, as compared with black-and-white, should be little if any greater, both McConnell and Stanton testified.

Bell Labs engineer Axel Jensen, at request of FCC, compared resolution capabilities of all systems, as he did before IRE (Vol. 6:10), testified that dot-interlacing could put them all on about same plane resolution-wise.

CTI hasn't proposed adding technique, but many expect it will momentarily, since engineers say it should work for them, too. Incidentally, CTI has petitioned for another official demonstration, in San Francisco, any time after April 25.

CBS showed kine recordings of color, 405-line and 525-line black-and-white. They were projected through movie camera, came through well.

At week's end, RCA's Dr. George Brown was on stand, had just begun giving more data on interference ratios, noise, etc., all to effect color is about same as black-and-white for purpose of allocations. Hearings resume same place April 3.

non-school pursuit...The broadcaster has a direct obligation to provide a wholesome balance in programming."

Columnist John Crosby put it tartly: "My own opinion, an old-fashioned one, is that the parents have no one but themselves to blame. Any parent who lets his child sit in front of a TV set 30 hours a week is abdicating to the TV set."

**WCON-TV IN DOUBT, WKZO-TV TESTS SOON:** Curious situation has developed in Atlanta, where merger of Journal and Constitution into corporate entity (though they will continue to publish separately) would leave one company owning 2 AM and 2 TV stations -- contrary to duopoly rules. So Atlanta Constitution's now-building WCON-TV, due on air in June, will probably go on block along with WCON-AM, 5 kw on 550 kc, ABC outlet. Together, they represent \$850,000 investment to date, of which about \$250,000 is in complete RCA transmitter equipment for TV, already installed, and \$180,000 in 1056-ft tower called highest of kind in country and near completion.

Troubles loom for seller, however, inasmuch as (1) both present TV stations in Atlanta, one owned by Journal, are operating in red, and buyers may be reluctant to sustain inevitable initial loss operation; (2) Constitution's AM outlet has operated last 2 years only under STA, due to engineering troubles that may require investment in 2 more towers to add to present 4; (3) station's power radiation involves certain engineering kinks still requiring adjustments with FCC, let alone completion of plant; (4) question whether FCC will permit sale of CPs.

So there's possibility that one more among remaining pre-freeze CPs for TV will be forced to drop out. CPs now total 7, with Louisville's WHAS-TV making formal debut March 27 as 102nd station on air (Vol. 6:10-11). Following Sunday, April 2, Norfolk's WTAR-TV gets going. This week, there's word that Kalamazoo's WKZO-TV may begin tests April 1 (Lansing's WJIM-TV is already testing), and Rock Island's WHBF-TV is far enough along so tests may be expected by end of April or mid-May. This week, too, first new application since last Oct. 15 was filed -- by WBTM, Danville, Va. for Channel No. 7; see TV Addenda 10-K herewith for details. Withdrawn was Topeka application of Midland Broadcasting Co., Kansas City (KMBC).

### Count of TV Sets-in-Use by Cities

As of March 1, 1950

Sets-in-use totaled 4,835,000 as of March 1, according to NBC Research's monthly "census" report estimating TV receivers within 40-mi. service areas (.5Mv). NBC no longer publishes family figures, but those here listed are best available estimates of 1948 families within 40-mi. radius of city; note, however, that there are some overlaps, so that family figures are sometimes higher than actually served. March report includes Norfolk and Kalamazoo, due to have own stations by April. Total represents 461,000 increase over Feb. 1 count (Vol. 6:8).

#### Interconnected Cities

Area	No. Stations	No. Families	No. Sets
Baltimore	3	732,000*	146,000
Boston	2	1,175,000*	306,000
Buffalo	1	323,000	73,800
Chicago	4	1,438,000	420,000
Cincinnati	3	384,000	92,900
Cleveland	3	695,000	176,000
Columbus	3	225,000	49,600
Dayton	2	291,000	42,900
Detroit	3	839,000	191,000
Erle	1	112,000	17,000
Grand Rapids	1	182,000	18,200
Kalamazoo	—(a)	143,000	6,500
Lancaster	1	85,000	35,600
Memphis	1	177,000	24,200
Milwaukee	1	327,000	89,400
New Haven	1	557,000	70,400
New York	7	3,597,000	1,145,000
Norfolk	—(b)	196,000	3,600
Philadelphia	3	1,184,000	395,000
Pittsburgh	1	742,000*	80,000
Providence	1	1,011,000*	38,000
Richmond	1	130,000	23,600
Rochester	1	208,000	31,100
Schenectady	1	258,000	62,500
St. Louis	1	474,000	98,500
Syracuse	2	199,000	33,800
Toledo	1	241,000	37,000

Utica	1	127,000	9,300
Washington	4	691,000*	109,000
Wilmington	1	183,000	28,300
<b>Total</b>			
Interconnected	55		3,854,200

#### Non-Interconnected Cities

Albuquerque	1	22,000	2,500
Ames (Des Moines)	1	126,000	4,500
Atlanta	2	233,000	27,800
Binghamton	1	131,000	9,800
Birmingham	2	196,000	11,400
Bloomington	1	104,000	5,000
Charlotte	1	171,000	12,200
Davenport	1	133,000	8,300
Fort Worth	1	269,000*	19,300
Dallas	2	277,000*	24,500
Greensboro	1	165,000	9,600
Houston	1	217,000	16,500
Huntington	1	132,000	6,600
Indianapolis	1	231,000	30,000
Jacksonville	1	94,000	8,200
Johnstown	1	250,000*	16,500
Kansas City	1	275,000	28,900
Los Angeles	7	1,372,000	424,000
Louisville	2(c)	188,000	25,200
Miami	1	117,000	19,200
Minneapolis			
St. Paul	2	333,000	74,900
New Orleans	1	225,000	19,900
Oklahoma City	1	138,000	21,500
Omaha	2	132,000	15,800
Phoenix	1	49,000	5,000
Salt Lake City	2	93,000	11,000
San Antonio	2	130,000	10,300
San Diego	1	113,000	25,500
San Francisco	3	825,000	43,500
Seattle	1	307,000	24,500
Tulsa	1	125,000	16,400
Others	—		2,500
<b>Total Non-Interconnected</b>	47		980,800
<b>Total Interconnected and Non-Interconnected</b>	102		4,835,000

\* Family figures are based on estimates of 1948 population. Note that Boston-Providence, Dallas-Fort Worth, Baltimore-Washington, Pittsburgh-Johnstown coverages (hence total families) overlap. (a) WKZO-TV due to start tests early April. (b) WTAR-TV due to start scheduled operation April 2. (c) WHAS-TV due to start scheduled operation March 27.

Rash of new and revised comments on FCC's proposed vhf-uhf allocation plan (see pages 66-76, *TV Directory No. 10*) were filed at deadline March 24—all 37 summarized in Supplement 67F herewith. They brought total comments filed thus far to 232 (for summaries of all, see Supps. 67, 67A, 67F). Deadline for oppositions to new proposals is April 7. Noteworthy among week's batch was Yankee Network's request to change its Boston WNAC-TV from present Channel No. 7 to No. 2 to overcome receiver oscillation interference stemming from Providence's No. 11 (Vol. 6:8). WBTV, Danville, Va., requests Channel 7, proposing changes affecting 25 Southern cities. And RCA plumps for full use of entire uhf band, geographical groupings of uhf channels to ease set manufacture problems, assignment of at least 4 channels to each metropolitan area, avoidance of vhf-uhf intermingling in same cities if possible.

First concession that Phonevision may not get first-run pictures came this week from Zenith's E. F. McDonald, who told Hollywood newsman pay-as-you-look system could use second-runs though he'd prefer pictures not more than year old. Heretofore, he has insisted that first-runs were part and parcel of Phonevision's appeal. Leaving Hollywood March 21, he said he will return in month to settle details on 90 pictures he says he has secured for Chicago tests starting in September. Thus far, no takers have been announced of royalty plan offered other set manufacturers (Vol. 6:8) to permit them to build in Phonevision plugs and units. Note: Upon return to Chicago, Comdr. McDonald was quoted in *Chicago Journal of Commerce* March 25 as stating he believes "Hollywood money" is largely behind recent activity and gains in Zenith stock.

Question churning FCC staff and some broadcast circles is who's going to head up Broadcast Bureau to be set up shortly under reorganization plan (Vol. 6:10). Believed to be Chairman Coy's choice in Harry Plotkin, asst. general counsel, but Comr. Jones and certain broadcast interests are said to be plumping for John Willoughby, asst. chief engineer. (Comr. Jones had also backed Willoughby for chief engineer job, which went to Curtis Plummer; Vol. 6:10). TV would have division in Broadcast Bureau. Choice may hinge on whether lawyer or engineer should be selected, and that in turn may depend on profession of person picked to head Safety & Special Services and Field Engineering & Monitoring bureaus.

Kine recording complaint of viewer Charles W. Curran, Jackson Heights, L. I. (Vol. 6:4) was dismissed by FCC this week. He had asked that stations be required to announce each kine before showing on grounds that viewers spend needless time adjusting sets trying to get better reproduction from kines. Commission's reasons: (1) People usually know when they see kines, and if they don't, there's nothing to worry about. (2) AM-FM stations aren't required to tell what kind of mechanical reproduction is used—whether ET, record, tape, etc. (3) To follow Curran's logic, stations ought to tell whether program is film, whether new or old film, whether it comes through 2.7-mc network—or anything else than direct live material. FCC's implication was that such procedure is ridiculous. Complaint was first and only such received.

Personal Notes: CBS chairman William S. Paley elected life trustee of Columbia University . . . Verne W. Behnke, ex-Video Varieties Corp., joins CBS-TV as sales rep in Film Syndication Dept. . . . John R. Sheehan, ex-Buchanan, joins Cunningham & Walsh (formerly Newell-Emmett) as associate director of radio-TV . . . Wallace A. Ross, publisher of *Ross Reports* on TV, new sales director of World Video Inc., succeeding Henry White (Vol. 6:11).

Telecasting Notes: Crosley TV stations offering advertisers time bonus up to 50% of their average weekly expenditures if they stay on during July, August, September; or else they can use established 40% summer discount. WKRC-TV, Cincinnati, adopts 40% discounts from April 1-September 30 for all times except 7-10 p.m. . . . New York News' WPIX has 30-day option on 118 Madison Square Garden events during 1950-51, covering all but Fri. boxing (NBC's) and Sat. nights; deal based on WPIX's ability to sell package figured at \$500,000, including air time . . . WJZ-TV new daytime schedule calls for 12:30-5:15 p.m. Wed. thru Sat. . . . Jerry Fairbanks Inc. sets up complete movie studio facilities at 157 E. 69th St., New York, headed by v.p. Russ Johnston and production director Robert Lawrence . . . Joan Crawford reported to be considering offer of \$1,000,000 to do series of halfhour fashion films to be sponsored on TV by women's clothing company . . . Eagle Lion feature films as late vintage as 1945-47 being made available for TV; WJBK-TV, Detroit, buys 49 of them at reported \$12,250.

Network Accounts: hi-V Corp. (frozen orange juice), of which Arthur Godfrey is large stockholder and director, will sponsor him on CBS-TV starting April 4 in show featuring him "teaching ukelele," Tue. & Thu. 7:45-8, thru Franklin Bruck Adv.; that makes it 8 hours, 45 min. on air weekly for Godfrey, 2 hours on TV . . . Anheuser Busch (Budweiser), whose *Ken Murray Show* is on CBS-TV alternate Sat. 8-9, in October will sponsor some show same period weekly.

Station Accounts: Noteworthy new types of local TV sponsorships are New York Telephone Co., using film spots on state TV stations, having as theme business listings in Classified Directory, placed by BBDO; and Retail Clerks Union Local 770, Los Angeles, which starts *770 on The Air-TV* on KTTV, Mon. April 3, 11-11:15 p.m., with guests, films, commentaries, etc. Among 17 new sponsors signed by New York's WPIX this month are Guinness Stout, thru Hewitt, Ogilvy, Benson & Mather; Jamaica Race Track, thru Al Paul Lefton; Lamont Corliss (Nestles candy bar), thru Cecil & Presbrey; Shop by Mail (nylon hosiery), thru Scheck Adv.; Duke Industries (Hair-Vac), thru W. B. Doner; Schneider International Co. (plastic dishes), thru John Shrager Adv.; John Middleton Tobacco Co., thru Anderson, Davis & Platte. Among other sponsors reported using or preparing to use spot TV: Conmar Products Corp. (zippers), thru William Weintraub Agency; H. J. Heinz Co., thru Maxon; Clark Bros. Chewing Gum Co. (Teaberry gum), thru McCann-Erickson; Santa Fe Railroad, thru Leo Burnett Agency; Adler Co. (socks), thru Ruthrauff & Ryan, Chicago; British Ceramics & Crystal (Canada) Ltd. (English bone china), tests on WBEN-TV, Buffalo, thru F. H. Hayhurst Co., Toronto; Cory Corp. (Automatic Coffee Maker), thru Dancer-Fitzgerald-Sample; Atlantic Syrup Refining Corp. (Donald Duck Chocolate Syrup), thru J. Robert Mendte, Philadelphia; Drackett Co. (Drano & Windex), thru Young & Rubicam; Brock Candy Co. (Brock bar), thru Liller, Neal & Battle, Atlanta; Armour & Co. (Vertagreen lawn fertilizer); Chr. Hansen's Laboratory Inc. (Junket), thru McCann-Erickson.

Hollywood Screen Directors Guild (Ind.) claimed jurisdiction this week over TV directors—film and live—on ground live directors are engaged in productions viewed on home "screens." If serious, move presages jurisdictional battle with Radio & TV Directors Guild (AFL).

FCC budget of \$6,625,000 for 1950-51 was recommended this week by House Appropriations Committee, \$25,000 more than Commission got last year, \$287,000 less than President had asked for.

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## COLOR PROBLEM — AND THE FREEZE

Text of Address by Martin Codel, Publisher of *Television Digest*

Before National Television Conference, Chicago, March 7, 1950

THERE's a common misconception about color television, just as there is about the freeze. A surprising number of people, including many in the industry who ought to know better, think all the FCC needs to do is issue an order tomorrow—and, *presto*, not only color but a flock of new TV stations will spring into being overnight.

Actually, except for the 8 more stations that were authorized pre-freeze and are still under construction, it will take a good 18 months to 3 years to get any appreciable number of new stations on the air. For the rest of this year, I can assure you there won't be any more than those 8, making exactly 109 stations.

(And what a stir this mere scattering of TV stations—as compared with very nearly 2800 AM & FM stations—are creating in the national economy in general and among our radio, film and advertising folk in particular!)

Next year, assuming completion of the allocation hearings, which are yet to begin and which alone can bring about the end of the freeze, maybe there will be a few more TV outlets in new and non-competitive areas. But there won't be very many more, for the preferred channels are few and the applicants will be many, at least in the larger markets.

Color likewise will be slow to get under way, regardless how the FCC decides the current proceedings in Washington.

Why? First, for the reason that almost no one in the deficit-ridden telecasting industry, can really afford to broadcast *any* color system now on any substantial scale—though those who are plumping for color are making an awful lot of noise about it and confusing an awful lot of people about its immediacy.

Secondly, even if it were perfected and ready and acceptable, color would come slowly because new sets would have to be purchased, or gadgets attached to existing sets, in order to receive it—quite aside from the new apparatus and new techniques required at the transmitting end.

Consider the CBS system, for example. The people who make television—the telecasters and the manufacturers—are afraid of it. Why? Basically, because it's incompatible. The 5,000,000 sets now in the hands of the public would immediately go blind every time CBS color is transmitted. And at the present rate of production and sale, there should be 10,000,000 such sets in use by the end of this year.

Sure, you can attach a gadget to your set and extract an inferior black-and-white picture from a CBS color

transmission. Or you might be able to attach or rig up a whirling disc and motor and get a small color picture. Or, if anybody will make them, you might buy a brand new set to receive color—a set that must inevitably cost more than today's mass-produced receivers.

The public, though, simply doesn't go for adapters or converters, as our past experience with shortwave and FM has proved. And the manufacturers have made it abundantly clear they don't want to make television sets with mechanical adapters.

Look at it this way, too: Assuming the CBS system were adopted and adapters and converters and new sets did come along. Would the telecasters be willing to sacrifice their monochrome audiences every time they put an incompatible color show on the air? We've sounded them out, in a recent survey of our own [See *Television Digest*, Vol. 6:7]. The answer was a virtually unanimous "No!" But could the FCC force them to broadcast CBS color? Conceivably—but I doubt very much whether it would, not while a *compatible* system is in the works.

Investments in colorcasting and commercial benefits from color will come only when there are enough color sets, in proportion to the whole, to make color programs worth the advertisers' while. Any way you look at it, that seems to be a long way off.

\* \* \* \*

THIS whole color business is premature, based on an exaggerated ideal in the minds of a very few people. It has resulted in a needless and wasteful prolongation of the freeze. Had the color-now issue not been raised, the even more vital and intricate problems of vhf and uhf channel allocations, and their concomitant problems of new receiver design and rearranged telecast structure, might be well on the way to solution by now. The FCC by now might be authorizing the new stations so badly needed and eagerly awaited.

We don't think anybody's color is ready, or even in early prospect—though it must be conceded that the pressures from Washington may be hastening it out of the laboratories. After watching all the demonstrations, and hearing or reading all the testimony, and scanning all the publicity (some of it really terrific), it is my conviction and that of my staff that to promise color television anytime soon might very well stymie the magnificent progress now being made in black-and-white TV.

Maybe, though, it's a sign of the inherent vigor of today's monochrome that all the ballyhoo, all the speech-making, all the publicity, hasn't really affected the TV receiver

market as yet; in Washington, scene of the color demonstrations, and source of all wisdom, more TV sets were sold in November-December-January than in the previous 9 months combined.

\* \* \* \*

**C**OMPATABILITY is the key. The telecaster is the critical man. He can't afford to start again building a new audience from scratch. He's having tough enough going now, financially, to add to that burden. Colorcasts must be receivable on today's receivers—in *black-and-white* if the householder doesn't want or can't afford to buy an adapter, converter or new-type receiver.

That's the problem of compatibility in its simplest terms. The telecaster and his "circulation department," who are the manufacturers and sellers and servicemen, now represent something like a \$2 billion annual factor in the national economy. They can't be expected to start all over again.

CBS's pictures are very pleasing, some subjects superb—and they represent a brilliant achievement. But they're incompatible, and their limitations are clearly visible and serious. Aside from requiring conversion of existing sets just to get its colorcasts in black-and-white, the CBS system represents a retrogression from today's excellent monochrome in these respects:

(1) They limit picture sizes and, when magnified with lenses, render wide-angle viewing impossible. TV's manifest destiny is larger pictures; witness the current upsurge of 16-in. and 19-in., which to my mind are merely steps on way to home-movie sizes. (Watch the 19-in. and the promised 22 and 24-in., and perhaps even 30-in. picture tubes this year!)

(2) Definition of the CBS picture, or ability to show detail, is far under today's standards for black-and-white—albeit many of the pictures, viewed subjectively, are quite satisfying.

As for RCA, Color Television Inc. and others claiming compatible systems, they're obviously unready. RCA's pictures are gradually improving, but they're still not as satisfying as CBS's. RCA's color in its present stage requires mechanism much too complex for commercial production yet, even if RCA were minded to produce it. RCA promises soon a single tri-color tube, which should make for a simpler and cheaper receiver—one the public will buy.

If we wait for RCA and the others, assuming they're on the right developmental track, they at least offer the promises and virtues of *compatibility, good definition and no limitation upon picture size.*

\* \* \* \*

**Y**OU'LL hear a lot about "double standards" or "multiple standards" in coming weeks. (Curious how these expressions develop. The FCC hearings sometimes sound like divorce proceedings.) What is meant by such terms is a decision allowing either CBS or RCA color systems, possibly others, to be broadcast commercially at the option of the telecaster. Both kinds of sets could be sold, though I suspect neither would be—in any numbers, at least, and for quite a while to come.

This would be a peculiar compromise on standards, of a sort the FCC has never in its history authorized. But

maybe that's the way to do it. On the other hand, it might throw the public into such confusion that it would refuse to buy anything—black-and-white or color. You're welcome to speculate about it. Your guess is as good as, perhaps better than the FCC's or Senator Johnson's.

\* \* \* \*

**B**UT, then, what's so urgent about color that it must be hastened, even if it requires separate tracks and separate standards of its own? Who's demanding it? Who would pay for it, if it requires special reception apparatus capable of only limited picture size? Would you go to the movies to see Technicolor on reduced screens? Should the movies have waited for Technicolor, which even now is said to represent only about 10% of all production?

Here's another pertinent question: Suppose one system of color gets going and, after a few years, some bright engineer comes up with a new development much more attractive. Should we then scrap our color system and start from scratch again? A few more such false starts and you might very well drive even the hardest pioneers out of the business in disillusionment.

Is it more important to hasten costly color than to build basic audience with the now available, mass-produced, reasonably-priced receivers that are constantly being improved—and *that are constantly giving us bigger screens?*

Actually, only a handful of people are really "sold" on the immediacy of color—and I sometimes wonder whether most of them really are. The record, and preponderant industry opinion, all argue for a natural and gradual evolution toward color—compatible color—and not its adoption in a hurry or in an indeterminate state on mere fiat from Washington.

Let's get on with the allocation, which is really a tough problem and not at all a synthetic one. Let's resolve the problems that properly brought on the freeze a year and a half ago—the problems of co-channel and adjacent channel interference and hence station service ranges. Let's have more stations in more communities—and hence more competition, better programs, wider networks and a chance at making the business pay.

\* \* \* \*

**B**Y way of reassurance, I must say that there are no villains in this piece—neither FCC nor Comr. Jones nor Senator Johnson nor CBS nor RCA. Each may have his own honest beliefs and own particular motivation, and you and a lot of other people may be confused. But I'm convinced the basic problem is in good hands, and must inevitably resolve itself naturally and rightly in spite of political and promotional pressures.

The FCC majority, the Joint Technical Advisory Committee (JTAC), the Condon Committee—yes, the telecasters and manufacturers—are men of stature and common sense. There's no "plot" to stifle color, and I can only guess that there's only one entity in the whole radio field which might begrudge CBS and its brilliant Dr. Peter Goldmark their rightful rewards if *they* can come up with a practical system that can be fitted less painfully into the television structure.

Do you suppose the 110-odd television manufacturers, in their competitive zeal, would overlook any such alluring new merchandising wrinkle as color if they really believed it was ready now—and *compatible?*

**NEW FACTS ABOUT 1949 TV OUTPUT:** It appears now that all of us, notably RMA and even RCA's own president Frank Folsom, were far too conservative in estimating 1949 TV set output. Best guide of them all, though its figures aren't made public monthly and though they omit big producers DuMont and Zenith, who are not licensees, is RCA's own license report for the year. It shows:

2,883,672 TV sets shipped, with factory value of \$546,606,941 (average of \$189.55 per set). RMA's count was 2,413,397, but because some major producers aren't members it estimated "more than 2,800,000" at year's end. Folsom guessed 2,500,000 in his annual statement (Vol. 5:53). Our own figure was 2,837,500, projected from RMA's (Vol. 6:3). True figure doubtless was somewhat in excess of 3,000,000.

9,875,429 other radios shipped, with factory value of \$264,320,957 (average \$26.76 per set). RMA's figure was 9,680,773, including TVs. True figure, adding in Zenith to RCA count, was very likely good 10,000,000.

Total TVs-radios on which royalties were paid last year to RCA: 12,759,101 at factory value of \$810,927,898. TV represented only 21.8% of unit output, but 66.4% of dollar volume.

Note: Reasonable factor in estimating retail value is 40%.

**SHORTAGES OF TUBES, CABINETS, ETC.:** Present high rate of TV set production, plus continuing demand for radios, have led to shortages of receiving tubes, cabinets and to some extent electrolytic parts. Result is scramble now for materials in short supply -- so intense already that one big tube manufacturer, forced to allocate, remarked that he actually welcomes summer slump so he can stockpile for fall-winter.

Yet there aren't any signs yet of letdowns in TV receiver demand, seasonal or otherwise, and some are even predicting it will continue well into May. A few say summer won't bring "slump" at all, merely slight seasonal reductions in demand.

After contacting key set, tube, bulb and component makers, we get this composite picture of supply problem:

(1) Picture tubes plentiful now -- all except 19-in. and rectangulars.

(2) Circuit tube situation aggravated by ordinary radio demand (average 6-plus tubes per set) and extraordinary TV requirements (average 20 tubes per set), plus considerable uses for industrial and defense needs. These are taxing capacity of 5 principal makers: GE, Raytheon, RCA, Sylvania, Tung-Sol.

Not merely one type of tube but, in case of one company, 20 types are in short supply -- list keeps constantly changing. Even round-the-clock assembly lines can't keep up with orders, and this company forecasts condition through rest of the year. One set-maker said BG6G deflection tube seems most critical at moment; all say miniatures are the big problem.

There's no bottleneck at glass blowers; Corning, biggest, says it can turn out all the little or big bulbs ordered.

(3) Cabinet shortages stem mainly from TV requirements, plus fact that wood furniture business is so good that, as one major set-maker put it: "There aren't enough fringe manufacturers to cope with a demand rising from last year's 3,000,000 to this year's 5,000,000 or 6,000,000 TV sets, even discounting large number of plastic and metal table cabinets." There's also shortage of lumber, including walnut and mahogany.

Bigger set makers like Admiral, GE, RCA, Philco have cabinet plants of own, but it's said they're not supplying enough. Wood situation is so serious that Red Lion Cabinet Co., Red Lion, Pa., prime Philco supplier, has its president James

Sechrest now in Africa seeking new sources -- but situation there has been aggravated by strikes!

(4) As for other components, it depends on who you talk to; big companies making own or having well-established lines of supply don't seem particularly worried. But some manufacturers have to beg for supplies. We're told resistors are being imported from England, selling at premium of \$5 per thousand.

\* \* \* \*

Do these factors spell fewer or more than 5,000,000 TVs and 10,000,000 radios this year? Sylvania's Max Balcom, RMA tube chairman, thinks tube suppliers can support that many -- "might do a little better." He doesn't think anybody at moment is actually being held up by tube shortages, though supply admittedly isn't abundant and could become critical overnight. If current production rate of nearly 500,000 TVs per month should continue through summer, he said, then there "really will be trouble."

Spokesman for one of biggest set-makers, though admitting worry about cabinets and tubes, made this observation:

"Shortages always seem to have a way of rectifying themselves. Somehow, shortages always vanish -- remember how we were crying about shortage of picture tubes not so long ago? Shortages are vexatious, they're insurmountable, they're godawful, but the ingenuity of American enterprise and competition always supplies the need. I'd bet that, with the flying start we're getting these first 4 or 5 months, even discounting summer, our industry will turn out well over 5,000,000 TV sets this year."

**TOPICS & TRENDS OF THE TV TRADE:** DuMont, GE and Zenith should be breaking very soon with news about new TV receivers. No details have leaked yet, no dope whether new lines or merely new items are in prospect. Zenith particularly is supposed to have some kind of "surprise" ready to spring.

Other than actual and looming shortages (see above), biggest industry news seems to be fact American Structural Products Co. (Owens-Illinois) is now shipping 14-in. rectangular bulbs which will soon be delivered by tube-makers to manufacturers. ASPC also says it's now shipping more rectangular 16-in. than rounds, and in May will have 19-in. rectangulars for sampling.

Corning Glass advises that by latter half of year 50% of its bulb production will be 16-in. rectangulars. Its 14-in. will be ready in 6-8 weeks.

Both Corning and ASPC say they're absolutely convinced rectangulars will eventually replace rounds -- but RCA, biggest 16-in. round producer, doesn't seem concerned, is now geared for increasing mass production (Vol. 6:9). Corning and ASPC are still shipping plenty of 12½ & 16-in. all-glass rounds, too. GE and Sylvania are now turning out 16-in. glass rectangulars, and 19-in. metal-coned rounds.

\* \* \* \*

New group is acquiring substantial interest in Sentinel Radio Corp., Evanston, Ill. They're not named yet, but move presages new management. Ernest Alschuler due to remain as president or chairman of board, with new executive v.p. Sentinel is supposed to have produced more than 50,000 TVs last year, claims it will do 100,000 this year. It's important maker for Montgomery Ward label.

Magnavox's president R. A. O'Connor expects price cuts in 16-in. next few months, though cabinet price increases could offset this -- so he told N.Y. Society of Security Analysts, probably adducing this from 16-in. picture tube price cuts due April 1 (Vol. 6:9)...Philco's Jimmy Carmine discloses 30% of company's TV volume now 16-in. (rounds), rest being 12½-in.; no rectangulars planned as yet...RCA expanding cabinet production at own factory in Monticello, Ind.

Stromberg-Carlson has added two 16-in. sets, first such in 1950 line. Table has rectangular tube, sells for \$295; console has round tube, sells for \$370. Next month, company will have 16-in. console-combination, still unpriced...Hallcrafters has added 12½-in. table at \$190 to line; set is covered with leatherette, is \$10 more than plastic 12-in. table Model 715.

Admiral regional managers meet in Chicago March 14, and week later new line of radios (AM & FM) will be announced...Westinghouse's Southern Pacific area manager

O. F. Achtenhagen quoted in trade press as saying Sunbury (Pa.) plant now running 5 assembly lines, plans production of 250,000 TV sets this year...Packard-Bell, in petition to get into FCC color hearing, said 1949 gross was about \$5,500,000 (80% from TV), sales now running at \$12,000,000 rate...Sightmaster has new 19-in. consolette at \$299; new 16-in. rectangular table at \$300, with FM and Sightmirror \$340, in same cabinet used for 12½; 16-in. consolette with FM \$319, with Sightmirror \$339.

Latest prices and specs of 607 TV receivers made by 80 manufacturers are listed in March issue of Radio & Television Retailing (Caldwell-Clements)...Queens (L.I.) Electrical Appliance Merchants Assn says it's in market for surplus, bankrupt or overstocked TV deals as part of members' promotional campaign; recently, QUEAMA sold Tele-tone 7-in. table for \$66 and 10-in. for \$75; also Bendix 10-in. table for \$95, consolette \$120, and 12½-in. table for \$153...How far from grace 7-in. has fallen indicated in Oklahoma City sale (by Robertson Appliance Co.) of 7-in. Admirals at one cent with every purchase of Admiral 16-in. consolette at \$370.

\* \* \* \*

Letter from Frank J. Moch, president of TV Installation and Service Assn, Chicago, informs us servicemen don't bear "grudge" against TV manufacturers, as implied in his recent speech (Vol. 6:6). Their attitude, he says, is one of "sincere conciliation," though he notes practices of setting service rates and policies have engendered some "ill will." He complains everyone has ignored TISMA recommendation that an intra-industry council be set up to iron out differences among manufacturers, distributors, parts jobbers, telecasters, servicemen, and even advertisers.

TV chairman of National Appliance & Radio Dealers Assn Mort Farr, Upper Darby, Pa., told House tax committee recently that TV retailers are working on lowest profit margin in history of major appliances, citing NARDA survey showing average overhead of 26% of sales or "more than the gross profit on TV price leaders and best sellers." He said many retailers already have closed up, and some larger dept. stores, music retailers, etc. discontinuing TV lines because overhead won't permit. He also noted that 60% of TV buying is on installment.

**'DOPING' THE TV-RADIO SWEEPSTAKES:** Merry scramble for top positions in TV unit output, subject of recent provocative prognostications in this space by Television Shares Management Corp. (Vol. 6:8), had Wall Street Journal's Joseph M. Guilfoyle likening 1950 to horse race -- and in able analysis March 9 he notes:

"Champion RCA is being challenged by Philco, now traveling the comeback trail...and by Admiral, a young upstart." Placing them 1, 3, 2 in 1949, he goes on to pick Motorola 4th [but it] "will have to beat off such challengers as GE and Emerson if it hopes to retain that spot this year." He then picks "dark horse" Zenith and then DuMont, Crosley, Westinghouse in that order to make up top 10.

In radio Guilfoyle calls Philco "the undisputed champ...one of the few companies which has not de-emphasized radio since TV entered." Last year they ranked thus after Philco: RCA, Admiral, Motorola, GE, Emerson, Zenith, Crosley.

Admiral is reported turning out 3000-3500 TVs daily now, spending 75% more in newspapers and magazines (out of 1950 ad budget of \$15,000,000); also planning from June thru Labor Day to lay down "continuous barrage" of plugs over radio stations in TV areas, plus billboard campaign, possible new homemakers' magazine, even county fair demonstrations.

Philco's prediction of upwards of 800,000 TVs this year is cited, and it's quoted: "We think we're outproducing everybody in the industry now. We'll average better than 19,000 sets per week this month...doubt anyone will be ahead of us."

Two factors are given for RCA's "lead in the TV sweepstakes": (a) top-notch merchandising job, and (b) high consumer acceptance of its receivers. RCA isn't telling, but last month's announcement of 1,000,000th TV set leads to guess it made 500,000 last year (vs. 400,000 by Admiral).

Motorola is accredited 285,000 last year, unpredicted this year; Emerson 65,000 last year, now 7500 per week, goal 400,000 this year; GE, current weekly average 10,000, to be increased. Top 7 TV producers are "conservatively estimated" by Guilfoyle as accounting for 3,800,000 receivers this year out of his predicted 4,500,000 industry total.

**Trade Personals:** Fred J. Neidig, ex-North American Philips, named commercial TV dept. mgr. of National-Simplex-Bludworth Inc., new maker of large-screen TVs (Vol. 6:6) and subsidiary of General Precision Laboratory Inc. . . . W. A. Bles, Crosley sales v.p., is subject of "worth knowing" sketch in March *Changing Times*, *The Kiplinger Magazine*, paying tribute to him as "a natural-born salesman" . . . Joshua Sieger, research chief, elected engineering v.p. of Freed Radio . . . Lloyd L. Spencer, ex-sales v.p. of Stromberg-Carlson, heads new Cleveland firm called Lindsay-Spencer Co., 7016 Euclid Ave., dealing in phone supplies . . . Lewis Winner, editor of *Television Engineering* (formerly *Communications Magazine*), heads new broadcast engineering-transmission group of IRE . . . Joseph C. Ferguson, onetime RCA, elected Capehart-Farnsworth asst. v.p. in charge of research and advanced development . . . Harry S. Gould, ex-Magnavox, new merchandising director of John Meck Industries . . . E. Jonny Graff, program director of WBKB, Chicago, becomes radio-TV director of Kaufman & Associates, Chicago agency, March 20.

Zenith reports sales for 9 months of its fiscal year ended Jan. 31, 1950 amounted to \$65,196,527, of which nearly half (\$32,506,411) were accounted for in third quarter (Nov., Dec., Jan.). Consolidated net profit for 9-mo. period was \$3,138,938, reflecting deduction of \$754,127 amortization incident to acquiring subsidiary (presumably Rauland). Net profit for third quarter was \$2,072,412. Profits were highest in company's history, comparing respectively with \$2,025,781 and \$1,041,246 for comparable 9-mo. and third-quarter periods year ago. Sales likewise were highest in history, comparing with \$56,951,492 and \$23,620,900, respectively. Says March 9 statement by president McDonald: "Sales for February were slightly lower (than Jan.) due to the smaller number of working days. Despite capacity operation and notwithstanding an expected seasonal decline in demand, which so far has not materialized, the company is continuing to allocate its production of radio and TV receivers and is scheduling operations in all of its plants at full capacity for the next several months."

March Industrial Bulletin of New York State Dept. of Labor, 80 Centre St., New York, is devoted largely to "survey" of TV industry in New York—though nearly all attention in receiver manufacture section is paid to Emerson, in tubes to Sylvania's plant at Seneca Falls and Lectrovision's at New Rochelle (big Corning Glass production overlooked). There are sections also on TV labor, training, stations, networks. Conclusion: "As a member of the nation's industrial squad, television seems definitely assured of a place in the first string lineup. It has proved itself a multiple-threat performer from the first whistle."

RCA's Vidicon, tiny camera tube (6-in. long, 1-in. diameter), is currently intended for industrial use, said company's Drs. Zworykin, Rose, et al, at IRE convention. But fact tubes are being put into field camera for RCA color system had conventioners expecting it to be available for broadcast units before long. Whole industrial camera is no larger than big cracker-box—one-tenth size of present cameras. Entire Vidicon chain sells for \$6500, compared with \$23,275 for present image orth chain.

Uhf is virtually here, fast-emerging from mystery stage. That's net effect of report on RCA-NBC Bridgeport TV satellite experiment (Vol. 6:5), by NBC's Ray Guy and Fred Smith at IRE convention. But definitive measurements to back up their feelings won't be in for while yet. Plans are to test at least through 1950.

**Financial & Trade Notes:** GE reports 1949 earnings of \$125,639,051 (\$4.36 per common share) were largest in its history, comparing with \$123,835,000 (\$4.29) in 1948; 1949 sales were \$1,613,564,000 . . . Philco president William Balderston says first quarter 1950 sales will set record for period, will be highest since first 1948 quarter's more than \$80,000,000; 1949 total was about \$215,000,000 . . . Emerson reports profit for 13-week period ended Feb. 4 of \$1,225,912 (\$1.39 per common share) vs. \$808,845 (\$1.01) for comparable period ended Jan. 29, 1949 . . . Crosley reports February dollar volume greater than any 1949 month; TV 93% and radio 175% above same month last year . . . Avco notice of annual meeting in Wilmington April 13 discloses these salaries: Victor Emanuel, chairman, \$128,316 plus \$20,000 extra compensation; Raymond C. Cosgrove, executive v.p. (resigned), \$100,299; James D. Shouse, chairman, Crosley Broadcasting Corp., \$60,000 plus \$20,000 extra . . . General Instrument directors took no action on common dividend usually paid in April; it declared 15¢ in 4 previous quarters.

Notes from IRE convention: Appearance of depth in TV pictures is possibility, using velocity TV reproduction system described by Georgia Tech scientists (M. A. Honnell, M. D. Prince) . . . Cheaper, easier method of carrying TV signals from city to city is seen in Army Signal Corps' "G-String" development (named after Dr. Georg Goubau, Ft. Monmouth); it employs single strand of wire instead of coaxial or bulky wave-guides, utilizing principle of surface-wave transmission . . . RCA showed smallest pocket radio, accomplished by using lid to form loudspeaker, making it one-third size, half weight of receivers now available; miniature tubes, lower power permit reduction in size.

DuMont's industrial color equipment (Vol. 6:9), 18-mc field-sequential system, got off to only fair start in IRE convention demonstrations. Consensus of engineer-observers was that resolution was good, brightness satisfactory (capable of 100 ft-lamberts), but colors weren't true. Also, Diesel engine supplying power was blamed for interference. CBS's Dr. Peter Goldmark was quoted saying he didn't "mind DuMont using CBS system . . . but I feel hurt that they didn't do a better job with it." DuMont plans to have 19-in. tube in 30-60 days (this was 12½-in.), reported 7 units to be sold at \$19,985 each in 3 months.

Hope for improving reception of weak TV signals in fringe areas is seen in 2 developments revealed at IRE receiver meeting this week. RCA Laboratories told of getting greater amplification from tube using electron beam deflection in addition to normal grid control. Although tube won't be commercially available for 2 years, it may make possible TV sets with fewer tubes (hence less expensive), or sets with greater sensitivity. DuMont told of work done in developing receiver circuit with improved noise-reduction qualities. It's a "suicide" circuit that opens wide for sync pulse, immediately closes up to bar noise from getting into circuit.

Finally describing his color work, Rensselaer Polytechnic Institute's Dr. Victor A. Babits (Vol. 5:50) told IRE session it is a method of transmitting light through transparent crystal, changing light's colors by applying electronic or magnetic impulses to crystal. Up to now, Dr. Babits said, he and associates have had certain amount of success with crystal 2-in. square. Listeners were still generally skeptical.

RMA is paying former Democratic Rep. Joseph E. Casey (Mass.) \$5000 retainer, and \$1000 a month, to help industry fight TV excise tax, according to report filed by Casey when he registered with Congress as lobbyist.

## COLOR ISSUES — AS DEFINED BY COY

Excerpts from Address by Wayne Coy, Chairman, Federal Communications Commission

Before University of Oklahoma Radio Conference March 14, 1950

\* \* \* \*

**T**HE SYSTEM proposed by the Columbia Broadcasting System has been in development longer than any of the other two systems and has progressed farther than any of the other two systems. The system has worked well and produces pleasing color pictures of good quality and good color fidelity. At the present stage of development the system must necessarily use a mechanical rotating filter as the means of producing color. Since the mechanical filter must be more than twice the size of the tube, it is obvious that direct view tubes under the CBS system as a practical matter can be no larger than 10 to 12 inches—the larger 16 to 20-inch tubes cannot be used with the color wheel.

In addition, the CBS system involves a change of transmission standards in two important respects. First, the number of lines are reduced from 525 to 405. Secondly, the number of fields are changed from the 60 of black-and-white television to 144 for color. CBS urges that the additional intelligence which results from color more than compensates for the loss in geometric resolution which results. However, when a station is broadcasting color programs in accordance with CBS standards, an ordinary black-and-white receiver will not be able to receive the programs in black and white unless either a manual or automatic adapter is incorporated into the black-and-white sets. But that is not color television . . . .

### The RCA and CTI Systems

The RCA system was first disclosed in late August of 1949. Its first demonstration was unsatisfactory even to its proponents. In subsequent demonstrations improvements have been noted. However, at the present time the system relies on three tubes to produce the color image. This is a costly and cumbersome procedure and involves fundamental problems of registration. If the system works out, present black-and-white receivers will be able to receive RCA color broadcasts in black and white with no change in the receiver. But that is not color television either.

Getting black-and-white reception on present receivers from color television broadcasts deals only with an economic aspect of the problem; namely, obsolescence of present-day receivers; or lack of obsolescence; or the cost of preventing such obsolescence as occurs when television programs, which one wants to see, are broadcast in color.

One additional fact about the RCA system is that at the present time a color signal under the RCA system will not pass through the coaxial cable presently available. The cable width used at present is about 2.7 mc. The RCA system requires about 4 mc. An RCA color signal pass-

ing through the 2.7 coaxial emerges as a black-and-white signal.

The CTI system [Color Television Inc.] has been demonstrated twice to the Commission and both of those demonstrations have been in recent weeks. CTI was not satisfied with the demonstrations and they are expecting to be able to show considerable improvement within the next few weeks. I do not believe I should comment further with respect to their system until I have seen a demonstration with which the proponents are satisfied.

### Promise of the 3-Color Tube

I should like to point out that there is considerable discussion about the possibilities of a single 3-color tube which would replace the three tubes used in the RCA system or the color wheel and tube that is now in the CBS system. RCA says such a tube would simplify their set and converter problem and reduce both size and cost. CBS says such a tube would relieve the handicap of a tube limited in size by the color wheel.

Such a tube is still in the laboratory and has not yet been demonstrated to the Commission. I hope with all my heart it develops and that when it is shown it will be perfect. However, in the case of this tube, as in the case of other much-heralded color television marvels, neither the Commission nor the rest of the industry can afford to count such eggs before they are hatched. In the past few months I have seen too many press releases describing perfect color television badly mutilated by bad performance.

Certainly a 6-mc color television system that would allow black-and-white reception on present-day receivers from color transmissions would be most desirable. At the present time we do not have such a fully developed system. On the other hand, we do have a workable color system with good picture quality but which is handicapped by limitations on tube size and which cannot be received by present black-and-white receivers without change.

### Questions Posed By Color TV

Must we choose an undeveloped system because its color transmission can be received in black and white on existing receivers?

Or must we choose a workable system whose color transmissions cannot be received on existing receivers in black and white?

Or must we permit all of the systems to have more time for experimentation and development?

If more time were to be allowed for experimentation and development of all color television systems, could the freeze be lifted and permit black-and-white television to

go ahead? Or should the freeze be kept on until it is possible to write engineering standards for color television?

If there were to be time for further experimental and developmental work, is there any action which, taken now, would protect the public presently buying television receivers in a manner which would reduce the obsolescence factor in the event the Commission decision favored a color system incompatible with present black-and-white standards?

#### Some More Alternatives

Given the assumptions I have just stated, could it be expected that the television manufacturing industry would immediately build manual or automatic adapters in all television receivers? Would the relative small cost for such an addition to a set be worth it in terms of giving the widest possible latitude for decision after further experimentation extending perhaps a year or more?

Or must we write multiple standards and let the public decide in the market place which is the better system? Is there any way to assure the future use of all color sets if such a proposal is followed? Is it a proposal in which the public will willingly accept the risks and costs involved?

Or must we reject all of the systems and say that we will proceed immediately with black-and-white television in both bands and let color wait until another generation or two, and in another, and now unexplored, portion of the spectrum?

These are the very difficult questions which the Commission has to face and resolve before it can decide the

color television issue. Needless to say, I am not prepared to answer these questions today.

You and I will agree that color is a delightful quality in our every-day life. But let me assure you, with deep feeling, that it is a hydra-headed animal when it is considered in relation to television today.

Color television is a matter of wheels within wheels—or as Winston Churchill said on Russian foreign policy—“a riddle wrapped in a mystery inside an enigma.”

Hearings will continue on this problem beginning in Washington tomorrow morning. We have already heard 33 volumes or 4500 pages of testimony. I would not be surprised to see the number of volumes exceed 50. I make no prediction when the hearing will end or when a decision will be made. I wish the decision could be made tomorrow but it won't be. I hope (I do not predict) that the Commission will be able to resume the processing of applications before this year is out.

The country is far richer in technological information today as a result of our present hearings. There is no question in my mind but what the Commission's actions with respect to color have moved forward the development of color television by months and years. As a member of the Commission I take pride in the fact that we have been so diligent in looking after the public interest. I am sure that the result will be a far better, far sounder and far more enduring system of television than if we rejected the considerations of color television at the present time and left it to chance to be developed at some unknown place in the spectrum and at some unknown date in the future.



**THEY WANT MORE RADIOS, TOO:** Prudent TV manufacturers, all save handful also makers of radios, are turning thoughts more and more to radio production and promotion -- goaded by dealers crying discrimination in favor of TV. So, despite fact merchants are bemoaning allocations and slow deliveries of brand-name TVs, there's perceptible increase in output of radios. Approaching summer, always good for portables, and fact that industry made and sold more than 10,000,000 radios last year at average factory value of more than \$26, mean radio business "ain't hay" by any means.

Fact is, distributors and dealers are crying for radios in TV areas no less than in non-TV areas -- but latter are most vocal in charging set makers with favoring TV for their limited cabinets as against much-demanded radio combinations under \$200. Actually, what with quick turnover, replacement business, ease of handling, slight service demands, radio business is still bread-and-butter even for many dealers enjoying the lush TV pickings.

New radios have been announced in recent weeks by Admiral, Arvin, Emerson, Motorola, RCA, among others, mostly table models and portables. RCA and Philco plan heavy promotions of portables soon. Arvin line includes \$50 AM-FM table. Emerson has \$17 table and \$90 table with 3-speed phono. Motorola has 4 new tables at \$25 to \$40. RCA has 2 new portables at \$30 & \$50, new console combination at \$160.

Indiana manufacturer John Meck has added AM to some new TV table models, thinks extra cost won't faze customers wanting single set for both. Here's his whole line now: Model XNA, 10-in. table, \$140; XOA, 12½-in. table \$180; XQA, 12½-in. table \$220; XQR, same as XQA with AM \$240; XTA, 16-in. table \$250; XTR, same as XTA with AM \$270; XRA, 12½-in. console \$260; XRPT, 12½-in. console with AM-3 speed, \$320; XSA, 16-in. console \$300; XSPT, 16-in. console with AM-3 speed \$360.

Note: RMA statistics committee chairman Frank Mansfield (Sylvania) projects RMA's 1949 count of 9,680,773 radios (Vol. 6:3) and RCA License Bureau's 9,875,429 (Vol. 6:10) to a more realistic total of 11,400,000 -- thus taking into account non-reporting producers. For TV, he fixes figure at 3,029,000, bearing out our belief (Vol. 6:10) it was "in excess of 3,000,000."

**TRENDS & TOPICS OF THE TV TRADE:** Watch for big splash before end of April by substantial TV manufacturer, offering 10-in. table model at \$99, table with 12½-in. at \$119, and 12½-in. console at \$149!

Further details aren't available, nor are we at liberty to disclose identity of this set maker beyond noting that he's one of top group recently listed (Vol. 6:8). He insists the prices are "coldly calculated" and will earn profit for himself and dealers. He plans to back campaign with national advertising, is confident startling prices will serve as antidote to summer slump everybody else expects, has dropped all radio production to clear the decks for big TV output.

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General Electric's new line abandons 10-in., includes one 12½-in. and one 19-in. model, concentrates on rectangular 16-in. It's GE's first line of 16-in., although it made \$430 console last fall and has been making the tubes for other customers. New line (all mahogany except blondes) comprises:

Model 12T7, 12½-in. table, \$200; 16T1, 16-in. table, \$270 (16T2, blonde, \$280); 16C110, 16-in. console, \$300 (16C111, blonde, \$310); 16C115, 16-in. console with half-doors, \$330; 19C101, 19-in. console, \$550. All have 16 tubes plus 3 rectifiers save 12½-in., which has 15 & 3. Deliveries have begun, though 19-in. will not move until later this month.

Another major out with new models -- and claiming its 1950 production will place it among top 20 (Vol. 6:8) -- is Stewart-Warner. It will feature 14 & 16-in.

rectangulars, retaining 12½-in. console-combination at \$350 from old line. Now being delivered is 16-in. rectangular table at \$280; due last week in March is same in console with AM-FM at \$350. Next month it promises 14-in. rectangular table and console-combination, as yet unpriced; also, late in April, 16-in. console and combination, unpriced. There may be changes in time for Chicago Summer Furniture Mart.

Bendix has new rectangular 16-in. console-combination, to be priced around \$450, for delivery in May. Company's blanket cancellation of existing dealer franchises occasioned all sorts of rumors; actually it's only to revise franchise form. Bendix is now producing 2500 TVs a week, limited by shortage of cabinets, etc.

Noblitt-Sparks (Arvin) will have new 12½-in. mahogany table at \$190 in April, console at \$229 or \$239 in May, full new line at Furniture Mart in June; company says it will make more than 100,000 TVs this year, this week broke ground for new factory in Columbus, Ind., expected to be in TV-radio production by Aug. 1.

Reported new Zenith sets aren't changes from present line, but include 2 improvements to cut down glare from outside lighting: (1) Glass covering plate is slanted downward, so that ambient light is reflected down instead of into viewer's eyes -- similar to Philco innovation. (2) Face of "black" tube is coated to dissipate outside light.

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Packard-Bell v.p. Robert S. Bell claims it's largest radio producer in West, with greater facilities than any other manufacturer west of Chicago (meaning, primarily, Hoffman); he reports production now 8000 TVs per month, expects to turn out 106,000 this year at average factory price of \$145 -- therefore, ought to have been included in "guesstimate" list of top 20 (Vol. 6:8)...Yet latest from Hoffman Radio is that it's producing now at rate of 180,000 TV sets, may hit 200,000 this year.

Pathe Television Corp., Brooklyn, same address as Air King (it's a subsidiary, Air King in turn being subsidiary of Hytron), reports new line comprising 12½-in. table at \$200, rectangular 16-in. consoles at prices varying from \$300 to \$360; all have 16 tubes, 2 rectifiers, except \$300 console with 17 & 3...Magnavox has new rectangular 16-in. mahogany console at \$300, in blonde \$320...Tele-tone has new 19-in. walnut console at \$370, in mahogany \$390...Fada advertises new line comprising 12½-in. table at \$200, same in mahogany \$210, same in console \$240; also, 12½-in. table for fringe area reception, \$270; also, 16-in. table at \$330, console \$365...Regal adds 19-in. console at \$497.50, with AM-FM \$527.50.

Macy's-New York advertised private label Supre-Macy line this week as follows (maker undisclosed): 16-in. Classic console \$329, Queen Anne console \$329, 18th Century console \$399; also 19-in. Queen Anne at \$399 and 18th Century at \$459...Sightmaster reports moving into new plant at 111 Cedar St., New Rochelle, N.Y.

Berkey & Gay Furniture Co., Grand Rapids, has authorized use of its name on custom-built TVs; Edgar S. Reidel, ex-Raytheon, now with Chicago investment firm of Shillinglaw, Bolger & Co. looking for manufacturer interested in using B&G quality name on royalty basis.

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Though local dealers are reported up in arms, big new potential market for TV sets is seen in Admiral's successful bid to furnish 4000 chassis (with 12½-in., at reported price of about \$100 per unit) in big Levittown, Long Island, housing project for Levitt & Sons -- sets to be built into living room walls, included in \$7990 price of 4-room house along with GE refrigerator, GE range, Bendix washer. There were 15 bidders, including RCA.

Washington Electric Assn reports 41,875 TVs sold in 1949 at \$13,818,750 retail -- or average \$330 per set. TV thus was highest income local dealers enjoyed, refrigerators running second with 31,118 units at \$9,335,400; radios most units (55,876) for retail trade of \$5,587,600. Philadelphia Electric Assn recently reported 220,366 sets sold during 1949 for \$73,274,529 (average \$332).

Marathon Radio & Television Inc., 495 Kent Ave., Brooklyn 11, N.Y. (Benjamin Willig, pres.) is new manufacturer. Line has three 16-in. consolettes at \$495, \$525 & \$545; 19-in. consolettes at \$565, \$495 & \$615. All have 27 tubes, 4 rectifiers... New radio-phono manufacturer is Steelman Phonograph & Radio Co. Inc., 742 E. Tremont Ave., Bronx, N.Y. (Morris J. Steelman, president).

**460,000 TV SETS MADE IN FEBRUARY:** Short February month, which for statistical purposes closed Feb. 24 and means March will be 5-week month, saw TV output of approximately 460,000 units -- second only to 5-week November's 497,000 (Vol. 5:52). RMA members report 367,065 sets, to which we're adding usual 25% and rounding out total. February total compares with 420,000 during January (Vol. 6:7), means total of 880,000 thus far this year to add to post-war cumulative of just about 4,000,000 as 1950 began (Vol. 6:3).

Weekly RMA output figures in February show: first week 97,394, second 91,663, third 92,905, fourth 85,103. RMA's February breakdown: table models, 164,-206 (3440 with AM and/or FM); TV-only consoles, 162,570; combination consoles, 40,-289 (28,595 with phonos). TV sets with FM totaled 42,940. FM sets totaled 86,455.

February radios of all kinds totaled 1,117,458, including the 367,065 TVs; this compares with 995,783 in January, 998,993 in December, 1,324,359 in November.

**WHAT IS 'PROPER' VIEWING DISTANCE?** Actual viewing distances, one of TV's most argued and least studied facets, finally has a few facts to go on. Dr. John W. Riley, Rutgers sociology professor, appeared as CBS witness during color hearing this week, presented study showing that people's habits apparently just don't follow expert opinion. He covered 102 families (287 individuals) in New Brunswick, N.J., found:

(1) Median distance from 10-in. tube (picture 6¼-in. high) was 8 ft. 4-in., or 15 times picture height. For 12½-in. tube (8½-in. high), median was 9 ft. 10-in., or 14:1 ratio. For 16-in. (10½-in. high), median was 9 ft. 8-in., or 12:1.

Those distances are surprising, since engineers argue that optimum is 4:1 or 6:1 or 8:1 or 10:1 -- but we've heard no talk about greater ratios. It's peculiar that median for 16-in. is about same as for 12½-in. Perhaps small sample accounts for it. Perhaps people are "pushed to the wall" by 12½-in., can't get any farther for 16-in.; but Dr. Riley says "size of room does not appear to control seating distance, although in the largest rooms people tend to spread out somewhat more."

(2) As for viewing angle, about half sit virtually in front of screen (within 20 degrees of perpendicular). Balance is about equally divided among those sitting 21-30 degrees and those over 30.

(3) "Custom and comfort" is basis for seating choice of most people. But a third of the 14% who sit closer than 6 ft. and a third of the 26% who sit farther than 12 ft. apparently find those distances easier on eyes.

(4) Children under 10 sit quite close, people over 40 towards back.

(5) Wearing of glasses has no bearing on choice of viewing distances.

Dr. Riley's study is titled "Study of Television Viewing Under Normal Home Conditions" (CBS Exhibit No. 346); write CBS Information Dept. for copy.

**MORE ABOUT RECEIVING TUBE SHORTAGE:** Maybe that circuit tube shortage won't be as serious as we indicated last week (Vol. 6:10), for we have these reassurances from these prime suppliers:

Ray C. Ellis, v.p. Raytheon: "We feel that the standard receiving type tubes as used in TV sets will be a short item this year, but do not feel that it will be a limiting factor in the production of TV sets. We among others are expanding production facilities so that when the peak demand hits the industry this coming fall we do not feel there will be any material shortages of tubes."

R. C. Carlson, v.p. Tung-Sol: "There is at present an apparent shortage of some types of tubes, but with some increased production, and proper planning on the part of set manufacturers as to requirements, there should be sufficient tubes available over the year to take care of contemplated set production as we know it."

Reports on picture tubes: Corning Glass spending \$5,000,000 on new plant in Albion, Mich., 300,000 sq. ft. on 31-acre site, for making blanks; will be in production by fall, employing 600...Sylvania March 20 makes effective 1-year guarantee on all its picture tubes, replacing without charge for manufacturers and distributors; each tube will have code date stamped on it...General Electronics Co., Paterson, N.J., reports it's adding new equipment in new building, now turning out 14 & 16-in. rectangulars.

**Financial & Trade Reports:** To finance expansion, Hytron (subsidiaries are Air King and Pathe) has registered with SEC plans for sale of 200,000 shares of \$8 par 6% convertible preferred and 440,000 shares of \$1 par common, all but 40,000 of common to be offered for sale by company itself; the 40,000 by Bruce A. Coffin, president; Lloyd H. Coffin, chairman; Edgar M. Batchelder, executive v.p.; David H. Cogan, v.p. Underwriters are Barrett Herrick & Co., New York, and Sills, Fairman & Harris, Chicago . . . Hytron reports 1949 net of \$565,171 (45¢ per common share) on sales of \$16,226,143 vs \$86,121 (8¢) profit on \$7,937,423 in 1948 . . . Hoffman Radio is not only splitting 1½-for-1 (common thus totaling 382,525 at 66⅔¢ par), but has advised SEC that wife and daughter of president H. L. Hoffman (who owns 23.6% of outstanding common) are selling 50,000 shares thru William R. Staats Co., Los Angeles, and Paul H. Davis & Co., Chicago.

SEC's latest summary of security transactions (during Jan.) include: Emerson's Dorman D. Israel sold 1700 shares, retained 620; General Instrument's C. Russell Feldman, resigned chairman, sold 9500, retained 500; GI's president Richard E. Laux sold 1800, retained 100; Kenneth C. Meinken sold 5500, retained 210 . . . In National Union Radio, president Meinken sold 2300 shares, retained 32,600; Clarke & White Inc., Boston bankers, sold 10,000, retained 5000 . . . Globe-Union Inc., whose Centralab division is major components maker, had sales of \$29,495,444 in 1949; is reported earning at rate of \$3.50 to \$4 this year (vs. \$2.54 per share in 1949), but chairman C. O. Wanvig tells *Wall Street Journal* that's probably "steep" though profit outlook is "very favorable"; company is part owned by Sears Roebuck.

RCA proxy notice for May 2 stockholders' meeting in New York discloses these 1949 directors' salaries: David Sarnoff, chairman, \$200,000; Frank M. Folsom, president, \$140,000; Niles Trammell, NBC chairman, \$100,000; John G. Wilson, executive v.p. RCA Victor, \$90,000 (plus \$25,000 incentive payments); C. B. Jolliffe, v.p., \$50,000 (plus \$17,500); Harry C. Ingles, president RCAC, \$35,000 (plus \$4000); Edward F. McGrady, v.p., \$30,000; Gano Dunn, consulting engineer, \$28,050; John T. Cahill, director, \$2250 (his law firm was paid \$365,000 legal fees for year).

Hazeltine reports 1949 profits were \$985,072 (\$2.81 per share on 350,000 shares outstanding) on gross income of \$2,848,213 vs. \$700,728 (\$2) in 1948; \$547,572 earnings retained in business after \$1.25 dividend left net worth at \$6,155,971. Proxy notice for April 11 stockholders meeting discloses these salaries; Jack Binns, president, \$35,775 (plus \$15,000 bonuses and profit-sharing); W. A. MacDonald, v.p., \$34,685 (plus \$15,000); L. B. Dodds, v.p., \$23,737 (plus \$6000); Jennings B. Dow, v.p., \$19,100 (plus \$6000); F. Robinson, v.p., \$18,150 (plus \$7500).

Packard-Bell declared quarterly dividend of 50¢, payable April 25 to holders of record April 15; raises rate to \$2 per share vs. \$1 last year . . . Motorola declared regular quarterly dividend of 37½¢ per share payable April 17 to holders of record March 31, reports sales and earnings first quarter 1950 promise "to exceed by a wide margin the record of any other quarter" in company's history.

Celomat Corp.'s CBS color converter (Vol. 6:10) turns out to be device giving 5-in. picture blown up to 7-in. Vice president Myron Greenwald testified, during FCC color hearing, that retail cost of unit, without adapter for changing existing receivers to 405 lines, would be about \$40; for 10 or 12-in. picture, it would be \$55-\$60. He couldn't estimate cost of adaptation. He reported his company's business, magnifying lenses, had dropped considerably in last 6 months.

**Trade Personals:** Austin C. Lescaboura, veteran electronics publicist, awarded French Legion of Honor for technical assistance to industrial missions; he was twice decorated previously by French govt. . . . George H. Lochman, ex-DuMont, appointed RCA Victor field sales representative for Michigan, northern Ohio, western Pennsylvania, working out of Cleveland . . . James W. Murray, ex-RCA record division v.p., elected v.p. of Capitol Records Inc., Los Angeles . . . Ernest Kohler, ex-Raytheon, has joined Oak Mfg. Co. . . . RCA Victor Distribution's v.p. Robert A. Seidel announces appointments of R. C. Dove as his operating asst., H. V. Somerville as technical asst. . . . F. P. Rice promoted to executive asst. to Irving G. Rosenberg, DuMont Tube Div. mgr.; J. L. Fisher named production control mgr., succeeding Chester Burwell, resigned.

Packard-Bell's request to get into color hearing (Vol. 6:10) was denied by FCC on same grounds Emerson, Wells-Gardner, et al, were rejected—it would offer no scientific color data. Color experimenter Theodore Wetzel, of Milwaukee (Vol. 6:2, 7, 8) is persisting in request for hearing, though FCC denied him once. He claims his system out of theoretical stage, says he has set up equipment to demonstrate.

Industry advisor to U. S. delegation to CCIR meetings in Paris and Eindhoven April 20-25 will be *Electronics Magazine's* Don Fink, who sails April 14 on *Queen Elizabeth*. After seeing French and Dutch TV, committee goes to London April 27-May 4 to look over British system. Foreign members of CCIR group begin 10-day tour of U. S. cities viewing stations and factories March 27 (Vol. 6:9). Object is to set up international TV standards.

More March 1 sets-in-use figures reported since NBC Research "census" of Feb. 1 (Vol. 6:8): Los Angeles 448,737, up 72,737 in month; Philadelphia 407,000, up 37,000; Boston 305,793, up 28,793; Baltimore 146,191, up 13,191; Milwaukee 89,419, up 8619; Buffalo 75,693, up 7493; Providence 40,950, up 8950; Syracuse 33,758, up 5258; Johnstown 16,560, up 2960.

Federal Television Corp., New York, retains right to use its name in decision by U. S. Court of Appeals this week, upholding lower court decision denying Federal Telephone & Radio (IT&T) request for injunction to stop it from using word "Federal" in name (Vol. 5:19,22).

NAB convention speakers trend to academic side—and plenty of them. Other than FCC chairman Coy, name speakers booked for April 16-19 convention in Chicago's Stevens Hotel have no radio identity. They're Gen. Carlos Romulo, president, UN general assembly; Herman Steinkraus, president, U. S. Chamber of Commerce; Paul H. Hoffman, ECA administrator; H. E. Babcock, agricultural author. AFM's Jimmy Petrillo has also been invited.

**Telecasting Notes:** DuMont Network centralizing production, rather than depending on local studio executives at Wanamaker, 515 Madison, Adelphi Theatre origination points (150 shows weekly); now, Alvin Hollander is mgr. of program facilities, Don Russell chief announcer, Miss Duncan McDonald new training supervisor . . . Pittsburgh's WDTV, hitherto network and films only, to get local studios, signs for 7500 sq. ft. in Chamber of Commerce Bldg., main studio 58x48, occupying May 1 . . . NBC offering TV advertisers 35% discount on gross for 8 weeks during July-August to encourage staying on thru summer; ad chief George Frey reports "encouraging response" . . . First TV awards in annual duPont citations went to ABC-TV for *Crusade in Europe*, to New York's WPIX for handling news and events . . . WTTG, Washington, appoints Harrington, Righter & Parsons rep firm on "trial basis" but other DuMont-owned outlets (WABD & WDTV) continue to be represented by DuMont Spot Sales.

**CLOUDY PROSPECT OF SMALLER SIZES:** Everybody's trying to learn identity of manufacturer who told us he intends producing 10-in. table to sell at \$99, 12½-in. table at \$119 and 12½-in. console at \$149 -- but we cannot as yet disclose anything more than published last week (Vol. 6:11). Whether this substantial manufacturer's big summer promotion will affect market as whole, your guess is as good as anyone else's.

Mere fact of \$100 TV receiver, regarded not so long ago as dream even with 10-in., actually was accomplished recently by Philharmonic, which listed 10-in. table at \$99.95 (Vol. 6:9) as well as surprisingly low prices on larger models. Situation led us to do bit of probing into 10-in., and we find record showing these manufacturers still offering them: Emerson, Crosley, DeWald, Meck, Motorola, National, Nielsen, Regal, RCA, Sparton, Sylvania, Tele King, Tele-tone.

Since last published list of 10-in. set makers (Vol. 6:4), GE, Muntz and Westinghouse have dropped them. RCA is expected to do so by summer. What the private-label folk will do, is problematical. Nobody even mentions 10-in. rectangulars -- 14-in. diagonal is smallest suggested as replacement of 12½-in. round -- but there's some talk that 10-in. may stage comeback in portables. Ten-inch tubes continue as substantial factor in replacement market.

As for 7-in., only producer still making them for own brand name seems to be National. Emerson has ceased making them, is now cleaning out last model. In 8½-in. field, there are only Arvin and Motorola. Former reports \$130 model doing well and calls 8½ "very important part of our entire TV production and sales program." Motorola reports it has no present plans to make any more 8½-in. models (\$140).

**PHILCO'S JUNE 'SUPER-COLOSSAL':** Look-see at Philco's bustling big TV, radio and tube plants in Philadelphia area tends to confirm glowing reports by its ebullient executive officer Jimmy Carmine that its TV output is currently around 18,000 units per week and that there's no letup in high rate of radio production. Then, too, there's 1949 annual report issued this week to bolster claim that Philco has really pulled out of slough into which it fell about this time last year. It reports largest orders on hand in company's history, reveals capacity soon will be 25,000 TV sets per week. But week's biggest bit of trade news from Philco is this:

In mid-June, at Atlantic City, it will play host to largest convention ever staged by any single American company (so they say) -- bringing together 6200 company men, distributors and dealers "to hear our story first hand." Ever one to do things on big scale, in line with hard-driving merchandising tradition it began when it took over Atwater Kent's dominant radio position in '30s, Philco has hired giant Convention Hall, reserved 20-odd hotels, budgeted \$1,000,000 for big event.

Plan is to hold distributor convention and meetings June 16-18, about 1200 attending, when it will introduce new TVs, radios, appliances. Combined meetings with 5000 dealers from all over country will be held June 19-22. Dealers will be guests of company and its distributors, their transportation and accommodations all paid -- but they're being urged to come without families inasmuch as business schedule will be crowded and additional hotel accommodations next to impossible to get.

Philco 1949 annual report released March 25 shows sales of \$214,884,000, earnings \$5,691,796 (\$3.17 per share) vs. 1948 sales of \$275,424,340, earnings \$10,531,914. But most significant is fact that, in wake of its bad TV breaks at start of last year, aggravated by spring-summer TV-radio "inventory recession," fourth quarter accounted for nearly third of year's sales (or \$64,841,000) and about half of year's earnings (\$2,777,000) -- and president Balderston informed stockholders:

"Sales and earnings are running well ahead of the last quarter of 1949, and operating results for the first quarter of 1950 are expected to be the highest for any initial quarter in the company's history."

**TRENDS & TOPICS OF THE TV TRADE:** DuMont is one of few who see present demand holding up through end of May, most others looking to April as falling-off time --and hoping ardently that baseball will prove hypo to spring-summer trade. Hoping, too, that program momentum now being gained will carry through spring and summer. Everybody's merely hoping and guessing, though, for TV trade is still too young, too beset with variables to follow radio precedents. Actually, it's now setting own precedents.

Signs of healthy and vigorous market: RCA dealers almost invariably putting customers on waiting lists for main models. DuMont still on allocation despite fact sets are higher-priced than most, haven't been changed or reduced since last general breaks in new lines and prices. Some manufacturers even saying allocations must continue through second quarter. And February sales of receiving tubes (for both TVs and radios) revealed by RMA as 24,865,546, just about double same month of 1949 -- hence talk of shortages (Vol. 6:10-11).

Sporadic reports of "soft spots" aren't substantiated yet by top manufacturers, who point to factories working at capacity, products moving onto boxcars and trucks as fast as turned out, wholesalers and retailers still clamoring for more.

\* \* \* \*

GE having announced its new line (Vol. 6:11), DuMont is apparently only major producer due out with new line before late spring or early summer when models for fall-winter will be introduced variously at company meetings and conventions, at Chicago Summer Furniture Mart starting June 19 and Music Industry Trade Show (NAMM) July 10-13 in Chicago's Palmer House.

Week of May 22, the 1950 Parts Distributors Conference & Show is scheduled in Chicago's Stevens Hotel -- separate this year from RMA convention, June 5-8. West Coast Electronics Manufacturers Assn stages 6th annual Pacific Electronics Exhibit Sept. 13-15 in Long Beach, Cal. Canadian Assn. of Radio & Appliance Dealers meets in Toronto's Royal York April 3-5, but TV will be only incidental.

\* \* \* \*

TV sales managers are going to do something about exaggerated advertising claims, so their business won't be subject of such sharp satirical jibe as appeared in March 18 New Yorker cartoon showing man in retail store asking, "Just what do you mean by giant, life-size 10-in. tube?" Sales chiefs of major set makers agreed, at Chicago meeting this week, that there were abuses -- claims for "big" screens, picture sizes in square inches, performance claims being among most flagrant. Overall committee chose Stromberg-Carlson's Clifford Hunt as chairman, named this subcommittee to draw up code of advertising practices: William L. Dunn, Belmont; V. C. Haven, Crosley; E. G. May, Sentinel; John Gilligan, Philco; James M. Toney, RCA.

Formerly known as Federal Video Corp., Shaw Television Corp., 200 Kosciusko St., Brooklyn, has line of 16 & 19-in. consoles in custom furniture, all with 26 tubes, 4 rectifiers. Prices range from \$495 to \$610 for 16-in., from \$595 to \$795 for 19-in., with one 19-in. combination at \$1295. Company moves April 15 to 195 Front St., Brooklyn.

\* \* \* \*

More new models: Trad adds line of home receivers to its commercial projections (TV Directory No. 10); home line comprises 16-in. console, \$395; 19-in. console with doors, \$495; new 18x24 projection, \$795...Magnavox has new rectangular 16-in. console combination at \$499...Hoffman has new rectangular 16-in. mahogany table at \$290, in blonde \$300...International Television Corp. advertising 16-in. console at \$280, 19-in. at \$500...Andrea will show new TV line in May.

Spring-summer catalog of Aldens Inc., Chicago mail order house, lists own-label 10-in. table at \$140; 12½-in. table, \$160; rectangular 16-in. table, \$220; 12½-in. console, \$200; 16-in. console, \$240; 16-in. console with doors, \$330; 19-in. console, \$370; 16-in. combination, \$400...Gimbels and Davega this week advertised Raytheon 7-in. model DX21 at \$90 (original list \$200).

Newsweek reports West Coast dealer buying radio time to describe to listeners what they're missing on TV at that very moment...We erred last week in reporting Motorola's 4 new radios as table models; actually they're portables, each in 2 dif-

ferent colors, prices ranging from \$25 to \$40...Philco releasing new portable at \$35, new AM-FM table at \$60...GE out with 3 new portable radios, priced \$20, \$30 & \$40, breaks big trade and consumer ad campaign in April and May...Sylvania March 25 announced new 19-in. metal (round) tube called 19AP4.

Another built-in receiver contract: Industrial Television Inc. has sold 60 chassis to go into living room walls of 5-room houses now being built by Orchard View Terrace Homes, Paramus, N.J. Later, 120 more "TV homes" will be built. Admiral this week replied to Long Island dealers, complaining about its 4000-set contract in Levittown (Vol. 6:11), that publicity would more than make up any of their losses.

**FABLE IN FACT—DuMONT TUBE STORY:** Allen B. DuMont didn't unveil that much-talked-about 30-in. TV picture tube this week -- rather, he simply disclosed his company was working on it. But he did say that it will probably be ready in the fall; will offer 600 sq. in. of picture area; will be usable primarily in public places. It was described as capable of high light levels and clean-cut definition, and called forerunner of 4x5-ft. "or even larger" picture tubes which may one day be usable in theatres. As for projections, either in home or theatre, the blunt-spoken Dr. DuMont doesn't give them a look-in.

[Also working on larger tubes are RCA (21-in.), GE & Lansdale (24-in.), probably Rauland and others (Vol. 6:8) -- though they're not talking about it.]

Some fabulous facts and interesting opinions about TV tubes were unfolded by Dr. DuMont and staff this week as they showed newsmen around their new Allwood plant at Clifton, N.J., called largest in world devoted exclusively to TV picture tubes. It embraces 170,000 sq. ft. of factory space on 27-acre tract, cost \$2,500,000, is given over entirely to CR production. It's eloquent monument to Dr. DuMont's conviction, held since he began making tubes with \$1000 capital (\$500 borrowed) in his basement in 1931, that "the way to develop TV is to develop the CR tube."

From what he and plant manager Irving G. Rosenberg stated, these seem to be most pertinent points insofar as they indicate trends:

Of more than 6,000,000 tubes to be produced this year (replacement market already accounting for 15% of total output and rapidly gaining), Allwood's 550 employees working 3 shifts a day 6 days a week expect to account for \$20-25,000,000 worth. DuMont doesn't disclose unit output, but did say plant by end of year should be producing at rate of 1,000,000 a year. Old plant at Passaic continues on 12½-in.

Allwood plant is producing all sizes save 7 & 10-in., which Rosenberg said will "definitely die." At moment, 16-in. is ascendant but it "must soon be eclipsed by the 17-in. DuMont rectangular [offering] over 150 sq. in. and a much more compact cabinet." The 19-in. metal-coned tube now accounts for about half DuMont output.

Rectangulares will replace rounds, in Dr. DuMont's opinion. Within year or so, he thinks all TV tubes will be rectangular. "We're gradually moving over now," said he. "We'd make more if we could get the blanks. They produce more pleasing picture than the present 'potbelly' tubes."

As for all-glass vs. metal-coned, Dr. DuMont said cost and picture results and life expectancy are about same for both, the metal having virtue chiefly of lighter weight. Glass may prove most economical for smaller sizes (meaning 12½) but larger sizes will be metal-coned, he said. (Doing big business now in spinning the metal cones to which glass is annealed are Spincraft Inc., Milwaukee; I-T-E Circuit Breaker Co., Philadelphia; DeLaval Separator Co., New York.)

Tube prices are gradually lowering with mechanization and mass production, but Dr. DuMont thinks 12½-in. which now costs manufacturer \$19 (as against \$43.50 last year) has probably reached rock bottom. Another example is \$54.50 cost to set maker for 19-in. tube vs. \$189 for 20-in. just year ago.

Dr. DuMont takes dim view, literally, of filter-glass faces, variously called black, grey, no-glare, etc. "We think they're merely a stunt," he said. "We make them, of course, for our tube customers because that's what they demand. But in our own sets, we use the clear tube and I think when people get wise they'll go back to that." Presently, 40% of DuMont's tube output goes into own receivers.

**Financial & Trade Reports:** American Broadcasting Co. has made standby loan agreement with New York Trust Co. for \$2,500,000; in report on agreement, president Robert Kintner said ABC has invested \$8,000,000 in TV thus far. ABC gross income for 1949 was \$40,267,488, up from \$37,110,726 in 1948; but substantial program costs and TV depreciation charges resulted in net loss of \$519,085 for 1949 vs. profit of \$468,676 (28¢) in 1948 . . . Last year's sharp drop in phonograph record sales reflected in 1949 report of Capitol Records Inc., showing sales of \$11,496,400 vs. \$16,862,450 in 1948; net income of \$60,477, compared with \$1,315,847 (\$2.60 per share) preceding year.

Corning Glass sales went to \$73,197,782 in 1949 vs. \$67,866,101 in 1948, says annual report, and its in TV (plans centering largely on rectangular tubes) up to hilt; net earnings were \$7,078,384 (\$2.56 per share) vs. \$3,648,253 (\$1.25) in 1948 . . . Collins Radio reports sales for 6 mo. ending Jan. 31 were \$5,551,794, net profit \$145,243 (39¢); same period last year sales were \$4,444,663, profit \$246,543 (71¢).

Olympic Radio reports 1949 output of 51,718 TV sets, lifting net sales (including radios) to \$9,609,672, nearly triple 1948's \$3,518,533; 1949 profit was \$578,163 (\$2.24) as against net loss of \$45,771 in 1948; indicated billings first 4 mo. this year should approximate 60% of last year's record sales, according to president A. A. Juvilier.

Hoffman Radio report March 22 shows sales of \$11,987,650 in 1949, up 134% from 1948 volume of \$5,112,889, gain due primarily to TV demand; earnings were \$1,276,036 (\$5) vs. \$223,619 (86¢) in 1948 . . . Stromberg-Carlson president Robert C. Tait reported to March 23 annual meeting of stockholders that "reasonable profit" will be earned first quarter 1950, first 2 months having been profitable; last year's first quarter showed loss of \$478,000.

Wilcox-Gay Corp., now heavily in TV (Vol. 6:6), reports 1949 net loss of \$755,762 on sales of \$1,943,994, vs. 1948 loss of \$368,892 (after tax refund of \$114,716) on sales of \$4,006,312 . . . Oak Mfg. Co., components maker, reports net earnings of 71¢ per share on 450,000 shares outstanding for quarter ended Feb. 28 vs. 37¢ per share for like 1948 period; earnings for first 9 mo. of current fiscal year were \$1.70 vs. \$1.07 . . . Emerson declared quarterly dividend of 30¢ on 879,805 shares, payable April 15 to holders of record April 5.

Sylvania proxy statement for annual meeting April 27 in Parker House, Boston, discloses these 1949 salaries: Walter E. Poor, chairman, \$60,000 (plus \$5443 profit-sharing); Don G. Mitchell, president, \$75,000 (plus \$6804); H. Ward Zimmer, v.p., \$39,000 (plus \$3538); Max F. Balcom, v.p.-treas., \$31,200 (plus \$2830).

**Trade Personals:** George W. Smith, ex-TV & radio mgr. for Affiliated Retailers Inc., buyer for Macy's, et al (Artone TV brand), named merchandising rep for TV-radio-phono for Associated Merchandise Corp., buyer for Abraham & Straus, Bloomingdale, Filene, et al; he's succeeded at Affiliated by William Helfrecht, ex-Bamberger . . . Harry S. Gould, ex-Magnavox, new merchandising director of Meck Industries . . . Charles H. Bernstein, ex-Philco divisional sales, recently Air King, now New York sales mgr. for Tele-tone . . . Francis L. Monette, Lowell, Mass., named chairman of new TV standardization committee of National Appliance & Radio Dealers Assn.

To speed up "in the home" repairs, Howard W. Sams organization, Indianapolis, has issued *Television Tube Location Guide* (\$1.50), 219-diagram booklet showing position of each tube in virtually all makes of sets.

Sylvania has 128-p. manual on *Servicing TV Receivers*, containing 53 pictures illustrating faulty circuit operation. Book is sold by Sylvania distributors for \$2.

Soviet agent Gubitchev gave newsmen cute angle as he sailed for Russia. He took 12-in. set (Motorola) with him. When asked whether Soviet had TV stations, he replied: "Why, the Russians invented television! That's why I'm taking it back with me." On basis of past experience, it would seem he got orders to bring back an American TV model; Soviets are notorious for duplicating our electronics equipment. As for Russians "inventing" TV, veteran editor O. H. Caldwell observes that 2 of American TV's great men, Sarnoff and Zworykin, were indeed Russian-born!

Uhf information to be submitted by RCA when color hearing resumes: Work on Bridgeport transmitter (Vol. 6:5) should soon produce 1-kw output at 890 mc, compared with present 600-mc limit. Other work has produced 3 kw at 750 mc. In near future, 5 kw at 890 mc should be realized. Present goal is 10 kw, with single tube, at 890 mc. Present Bridgeport transmitter could be duplicated 6-12 months after order is placed; 1 kw at 890 mc could also be delivered in 6-12 months; 5 kw at 890 mc would be available in 18-24 months.

Now comes Editor O. H. Caldwell of *Tele-Tech* and *Radio & Television Retailing* magazines, with these statistics to show U. S. investment of TV is already more than \$2.5 billion: 5,000,000 receivers with installation costs, etc. at average \$400 each, \$2 billion; dealer and distributor investments and inventories, \$300,000,000; TV repairmen, \$100,000,000; TV manufacturing plants and equipment, \$130,000,000; 100 TV stations on air, \$50,000,000; coaxial cables, \$50,000,000; costs of FCC hearings, legal controversies, etc., \$50,000,000. Foregoing add up to \$2,680,000,000—and by end of 1950 Dr. Caldwell thinks this will have increased to \$4.5 billions.

FCC is being cited example of source of govt. revenue from service fees. Subject is being studied by staff of Senate Expenditures Committee, which will lay findings before Senators for decision whether formally to draw up plans. Although point hasn't been reached where charges have been formulated, some proponents foresee \$1,500,000 income from such FCC fees as \$2 for applications; \$2 for amateur, citizens radio, other public licenses; \$10 for ship, mobile, other semi-public licenses; \$100 for broadcast licenses, etc.

Bureau of Standards' big radio center, proposed for Boulder, Colo., was approved in House Appropriations Committee report this week. As soon as finally authorized, construction of \$4,475,000 building will start, to be in use by summer of 1952 and house virtually all Bureau's radio work, according to director Edward Condon. FCC looks to project for much scientific data it has been unable to collect itself or had to get from industry.

DuMont's "closed circuit convention" service (Vol. 6:5) would cost \$11,000 for the first hour on 21-city network, Norman W. Drescher, head of convention dept. told National Conference of Business Paper Editors in New York. Kines and extensions to hotels or convention halls (base cost figured on use of DuMont studios) would be extra.

NAB Research, in joint compilation prepared with RMA statistics committee, comes forth with these counts: 3,029,000 TV sets produced during 1949, of which 2,594,000 were sold, remainder in distributor-dealer pipelines; 70,436,000 radios in use at end of 1949, of which 5,000,000 were in public places; 14,764,000 auto radios in use.

Add TV's growing pains: 15-year-old boy was caught cutting TV lead-ins atop apartment in New Rochelle, N. Y. He said he was trying to learn if receivers really need antennas. He made mistake of experimenting 3 times on wires leading into a policeman's apartment.



Additional Digests of Comments

APPEARANCES FOR HEARING ON PROPOSED TV ALLOCATIONS

(To Be Conducted Before FCC en banc; Docket No. 8736)

For text of proposed rules and allocations, see TV Directory No. 10

Note: These comments are in addition to those reported in Supplements 67 & 67-A.

Badger Broadcasting Co., Madison, Wis. (WIBA) -- Requests assignment of Channel 12 to Madison; or Channel 10 to Madison, 12 to Milwaukee in lieu of 10, 10 to Grand Rapids in lieu of 12. (Dow, Lohnes & Albertson).

Baltimore Radio Show Inc., Baltimore, Md. (WFBR) -- Requests assignment of an additional vhf channel to Baltimore. (Caldwell-Rollo).

A. H. Belo Corp., Dallas, Tex. (WFAA & KBTW) -- Revises previous comments to favor FCC proposals for Dallas. (Loucks, Zias, Young & Jansky).

Central Vermont Broadcasting Corp., Rutland, Vt. (WHWB) -- Requests assignment of Channel 3 in lieu of 37 to Rutland instead to Montpelier.

Community Broadcasting Co., Baton Rouge, La. (WIBR) -- Requests assignment of Channel 13 to Baton Rouge. (P. W. Seward).

Allen B. DuMont Laboratories Inc., Passaic, N. J. (WABD, New York; WDTV, Pittsburgh; WTTG, Washington) -- Revises previous allocation plan (Supplement 68) to extend proposals to 1300 cities, make changes, etc. (Roberts & McInnis).

Eastern Radio Corp., Reading, Pa. (WHUM) -- Revises previous comment to request Channel 8 with 100 kw at 500 ft at site 15 miles W. of Reading (Fly, Fitts & Shuebruk).

Elm City Bcstg. Corp., New Haven, Conn. (WNHC & WNHC-TV) -- Revises previous comments to further substantiate FCC proposal to change Channel 6 from community to metropolitan. (Fisher, Wayland, Duvall & Southmayd).

Evening News Assn., Detroit, Mich. (WWJ & WWJ-TV) -- Revises previous comment to request move of WNBK, Cleveland, from Channel 4 to 8. Or move of WWJ-TV, Detroit, from 4 to 6; WJIM-TV, Lansing, from 6 to 5. Or move of WDTV, Pittsburgh, from 3 to 4; WLWC, Columbus, from 3 to 2; WNBK, from 4 to 3. Or move of WDTV from 3 to 2; WLWD, Dayton, from 5 to 2; WNBK from 4 to 3; WSAZ-TV, Huntington, from 5 to 3; WAVE-TV, Louisville, from 5 to 3; WLWC from 3 to 4; WLWT, Cincinnati, from 4 to 5. (Barnes & Nielson).

Greenville News-Piedmont Co., Greenville, S. C. (WFBC) -- Requests assignment of Channel 7 to Greenville from Columbia, S. C. (Dow, Lohnes & Albertson).

Hildreth & Rogers, Lawrence, Mass. (WLAW) -- Revises previous comment to request assignment of Channel 7 to Lawrence-Lowell-Haverhill instead of Channel 9 if Channel 9 is assigned to Boston as requested by Yankee Network.

Hirsch Broadcasting Co., Cape Girardeau, Mo. (KFVS) -- Requests assignment of Channel 2 to Cape Girardeau from DeSoto. (George O. Sutton).

Lamar Life Insurance Co., Jackson, Miss. (WJDX) -- Requests proposed assignment of Channel 3 to Shreveport be limited to directional antenna or low power.

McClatchy Bdcstg. Co., Sacramento, Cal. (KFBK) -- Revises previous comments to request assignment of Channels 2, 6, 8, 10 to Sacramento and 8, 10, 12 to Fresno -- affecting San Francisco, Bakersfield, Reno, Chico, Los Angeles, Yreka, Redding, San Luis Obispo, Medford, Ore. (Dow Lohnes & Albertson).

National Broadcasting Co., Cleveland, O. (WTAM & WNBK-TV) -- Requests WWJ-TV, Detroit, be moved from Channel 4 to 6; WJIM-TV, Lansing, from 6 to 5.

(over)

Piedmont Bdcstg. Corp., Danville, Va. (WBTV) -- Requests assignment of Channel 7 to Danville, affecting proposed assignments to Montgomery, Ala.; Jacksonville, Fla.; Atlanta, Augusta, Cordele, Savannah, Ga.; Charlotte, Durham, Greenville, Raleigh, Wilmington, Winston-Salem, N. C.; Zanesville, O.; Charleston, Columbia, Greenville, S. C.; Chattanooga, Johnson City, Kingsport, Knoxville, Nashville, Tenn.; Charlottesville, Norfolk-Newport News-Portsmouth, Roanoke, Winchester, Va.; Charleston, W. Va.

Pittsburg Broadcasting Co., Inc., Pittsburg, Kan. (KOAM) -- Requests assignment of Channel 7 to Pittsburg in lieu of 30. (George O. Sutton).

Radio Cincinnati Inc., Cincinnati, O. (WKRC & WKRC-TV) -- Requests assignment of Channel 2 from Hamilton-Middletown, O. to Cincinnati; 11 from Cincinnati to Hamilton-Middletown. (Cohn & Marks).

Radio Corp. of America, New York, N. Y. -- Requests use of entire uhf band; at least 4 stations in each area; uhf grouped geographically for ease in set manufacture; avoidance of vhf-uhf assignments to same city.

Rockford Broadcasters Inc., Rockford, Ill. (WRCK) -- Requests assignment of Channel 12 to Rockford from Peoria, 8 to Peoria. (Dow, Lohnes & Albertson).

Southwestern Sales Corp., Tulsa, Okla. (KVOO) -- Requests assignment of Channel 13 to Tulsa, 19 to Enid in lieu of 13; or 8 to Tulsa from Muskogee, 26 from Harrison, Ark. to Muskogee, 29 to Harrison; or 8 and 13 to Tulsa from Muskogee and Enid respectively, 19 to Enid, 29 to Harrison, 26 to Muskogee. (Dow, Lohnes & Albertson).

Summit Radio Corp., Akron, O. (WAKR) -- Requests assignment of vhf channel to Akron.

Taylor Radio & Television Corp., Wichita, Kan. (KANS) -- Favors FCC proposal for Wichita; requests assignment of Channel 5 to Weslaco, Tex. from Brownsville.

Trinidad Broadcasting Corp., Trinidad, Colo. (KSFT) -- Requests assignment of Channel 8 to Trinidad from Pueblo. (P. W. Seward).

WARC Inc., Rochester, N. Y. (WARC) -- Favors DuMont plan. (Pierson & Ball).

WCAE Inc., Pittsburgh, Pa. (WCAE) -- Requests assignment of Channel 6 to Pittsburgh from Johnstown, uhf to Johnstown; 7 to Pittsburgh from Wheeling, uhf to Wheeling; 11 to Pittsburgh with directional antenna; 11 to Cleveland, as proposed by FCC, be limited to directional antenna. (Dempsey & Koplovitz).

Westinghouse Electric Corp., Pittsburgh, Pa. (KDKA) -- Requests assignment of Channel 7 to Pittsburgh from Wheeling, 13 to Pittsburgh from Johnstown, 11 to Pittsburgh, 6 to Johnstown.

WHB Bcstg. Co., Kansas City, Mo. (WHB) -- Requests Channel 7 for Kansas City, 12 for Omaha in lieu of 7, 24 and 26 for Lincoln in lieu of 12. (Spearman & Roberson).

WICA Inc., Ashtabula, O. (WICA) -- Requests assignment of Channel 8 to Ashtabula from Cleveland. (Hanson, Lovett & Dale).

Wyoming Valley Bcstg. Co., Wilkes-Barre, Pa. (WILK) -- Revises previous comments to request vhf channel to Wilkes-Barre with directional antenna (Miller & Schroeder).

Yankee Network Inc., Boston, Mass. (WNAC & WNAC-TV) -- Requests modification of CP to change WNAC-TV from Channel 7 to 2. Also assignment of 9 to Boston in lieu of 7, from Manchester, N. H.; 7 or 12 to Manchester. Or 12 to Manchester, 7 to Lawrence-Lowell-Haverhill. (Pierson & Ball).

NOTE: Following commented in favor of proposals for their cities: WIBC, Indianapolis; KTOK, Oklahoma City; WGAN, Portland, Me; WJBK & WJBK-TV, Detroit; KWBU, Corpus Christi. KMBC, Kansas City, withdrew opposition to comments of KFEQ, St. Joseph.

## THE TRI-COLOR TUBE — AND RCA POLICY

Remarks of Brig. Gen. David Sarnoff, Chairman of Board,  
Radio Corporation of America

Before Press Conference in Washington, March 29, 1950

*We believe Gen. Sarnoff's extemporaneous statements to newsmen at Wednesday's showing of tri-color tube so clearly analyzes RCA viewpoint of color TV situation that his remarks are here published for the benefit of those who want more details than those carried in sometimes confusing and contradictory press reports of the interview.*

**GENERAL SARNOFF:** Ladies and gentlemen, I find it difficult to follow Dr. Engstrom [v.p. in charge of research, RCA Laboratories] as a speaker—after the lucid explanation he has made. I feel that, however great the stimulus may have been from other sources, the actual result is the product of the brains and the toil and sweat of the research men and development engineers, and the other technicians who have brought this wonderful tube to its present stage.

In a sense, I feel that we are witnessing here today what the first group witnessed in New Mexico when the atom bomb was exploded for the first time, with this distinction: that here we witness a development for beneficent purposes that can bring us enjoyment and happiness, and can make for a larger industry and more employment, whereas the atom bomb unhappily produces opposite results.

### Beginning of Practical Color TV for Home

To my mind, practical color television begins with the single tube. Of course, systems had to be developed before this and many principles had to be explored and proven. But not until you have a single color tube, such as you have seen today, have you got the basic outlines of the practical color television system for the home. I share the optimism of Dr. Engstrom, and I congratulate most heartily every man in our organization who has had a part in this great development.

I might say to you that I have watched the development of radio and electronics for more than 40 years, but never before have I witnessed compressed into a single device so much ingenuity, so much brain power, so much development, and such phenomenal results, as are represented in this color tube.

It has taken electronics a long way and what the significance of this color tube may be to the future, I believe it would be difficult to over-estimate today. I think that the most fertile imagination would fall short in predictions compared to the realities which will follow.

### 'Facts of Life' About Color TV

When I came here this morning, I wondered whether I should tell you the facts of life about color television, as I see them. I have decided to do it, and in doing it, I shall be glad to submit myself to your questions and to answer them if I can.

It is almost impossible to touch the subject of color television without raising a fuss and starting a controversy. But I do not know anything that you ladies and gentlemen of the press like more than controversy. So, you have a fine target before you this morning. I leave myself to your tender mercies. Nothing I say is confidential. All I ask is that you use the abundant intelligence

which you have, so that when you quote me, please do not make me say things that I have not said. I will probably say plenty as it is.

The first point I would like to make is this: I want to dispel any suspicion or suggestion or doubt as to where RCA stands in this field of color television; as to whether we welcome it, whether we want it, whether we like it, or what we are going to do about it, and so on.

### RCA 100% for Color TV

My answer to those and similar questions is that we in the RCA are 100% for color television. We believe in it. We have done all that we knew how to do up to this morning to advance it. We are going to continue to use our brain power and our resources and our facilities to keep on advancing it. So it does not strike us as something unpleasant, but rather as something we believe offers the greatest opportunity for enhancing and enlarging the service of television, both in black and white and in color, to the home and to industry in general.

And from a purely practical standpoint, who has more to gain from the development of color television than the RCA? After all, we are in business not only to broadcast programs and to sell advertising over the broadcast systems. We are also in the business of manufacturing and selling receiving sets, transmitters and tubes. So it is to our interest more than it is to any other single interest to advance the day when color television may be translated into a practical service. It will increase our business, it will increase our income, and it will increase our profits.

If anybody knows any reason why the RCA should not welcome color, I do not know that reason. It has never influenced our thinking.

The second point I would like to make is this: I am not as pessimistic as Dr. DuMont, who says that color television is anywhere from 10 to 20 years off. I do not believe that. It will be a much shorter period. I think you are able to judge that for yourselves, after what you have seen this morning. But I am not as unrealistic as the Columbia Broadcasting System spokesmen who say that color television is here today. I do not wish to associate myself with either extreme position.

### Which System Is More Nearly Ready?

My third point is this: In point of readiness, which system is more nearly ready for commercial service?

You have certainly had plenty of claims and counter-claims and statements and mis-statements on that point. My conviction is that RCA is ahead of any other system even in its present form. But if we are talking about a single tube, all-electronic color system, more development

work needs to be done even with our system before mass production can be undertaken and sets sold to the public.

As to the proposed modified electronic system of the Columbia Broadcasting System, so far as I know it has neither been demonstrated nor field-tested as yet. But that does not mean, to my mind, that there is any reason why the FCC cannot set broad standards right now. The translation from the present position into the ultimate product will go faster from the day that the Commission establishes such standards.

When we talk about Commission standards, we have not the slightest wish to have the Commission approve our system and outlaw somebody else's system; nor to get into that kind of an argument. What we are interested in is to have the Commission set standards. This, it seems to me, can be done.

Already the Commission has spoken on the width of the channel—6 megacycles. We accept that. There are only two other broad standards that the Commission really has to set in order to clear the road. One is a requirement that color pictures, by whatever system transmitted or received, shall not be inferior in quality to present black-and-white pictures. The other is that whatever system is employed it *must be compatible*. You have seen the reason for that today, and you have known of that reason before.

### The Three Basic Standards

If these three broad, basic standards are set by the FCC—6 mc, quality, compatibility—any system should be free to go forward and develop and try to meet those standards. I think those are the minimum requirements for standards that the FCC should be reasonably expected to set. Such standards would protect the public interest, and avoid making obsolete the 5,000,000 or so television sets already in the hands of the public. This number probably will reach 10,000,000 by the end of this year.

After such broad standards are set by the FCC, let the good American system of competition express itself to the full. Let there be competition in design, in appearance, in performance, in price and in service. . . .

It is my purpose to speak frankly. Let us, therefore, take a look at the situation as between the two principal contenders—RCA and CBS. In referring to these two, I do not intend to minimize any other system that is being offered or demonstrated. I merely refer to the two major contenders here, one of whom has been more aggressive than the other in publicity exploitation.

### What About the CBS System?

CBS says, as I understand it, that its system of color is ready now; that all the Commission has to do is to approve that system and that, this done, the public would have color right away. What system are they talking about? They are talking about the mechanical disc, field-sequential system. However, in the testimony recently given by the experts for CBS they said that if the RCA color tube is made available, they could use the tube in their set, too, and that this would remove objections to their mechanical system with its limited picture size.

That is the same thing as saying we are both interested in transportation: one is building an automobile and the other a horse and buggy. The argument seems to run that when the automobile is ready the horse and buggy could be abandoned. But this would be adopting the other party's method of transportation.

Of course, that does not mean that we would not make our tubes available to anybody that built CBS sets. We would make them generally available. But the basic principle of the mechanical system then goes by the board, as it should.

I cannot imagine that, between now and whatever time it may take to produce these tubes commercially and to make them available to the public, anyone would be interested in buying a mechanical-disc set, with its limitations, for home use. I do not believe they would be interested in making such a purchase any more than they would be interested in buying a mechanical black-and-white set when they can get an all-electronic black-and-white set.

CBS has stated, also, that it will adopt the sampling method which is an important element of the RCA system. Likewise CBS has said that it will adopt the dot-interlaced scanning method. Thus, they claim, they can improve their picture. I hope they will do all this. But, if they adopt dot-interlaced scanning, and sampling, and the single tri-color tube, if they throw away their mechanical disc, what is left of their so-called system that justifies them calling the modified system the CBS system?

### What About Compatibility?

I will tell you what is left—the field-sequential method. Although they are not the inventors of the field-sequential method (for it was known years before), nevertheless their use of it would be the only distinguishing feature between the so-called CBS system and the RCA all-electronic system which employs the dot-sequential method.

I ask you, is that a virtue or a vice? As you know, the dot-sequential system provides compatibility, while the field system does not. If anyone knows why the field-sequential system should still be employed, I wish he would tell me. I do not know the answer and our engineers don't know the answer, although they know many reasons why it should be abandoned.

Now, all the CBS has to do is to move over a little bit and adopt the dot-sequential system. This would end the needless argument. The Commission could set standards and all the engineers could go back to their laboratories and workshops instead of hanging around in Washington.

Our friends in CBS say that their system is all ready, and that ours still needs further development. Well, *what* system is ready? We have already discussed the mechanical system as it stands today in the light of the color tube. But when they begin to modify their mechanical system, and adopt dot-interlaced-scanning and sampling, to throw away the mechanical disc, and to substitute the RCA color tube, then they, too, will have an all-electronic system.

### CBS Needs to Field Test

But has anybody seen that modified CBS system? Has the CBS itself seen that system? Do they know what a color tube would do in their present set with their present field-sequential circuits? They have admitted, only two weeks ago, that they would have to submit their modified system to field testing. You will recall that at the beginning, they said that their system required no field testing; that they had already had all the field testing necessary.

So, if CBS now has to submit an all-electronic set to field testing, which they admit they have to do, and which we agree they have to do, how can it be claimed in advance of any knowledge of what the field tests would show, that such a modified, unproven and untested system is ahead of what you have already seen here today? Our system has been field-tested, up to the color tube, for months and months.

So the opposite of what is claimed by CBS happens to be the case. The RCA is further ahead in the development of an all-electronic system than anyone else in the world. I submit that statement for challenge by anyone. CBS is not quite as ready as their press reports and their testimony before the FCC imply.

Ladies and gentlemen, those are the essential facts I wished to place before you today.

Having listened to me patiently, so far, I assume that what you want to know now is how soon will this color set, equipped with the RCA color tube, be ready for the public.

There is no simple answer to that question. Our next step is to make an official demonstration to the FCC. The date is set for April 6. Tomorrow we are going to demonstrate this tube and set to licensees and to other people who are interested in television, so that they can see what you have seen today.

As Dr. Engstrom has stated, we are moving forward to translate these laboratory and hand-made models into production models. That is not a matter of years; it is a matter of months. After we get good production models, we have to tool up, and gear our lines for mass-production.

No matter which system is approved by the FCC, it will require a reasonable period of time before one can produce commercially designed instruments. I hesitate to say one year, two years, or three years, because I don't know the exact amount of time all this will take. But I do know that from the minute the FCC sets standards, and if they set standards along the lines that I have just discussed, we would be able to go forward with our system. From the moment when the green light is given, we will be working day and night to take these remaining steps in our laboratories, in our set factories and in our tube plants, in order to get these instruments to the trade and to the public as quickly as possible.

#### Black-and-White Buyers Safe

In such a program, we see no problem either for the broadcasters or for the manufacturers of black-and-white sets. With a compatible system, there is no reason whatever why anybody should not continue to own or to buy, if they do not own one now, a black-and-white television receiver. The programs will be received in monochrome with present-day black-and-white sets, and without any modification whatsoever. You have seen here, today, better black-and-white than you have seen before. When the color tube is available, either a new color set can be purchased or present sets can be converted to receive in color as well as in black-and-white.

We have not yet fully gone into the problem of simplification of these circuits so that they could be adapted to present sets. That is the next step. We have no doubt that the color tube with its accompanying additional circuits can be made to apply to existing television receivers. That is an engineering development now under way.

What you have seen here are our standard black-and-white sets to which the color tube and its circuits have been adapted. We see no reason why, under the program I suggest, there should be any problem for the industry or why there should be any hesitation on the part of anyone to buy black-and-white sets now on the market.

It is quite a different story with an incompatible system. It is a different story for the broadcaster, too. You have seen or heard the statement made by the president of NBC before the FCC last week. He said that NBC would be prepared, when the FCC sets standards, to equip its broadcast transmitters for color transmission and to send out color programs on a regular schedule.

Finally, I would like to leave this thought with you. There is nothing in the development of our system, whether it be at the transmitting end or at the receiving end or at the tube end, which we seek to preserve exclusively for ourselves. There is no monopoly element, no monopoly question involved in this whole situation. We would make all of the things that we would use ourselves, available to anyone else who wanted to buy it and use it.

That is the story of color television, as I see it, as of this morning. I thank you most sincerely for your patience and for your attention.

**QUESTION:** Would you tell us what the projected cost would be of a set?

**GENERAL SARNOFF:** At this moment we have not yet moved into commercial design and mass production. My guess would be that when these sets are made and sold in similar quantities to black-and-white sets, the cost would be approximately 25% more, perhaps 20 to 25% more than an ordinary black-and-white set. But, as I say, this is guessing in advance of detailed knowledge of the specific design and actual production costs.

**QUESTION:** I notice that during the talk this morning that more emphasis seemed to be put on the three-gun tube. Do you think that is more likely to be the answer than the one-gun tube?

**GENERAL SARNOFF:** I don't think so. I think that there will be both, but I think the one-gun tube is likely to be the ultimate answer. These are purely matters of economical manufacture. There is no basic reason I know of why the one-gun tube should not be the ultimate answer. Nor do I think it is going to make any great difference whether it is three guns or one gun. It is still one tube.

**QUESTION:** When you talked about authorization of any particular system, did you feel that the Commission might practically authorize all of the competing systems and leave it up to competition to decide which is the best?

**GENERAL SARNOFF:** I don't visualize the necessity for the FCC to approve or disapprove systems as such. I think what it needs to do is to set standards. If FCC sets broad standards, any system that can meet those standards can go ahead. Competition can be along many lines, as for example, design, color tube type, price, service and so on.

**QUESTION:** That would mean that no system would be outlawed, then; all companies could go ahead on whatever system they might be working on?

**GENERAL SARNOFF:** No, no system would be outlawed, but none would be licensed that did not conform to the standards.

**QUESTION:** How far is the color system away from equality in quality with that of the best black-and-white?

**GENERAL SARNOFF:** Well, so far as reception on black-and-white, which you saw today, the color camera produces a black-and-white picture on the standard receiver somewhat better, I think, than the standard black-and-white. So far as color is concerned I would say that we are already pretty close to that same quality.

You must remember also that when you see these demonstrations, they are under forced draft, they are using temporary equipment. Also lighting has much to do with the net result that you see on the receiver. But when color operations are standardized as they are for black-and-white, I would expect that the definition of a color picture will be as good as black-and-white.

**QUESTION:** What kind of lighting was used in the studios?

**GENERAL SARNOFF:** So far as I know, it is standard lighting. Is that so, Dr. Engstrom?

**DR. ENGSTROM:** Incandescent lighting. The light level was 150-foot candles. This is the same or a little less than we use for black-and-white.

**QUESTION:** Ordinary street type makeup?

**DR. ENGSTROM:** The makeup tends to go a little bit in the direction of make-up for color movies.

QUESTION: How many dots do you hope to get? How many elements do you hope to get?

DR. ENGSTROM: Twice the present number.

QUESTION: The General has indicated when the color tube set is in production it will cost about 25% more. What about the problem of the cost of conversion? Can you tell us something about that?

GENERAL SARNOFF: I don't know the price of conversion yet. We haven't worked out the precise design for conversion. But there will be continued efforts in the direction of simplification and this will bring down the cost.

QUESTION: How close are you to mechanization of the tube, where is it built?

DR. ENGSTROM: Lancaster, Pennsylvania. We have quite completely visualized the mechanized processes, and the next step now is to put them into operation.

QUESTION: There is one point that I think was left unanswered by both you and Dr. Engstrom, and that is the matter of size of the picture. This is a 16-inch tube that was reduced to 14. I suppose that is because of the mask inside. That does not mean that this color tube will limit the size of the picture?

DR. ENGSTROM: No. It will not be limited in size. In fact it is easier for us to make a large tube than a small one.

QUESTION: Will you use 24 and the 30 inch tubes, when they come along?

DR. ENGSTROM: I think we will start with the 16-inch size and go up in size for color.

GENERAL SARNOFF: There is no limit in picture size with a tube as there is with the mechanical disc. More than that, the viewing angle is exactly the same as it is with present black-and-white receivers. This is because the color tube is the direct-view type and does not require a lens to enlarge the picture.

QUESTION: You said that the FCC ought to set just general standards?

GENERAL SARNOFF: Broad standards.

QUESTION: And one of those standards was compatibility. What about the question of compatibility of color system? Would there be one receiver that would receive your system, modified CBS system and the CTI system?

GENERAL SARNOFF: If there is such a universal receiver, I know nothing about it. I never saw one. Such a universal receiver has not yet been demonstrated. Obviously, it would be more expensive than a receiver for one system.

QUESTION: Then you would have a set that would accept the RCA system only, but if the CBS system were authorized and some broadcaster were to broadcast the CBS modified system, single system receivers would not be able to receive all transmissions.

GENERAL SARNOFF: If CBS or anyone else can comply with the broad standards that I discussed, then there would not be a CBS system or an RCA system or any other specified system. It would be a compatible color television system.

QUESTION: What about the CTI?

GENERAL SARNOFF: Well, the CTI has a line sequential system. CTI claims that their system is compatible.

QUESTION: There is no question of compatibility of color, that is, if the standards you suggested were to be authorized?

GENERAL SARNOFF: I want to clarify your question. What I am saying is that under multiple standards where each system is authorized to go ahead, you will need three

separate receivers, or a universal receiver that can receive all three systems. The latter would certainly be more complicated and more expensive than a receiver built for a single system. Competition should not be between field-sequential or line-sequential or dot-sequential systems. Competition should be based on the quality, price, design, service, etc. of the product and on programs.

Now, the Commission has no choice, as I see it, either to set broad standards, as I have suggested, or to set multiple standards. We see no useful purpose to be served by multiple standards. However, if the Commission decides on multiple standards we will go along and cooperate. No one knows what the future may bring. Therefore any standards that are set must be such as to permit further development and further growth. The field-sequential system using the mechanical disc has demonstrated that it cannot improve unless it adopts the important features of the all-electronic compatible system.

We have demonstrated from the beginning the continued improvement possible with our system. You have seen these improvements during our successive demonstrations and we are confident of further improvements.

QUESTION: Do you foresee the day when RCA will not turn out black-and-white television sets?

GENERAL SARNOFF: No, I don't. A compatible set will receive both black-and-white and color transmissions. And black-and-white sets will always be cheaper than a combination black-and-white and color set. I see no reason why we should abandon black-and-white receivers.

QUESTION: You mean the single tube will tune in the black-and-white program?

GENERAL SARNOFF: Yes, it will.

QUESTION: Do you think it is worth trying for more than 6-megacycles bandwidth for color?

GENERAL SARNOFF: I think 6-megacycle channels have become so fixed because of practical considerations that I doubt whether there is any way to alter it now. Certainly for the VHF 6-megacycle channels are indicated. We can also start UHF with 6 megacycles. There is no doubt that with more channel width you can pass more information. The better the definition the better picture you would have. But there is a limit to the use to which the spectrum can be put which has to be considered by the Commission. I have great sympathy with the problem of the FCC in this difficult problem of allocation. It is not an easy job.

QUESTION: What assurance does the FCC have that, if they would authorize standards for your system, the coaxial would be modified to carry them?

GENERAL SARNOFF: Such assurance as they can get from the Telephone Company. The Telephone Company has stated that it would adjust its cables for the required band-width to carry the color programs. Also, most of the interconnection will be by radio relays, where that problem does not exist at all. I think that the first trans-continental television will be by radio relay rather than by coaxial cable. It will carry our color. It does not seem to me to be proper to compress color and reduce its quality in order to meet the narrow band of existing cables. It is better to increase the bandwidth of the cable, by whatever means needed and those means are known—and thus let the full color signal go through.

Also, I believe that the present cable problem will not continue for long. I would not be surprised to have our experts find how to get our color through, even with present limited bandwidth of the coaxial cable.

In any event, the Telephone Company is on record that it would make proper facilities available for color transmissions. I think that by the time color television will be ready for the home, the cable problem will be solved.