

THE SUPREME COURT OF THE UNITED STATES

October Term, 1950

NATIONAL ASSOCIATION OF BROADCASTERS,
NATIONAL BROADCASTING COMPANY, INC.,
AND VICTOR DISTRIBUTING CORPORATION,

Appellants,

UNITED STATES OF AMERICA,
FEDERAL COMMUNICATIONS COMMISSION, and
COLUMBIA BROADCASTING SYSTEM, INC.,

Appellees.

WARD & PAUL

ATTORNEYS AT LAW
WASHINGTON, D. C.

IN THE SUPREME COURT OF THE UNITED STATES

1)

October Term, 1950

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| RADIO CORPORATION OF AMERICA, | : | |
| NATIONAL BROADCASTING COMPANY, INC., | : | |
| RCA VICTOR DISTRIBUTING CORPORATION, | : | |
| et al., | : | |
| | : | |
| Appellants, | : | |
| | : | |
| v. | : | No. 565 |
| | : | |
| UNITED STATES OF AMERICA, | : | |
| FEDERAL COMMUNICATIONS COMMISSION, and | : | |
| COLUMBIA BROADCASTING SYSTEM, INC., | : | |
| | : | |
| Appellees | : | |
| | : | |

Washington, D. C.

Monday, March 26, 1951.

The above-entitled cause came on for oral argument at 12:55 p.m.

PRESENT:

The Chief Justice, Honorable Fred M. Vinson, and Associate Justices Black, Reed, Frankfurter, Douglas, Jackson, Burton, Clark, and Minton.

APPEARANCES:

On behalf of Appellant RCA, et al:
JOHN T. CAHILL, ESQ.

On behalf of Appellant Emerson:
SIMON H. REMKIND, ESQ.

On behalf of Appellant International Brotherhood
of Electrical Workers:

ALFRED KAMIN, ESQ.

On behalf of Appellee Columbia Broadcasting:

SAMUEL I. ROSENMAN, ESQ.

On behalf of Appellee United States of America
and Federal Communications Commission:

PHILIP B. PERLMAN, ESQ.

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P R O C E E D I N G S

The Chief Justice: Case No. 565, Radio Corporation of America versus the United States.

The Clerk: Counsel are present.

ARGUMENT ON BEHALF OF APPELLANT RCA, ET AL.,

by Mr. Cahill.

Mr. Cahill: May it please the Court, this case is here on direct appeal from a two-to-one decision of a statutory three-judge court in the Seventh Circuit, granting appellee-defendant's motion for summary judgment and dismissing the complaint herein.

This is a suit to enjoin an order of the Federal Communications Commission, which we allege threatens to seriously impair the television service now enjoyed by 45 million people.

We further allege that the order threatens an investment by 12 million television receiver owners by billions of dollars.

This suit was brought to enjoin the order of the F.C.C. which authorized for the first time commercial broadcasting by the incompatible CBS Color System, and which order, as well, outlawed commercial broadcasting by any other color system.

The suit is brought under Section 402(a) of the Communications Act, which authorizes judicial reviews of orders of this kind.

Appellants include the Radio Corporation of America, the National Broadcasting Company, and the RCA Victor Distributing

Corporation, another subsidiary of RCA, which sells television receivers to dealers in the City of Chicago. Other appellants are represented by separate counsel.

Appellees herein are the F.C.C. and the United States. CBS intervened below and is an appellee here.

The order in question was adopted after hearings held in the City of Washington, and at those hearings three color systems were considered. The CBS System, which was exclusively adopted by the Commission, is the only incompatible system of the three.

By "incompatible" I mean that no television picture whatsoever can be received by any of the 12 million sets now in the hands of the public from the color transmissions of the CBS System.

If this order went into effect today, color broadcasts made in accordance with the order could not be received by the 45 million people who are now members of the television audience.

The public's investment of over \$3 billion in home receivers in the last five years would be rendered ineffective to the extent that there are color broadcasts under the CBS incompatible system, which this Commission has exclusively adopted -- that is, they would be completely out of business, these 12 million sets, unless hundreds of millions of dollars are spent by the public for expensive alterations on their sets.

Now these hundreds of millions of dollars which the

individual set owners collectively would have to spend -- and if they have that money, and I very much doubt because thousands of these sets are bought on time installment payments -- these hundreds of millions of dollars would have to be spent just to get an inferior black and white picture, not a color picture at all, just an inferior black and white picture from the color transmissions of the CBS System.

Justice Frankfurter: You mean the black and white would be degraded as it were because of the color?

Mr. Cahill: Degraded. This is a 60 percent step backward in the existing black and white picture. The black and white picture that the set owner will receive will have only 40 percent of the picture detail that he gets today. That is the kind of black and white picture he will get from the CBS color transmissions.

Justice Frankfurter: Mr. Cahill, in the interest of time would you mind stating whenever you make a statement of fact when that fact is conceded on both sides and when it is controverted?

Mr. Cahill: This is conceded. There is no question.

Justice Frankfurter: I am not talking about this, but generally.

Mr. Cahill: Yes, I will be glad to.

Justice Burton: Would they still be able to see an RCA black and white picture without modification?

Mr. Cahill: If the RCA System were adopted -- and I will come to that in a minute -- without touching the receiver, the set owner --

Justice Burton: Not if the RCA System were adopted but if the present order of the F.C.C. stood, what would become of RCA black and white?

Mr. Cahill: He would not be able to get it if he adapted his set to 405-line transmission.

Justice Burton: When he adapted it he also cut out the RCA receiving ability?

Mr. Cahill: No, he can put in a switch which will enable him to go from the 525-line RCA black and white transmission to the 405-line CBS transmission.

Justice Burton: And if he does not do anything, he can get the RCA broadcast without any trouble and he cannot get the CBS?

Mr. Cahill: That is correct.

Justice Burton: So you would have a monopoly on his use of your broadcasts?

Mr. Cahill: We would have not a monopoly, Your Honor, because presumably this order is to be taken very seriously. I am sure that if the broadcaster does not broadcast in color, when his license comes up for renewal that would be considered as to whether he is broadcasting in the public interest.

Further than that, CBS has promised 20 hours of color

broadcasting a week, and I take it they will live up to their promise.

If there is any monopoly here, it is the CBS monopoly in color, to which I shall address myself in a few minutes.

Justice Burton: There is something I want to get clear. These people who now have these television sets, without doing anything, without spending any money, they could still get the RCA television broadcast without any trouble?

Mr. Cahill: They can still get RCA standard black and white.

Justice Burton: Same as they are now?

Justice Clark: Suppose your system were adopted, how would they get the color?

Mr. Cahill: Well, I am coming to that, if I may, your Honor. I should like to develop first the situation in regard to what happens to the existing black and white service, and then deal with color service.

Justice Clark: Of course you could, could you not, broadcast both black and white and color, or could you do that?

Mr. Cahill: No, you could not. That is one of the points I make against the order. This is the most expensive from the public standpoint of channel utilization. That is an argument I would like to develop at some length.

You can not simultaneously under the CBS system broadcast the existing black and white and CBS color. I should like to deal with that when I come to it.

Justice Clark: You would have to broadcast either black and white or color?

Mr. Cahill: Under the CBS system. That is not true under the RCA system.

Under the RCA system all you do is add certain characteristics to the existing signal, and if you have a color receiver, you will receive the picture in color; if you have an existing black and white receiver, you will receive the RCA color as a black and white picture. I will go into that at

some length.

Justice Reed: I am not clear, but do I understand that the CBS system will not be able to broadcast any black and white?

Mr. Cahill: No, that is not so, if your Honor please. The CBS system will not be received on existing black and white receivers.

Justice Reed: You mean its color system?

Mr. Cahill: Its color system will not be received either in color or as a black and white picture, as things stand now.

Justice Reed: What about your black and white broadcasts?

Mr. Cahill: If there are black and white broadcasts as they are now before the order goes into effect?

Justice Reed: Well, after the order goes into effect, will they still be broadcast in black and white as well as color?

Mr. Cahill: There will be some broadcasting of black and white, there is no doubt.

Justice Reed: They will broadcast 20 hours a week on color?

Mr. Cahill: No, they can broadcast more than that if they wish. CBS promised that as a minimum.

Justice Reed: They will have at least that amount?

Mr. Cahill: Yes, and it may be a great deal more.

Justice Reed: But also some black and white?

Mr. Cahill: There undoubtedly will be some black and white.

Justice Reed: By whom?

Mr. Cahill: I would assume by CBS.

Justice Reed: They can if they want to?

Mr. Cahill: They can if they want to.

Justice Clark: It is true then you could broadcast both?

Mr. Cahill: Not simultaneously, Mr. Justice.

Justice Clark: I did not mean simultaneously. If you want to put on a style show, we will say, in the afternoon, and have color, why, you could broadcast that in color, and then this afternoon you could broadcast the crime committee in black and white.

Mr. Cahill: I want to go into that, and I want to show just how difficult it is to do that. I want to develop that at some length. I am going to come to that in about five or 10 minutes, if I may.

Justice Reed: You say you can not do it simultaneously?

Mr. Cahill: You can not do it simultaneously.

Justice Reed: From the same transmitter?

Mr. Cahill: No, it can not be done from the same transmitter.

Justice Reed: It could be done by two transmitters?

Mr. Cahill: But then you would be using two wave lengths, and that is the scarcest thing we have, these wave channels.

Justice Reed: Is CBS broadcasting in color now?

Mr. Cahill: These broadcasts are not on the air now.

When I say in theory your black and white pictures, I mean just that. The black and white pictures which the public will get from the CBS color transmissions will have but 40 per cent of the picture detail that those pictures have today.

Now the picture which the present set owner will get after he has bought the device called an adapter, which will set him back \$50, plus an installation charge of \$15 more, will be that degraded black and white picture.

Now this order is like unto the order of a mythical commission which said that hereafter all automobiles may operate on a fuel which will make them inoperable, but if you buy a gadget called an adapter for your carburetor and pay \$50 for it, plus an installation charge of \$15, thereafter your car will work almost half as well as it does now. That is, 40 per cent as well as it does now.

On the other hand, the compatible RCA system, which the public is prohibited by this order from seeing, was also brought before the Commission in these hearings.

Now all television broadcasts -- and I want to stress that -- under the RCA compatible color system can be received as black and white pictures by all of the 12,000,000 receivers today in the hands of the public without touching those receivers. That is, the present black and white pictures

operate on the RCA color signals just as they operate on the existing black and white signals.

Now to put the difference between these two systems -- the incompatible CBS system and the compatible RCA system -- in recent focus, Mr. Justice, I will take the hearings of the Kefauver Committee, because I know of no program which has done more to dramatize the importance of the existing black and white service than the hearings of the Senate committee.

Justice Frankfurter: I hope we do not have to take judicial notice of the value or significance or validity of that performance.

Mr. Cahill: No, you do not. (Laughter)

When those hearings were broadcast on existing standards, 45,000,000 people could look at them. If RCA color were adopted, again, everybody could see them as black and white pictures without touching the receivers, and anyone having an RCA color receiver could receive them in color.

Justice Burton: If the CBS order, the present order, were in effect, those same people receiving it could receive it in black and white under that order, is that right?

Mr. Cahill: No, they could get nothing, absolutely nothing.

Justice Burton: Even though RCA is putting it on as it is now, they could not get what they are getting now?

Mr. Cahill: If the broadcast we are talking about were

a broadcast of CBS color, the existing receivers as they stand would obtain no picture whatsoever.

Justice Burton. I am talking about a RCA broadcasting of the Kefauver Committee. Suppose the present order that we have been talking about here that was issued by the F.C.C. were in effect and the Kefauver Committee hearing was on, and the RCA broadcast it as they broadcast it now, couldn't the people with the sets see it just the same as they do now?

Mr. Cahill: Yes, Mr. Justice.

Justice Burton: Under the CBS order?

Mr. Cahill: No. Mr. Justice, you keep talking about the RCA black and white system, there is no such thing as the RCA black and white system.

Justice Burton: The present system.

Mr. Cahill: The present system of black and white would be receivable by all existing receivers, as it is today.

Justice Burton: Just as it is today under the F.C.C. order. You could see it then just as you can see it now?

Mr. Cahill: The F.C.C. order has nothing to do with that.

Justice Burton: So the people would not be cut off from the Kefauver Committee by this order going into effect?

Mr. Cahill: Under the existing order; but if the broadcasts were under the terms of the order -- that is, a transmission of the CBS color system -- the existing receivers would get absolutely nothing.

Justice Burton: But if you kept on doing what you are doing now, they could get just what they are getting now?

Mr. Cahill: That is right, if you do not broadcast under the order we are talking about here, nothing happens. The time that something happens is when you begin to operate under this order. That is the time the existing receivers get nothing.

Justice Reed: There is no reason why both systems should not be focused, if that is the word, upon the Kefauver Committee, is there?

Mr. Cahill: There is no reason why a person who buys an adapter should not receive it.

Justice Reed: I mean, just right now if this was in effect and the Columbia Broadcasting System of television were there and also the other ordinary black and white, both would be transmitted?

Mr. Cahill: Not by the one transmitter.

Justice Reed: No?

Mr. Cahill: By two transmitters, using two channels?

Justice Reed: Yes.

Mr. Cahill: That is correct.

Justice Reed: And is that the usual practice for three or four broadcasting companies to go on the same --

Mr. Cahill: No, it has never been done before. This use of two transmitters for the one service has never crept up before,

but that is an extensive part of my argument, that this is wasteful in requiring the use of two channels, and I would like to go into that at some length quite a while later.

Justice Clark: They do have two transmitters on radio and television; they would have separate ones, would they not?

Mr. Cahill: I beg your pardon?

Justice Clark: As of today, when they have a separate transmitter for radio and a separate transmitter for television -- Do they not?

Mr. Cahill: Those are separate services, Mr. Justice, you are quite right.

Justice Clark: And you could not have a separate transmitter for black and white and a separate transmitter for color?

Mr. Cahill: Yes, if you want to be very wasteful and double the expenditure of the scarcest thing we have, which this Court said the Commission was created to conserve, namely, these channels.

Justice Clark: I thought the record indicated that it did not cost much on the CBS to change over to color.

Mr. Cahill: Oh, it costs quite a bit, your Honor. I have not come yet to what it costs to change over. I have dealt now only with what it costs to get even a degraded black and white picture. I shall come in a moment to what it costs to get color.

Justice Clark. Of course, that is the ultimate objective, is it not, color?

Mr. Cahill: That is the ultimate objective, your Honor.

Now, the third color system considered at these hearings was a theoretically compatible color system of a company called Color Television, Incorporated. That third system is not involved in this litigation.

Now, the Commission's order here before us is based on two reports, and the two reports are professedly founded wholly and entirely on technical engineering considerations, but the arresting fact is what the Commission has done is to distort the most compelling reason for the rejection of the CBS system -- namely, its incompatibility -- into the sole reason for its immediate adoption.

Now, that is the rationale of both these reports. The Commission reasons that they must not allow the problem of compatibility to become any greater, because if they do it will never be possible to adopt an incompatible system -- and, by the way, the CBS is the only incompatible system -- because of the ever-increasing number of sets in the hands of the public.

Now, these two reports of the Commission purport to be based on hearings which lasted nine months. During those hearings nobody advocated the adoption of the incompatible CBS system except CBS itself.

There appeared before the Commission the leading experts of the television industry -- Dr. Allen DuMont, who testified, of the DuMont Laboratories; Dr. Baker of General Electric; D. B. Smith of Philco; Dr. Lee DeForest, father of radio, co-called; and Axel Johnson of the Bell Laboratories of A. T. and T., who testified as the Commission's own witness; and independent experts, such as Donald Fink of the Joint Technical Advisory Committee, who appeared.

Now, all of these witnesses gave testimony supporting the adoption of a compatible, high quality system. All of these men have years behind them of experience and honorable reputations in their chosen profession of radio and television engineering.

All these men have heretofore been respected and honored by the Commission. None of them advocated the adoption of the incompatible CBS system.

The Commission in its first report makes it expressly plain that it rejected all of their testimony. This is the first time that anything of the kind has occurred in the history of radio or television.

Heretofore the Commission has relied upon the professional opinion of the engineers of the industry. This disregard of the professional opinion of the engineers is epitomized in the separate concurring opinion of Commissioner Jones, a lawyer with no technical background. The opinion of Commissioner Jones --

Justice Frankfurter. Do you think that helps?

Mr. Cahill. I beg your pardon?

Justice Frankfurter. Do you think that helps the solution of this problem, because if it does, it is the first encouraging words I have heard about it.

Mr. Cahill. I trust that it will in a moment, Your Honor.

The opinion of Commissioner Jones consists almost entirely of a diatribe against the entire radio engineering profession. It is devoted to the theme that the scientists of this industry have given sham testimony throughout the years on the matter of color television. It goes to the extent of clearly implying that the professional opinion of these distinguished

scientists has been prostituted to the commercial desires of their respective companies.

Now there is incorporated in this record an editorial by Donald Fink, himself a distinguished and outstanding engineer. Mr. Fink says of Commissioner Jones' opinion, and I quote very briefly:

"The burden of this opus is that the industry committees which he testified before the FCC on television matters have systematically obstructed the introduction of color television by sham engineering testimony.

"According to Jones none of the members --

Justice Black. On what page is the opus to which you refer?

Mr. Cahill. The opus of Commissioner Jones is at Record 193.

The Chief Justice. Was there any testimony before the Commission other than the scientists, the experts to whom you refer?

Mr. Cahill. There was no testimony, if I understand The Chief Justice's question, supporting the adoption of an incompatible system. All the testimony except that of the CBS engineers, was in favor of a compatible system.

The Chief Justice. Then evidently they had some testimony; is that right?

Mr. Cahill. The CBS engineers,

The Chief Justice. Yes.

Mr. Cahill. Yes, Your Honor, and I want to deal with that.

The Chief Justice. Now the FCC has to make a determination, does it not, when you have contrary evidence?

Mr. Cahill. Oh, yes, Your Honor; and I shall say that here they did not have enough evidence, and they said so themselves. They said in three important respects, as I shall discuss, that they had to base their decision on what they called, and I quote, "speculation and hope", and I say that that is the first time that any commission has ever come before this Court asking that its order be upheld on the basis of nothing more substantial than what they have been pleased to call "speculation and hope".

The Chief Justice. What did they say about the end product of the testimony of the scientists? Had they characterized that relative to "hope"?

Mr. Cahill. They found, as I will discuss, Your Honor, that they needed more information in order to enable them to reach a decision.

The first report of the Commission reached no decision. Thereafter, without taking any evidence whatsoever, 40 days later, the Commission came down with a second report and an order exclusively adopting the CBS system.

Now finishing this comment on Commissioner Jones:

"According to Jones, none of the members of these engineer-

ing groups, excepting the two CBS members, have presented consistent, reliable and trustworthy testimony during the past ten years. We wonder whether the worthy Commissioner knows the men he so recklessly and immoderately attacks.

"The combined membership of those committees comprises 121 men, 45 of whom are Fellows of the Institute of Radio Engineers; 25 directors, past and present, of that body; 8 past presidents; 6 men who hold the IRE Medal of Honor; and 4 others who have won the Morris Liebman prize.

"An indictment of these men is an indictment of the whole profession of radio engineering. They have dealt with the radio service of the United States from the earliest days.

"They have managed the technical effort in electronics during two wars. Without their cooperation, the FCC simply cannot function in regulating its highly technical domain.

"When one man aligns himself against a whole profession, fair minded men will consider that the man is wrong. The only systematic aspect of this record presented by Jones is his own systematic rejection of any testimony that disagrees with his own notions. Moreover, the testimony is rejected not merely as wrong but as intentionally dishonest. That is demagoguery."

Now, as I said, Mr. Chief Justice, one might well expect after these lengthy hearings that the Commission would have come up with a decision in its first report. That is not

the fact.

In the first report the Commission adopts no system. It says that if the Commission adopts the incompatible CBS system, it will be basing its decision on "speculation and hope" in several important respects.

Justice Clark. Where is that statement in the record about "speculation and hope"?

Mr. Cahill. It is at Record Page 165, paragraph 146, both the third and fourth line and the last two lines of the paragraph.

Turning now to the three important respects in which this Commission by its express admission acted on "speculation and hope" -- and I might say, that the order adopting the CBS system was by a divided vote, five to two -- first, the Commission speculated and hoped that the all important limitation on picture size of the CBS color system might be eliminated at some future time.

Now let me explain why this limitation exists. During the ten years that CBS has been tinkering with this system it has not changed in any fundamental respect whatsoever the apparatus which it uses to get color.

Ten years ago CBS used mechanical spinning wheels. Today it still uses mechanical spinning wheels to produce the color. The one spinning wheel is in front of the camera in the studio, the other spinning wheel is in front of the picture tube in

your living room.

Now it is this mechanical aspect of the CBS color system which puts this terrific limitation on the maximum size of its picture.

I might say still further that the disc in front of the receiver in your home, since it must cover the entire picture, requires that the center of the disc be at one side of the picture. Every receiver under the CBS system will have a separate electric motor in your room, which will turn the disc at a rate of 1,440 revolutions per minute, the same speed as the speed of the motor in front of the camera in the television studio.

Now these whirling discs contain plastic filters of red, green and blue, and it is the presence of those plastic filters in the spinning discs in front of the degraded black and white picture which adds the color in the CBS system.

Since those plastic spinning discs have got to be slightly more than twice the size of the face of the picture tube on your receiver, it is conceded that the maximum direct-view picture that can be obtained in color under the CBS system is only 12 1/2 inches.

Now the American people, on the other hand -- and this is not disputed -- are daily expressing their decided preference to the extent of 90 per cent of the sets being sold for picture sizes 16 inches and larger.

So that the Commission in exclusively adopting a system with pictures limited to 12 1/2 inches, is setting its judgment against that of the public which it is created to serve. That is, by standardizing on something midget sized as contrasted with the public wish for large screen television.

Again it is as if some mythical commission were to standardize on four-cylinder automobiles when the six and eight cylinder cars were known to exist and they were being bought by practically everybody. Or to take an analogy from the field of sports, it is as if we were to standardize exclusively on miniature golf when the public had been accustomed to playing on eighteen hole golf courses.

Not even CBS really believes that the American public will be satisfied with midget screen television. As far back as 1944 CBS thought that an 18-inch screen -- and I quote -- "was the size most folks seemed to want in their living room." Today 30-inch black and white sets are being offered to the public.

Now CBS proposes that these spinning wheels be added both in new receivers and in existing receivers after the fifty-dollar job to produce the degraded black and white picture is first done to the existing receiver.

The DuMont Laboratories in the hearings showed the Commission what a spinning disc converter would be like on one of their 19-inch black and white receivers, not one of

their really big receivers, not one of the 30-inch receivers.

The converter had all the aspects of a Rube Goldberg cartoon or one of the equally fancy inventions of the comedian Joe Cook.

These converters, these spinning wheels, introduced to an all-electronic art, a mechanical device as archaic as the magic lantern is to the modern movie projector, and they do not come for free.

Everybody who wants one of these spinning wheels will first have to adapt his set at the cost of \$50, plus a \$15 installation charge, and then lay out an additional \$100, plus another installation charge of approximately \$15 in order to get the mechanical spinning converter before he ever gets a CBS color picture for the first time. In other words, it is \$150 to adapt and convert his existing set, plus two installation charges of about \$15 each.

Now one has but to look at the daily newspapers to realize that the cost of sets today, new, many of them, is not equal to \$150. But let us look at the average receiver owner in his living room.

Today he turns his television set on by touching one button. If he has to do anything by way of tuning the picture brightness or turning the contrast range, he feels he has been called on to perform a skilled operation. But that is all he has to do today.

Now let us see what he gets after he spends his more than \$150 to adapt and convert and receive this CBS color. The whirling disc converter that he pays \$150 must be moved out of the way when present-day standard black and white broadcasts are on the air. It is, therefore, essential that this converter be portable.

If he owns a cabinet model receiver, the CBS manufacturing witness recommended that the converter housing, which includes the electric motor and the whirling disc, be mounted on a pedestal with wheels.

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What he would have would be a big box weighing between 25 and 30 pounds, mounted on top of a piece of pipe long enough to reach from the floor to the level of his picture tube, with wheels under the whole affair.

Now assume this television set owner is sitting in his living room watching an existing broadcast of black and white and then the broadcaster starts sending transmissions under the CBS Color System.

Well, first the owner must get up and trundle his hand truck over in front of his receiver; then he must flip a switch to turn on the electric motor; then he has to wait until the spinning disc gets up to a speed of 1,440 revolutions per minute.

That amount of time will vary with how powerful the motor is, but CBS concedes that 30 seconds is a reasonable time.

Then he has to flip a button to change from the standard 525-line broadcast to the 405-line CBS System. Then he must push the phasing button to lock the colors into this whirling disc in proper sequence, because if he does not perform that last operation, since the filter disc at the receiver is in precise synchronization with the filter disc in front of the camera in the broadcasting studio, the viewer might find himself looking at red grass and at an American Flag with blue stripes.

Now after doing all that, the viewer drops wearily into a chair in the hope that it all will work.

This is not the testimony of those opposed to the CBS Color System. On the contrary, this was the testimony on cross examination of CBS's own witnesses, including the president of that company. And there is no way of avoiding all those steps in regard to the 12 million existing receivers, except it will be possible with some small table model receivers to fix these clumsy mechanical discs permanently to the receiver and to slide them out of the way with a track arrangement.

It is the most complicated series of electrical operations that the average citizen has ever been called upon to perform.

The Chief Justice: Do you reckon anyone would buy any of them?

Mr. Cahill: I do not know about that, Mr. Chief Justice. Certainly the bugs in the things are going to be worked out at the expense of the public and not in the laboratory, as they should have been.

This system is an unready system because any system that is incompatible has a fundamental defect in it and it should have been worked out over 10 years, and whereas this opinion is based on "speculation and hope", there is not the slightest hope held out that the basic difficulty with the CBS System has ever been licked or that there is a hope of its being licked, and I refer to incompatibility.

Justice Clark: Would it be fair to say this is a sort of interim type of instrument to be used or not?

Mr. Cahill: Mr. Justice, only in respect of certain parts of it. You will always have to have the spinning disc even in new receivers. You will always have to have the electric motor. You will always have incompatibility, and you will always have 60 percent degradation of the existing picture. Those are things that they cannot get away from.

Justice Clark: What I meant was the ultimate objective is color, so we will say the order is in effect, and they start color.

Mr. Cahill: We are all for color, Mr. Justice.

Justice Clark: Yes, sir. Then some people, of course, are going to buy color radios, are they not?

Mr. Cahill: I think so, yes.

Justice Clark: And eventually these television sets in the hands of the public, these 12 million, are going to be sort of like mine, they will be a little outmoded and they are going to start buying, and the idea of the Commission, I thought, was they would buy color, and if you did not have some type of color that was available now, of course, they would buy black and white, would they not?

Mr. Cahill: They will, yes, sir, Mr. Justice.

Justice Clark: There is not any question about that?

Mr. Cahill: Yes, Mr. Justice. If you buy that color, what will you get for your money? You will get a maximum picture size of 12 1/2 inches, and that in the opinion of the public

today is midget size. You will get an incompatible system. You will get a system that will cause you to lose 60 percent of the picture detail of the existing service.

Justice Clark: Granting all that, what I was getting at was: Would not the new television sets -- they would not have this flying disc.

Mr. Cahill: They will have it.

Justice Clark: They will have it?

Mr. Cahill: They will have it.

Justice Clark: I thought they would have a different system and it would be just color?

Mr. Cahill: No, they will always have on the demonstration on this record -- the new receivers will have the spinning discs.

Now I will come to a contention that CBS makes in regard to the RCA tri-color tube, but I would like to take that up, if I may, in the sequence I have here.

Justice Frankfurter: Supposing everything you say is so. Would it make any difference provided the field were left open to other color transmissions?

Mr. Cahill: But it is not, Mr. Justice; I mean it is expressly prohibited.

Justice Frankfurter: Is that not the real gravamen of the complaint you can have here, if you have got one?

Mr. Cahill: It is an important one and serious grounds,

Mr. Justice, but there are other grounds.

Justice Frankfurter: But if there is a real basis, unless you can say on this record a Commission having the discretionary range that this Commission was given and must have, unless you can say that no allowable judgment should have permitted this order, as I see it, the only claim you can have is that here was an order made, although allowable, which needlessly cut off other interests which should have been subserved and served --- are those your contentions?

Mr. Cahill: No. I can say more than that, Mr. Justice. I can say under the opinion of this Court in *NBC* against the United States that this Court held that the statutory touchstone for this Commission, the standard of the public interest, convenience and necessity, was further defined by Section 303(g) of the Communications Act, which laid down upon this Commission the duty of exploiting the fuller use of radio, and I say that by that touchstone, as you called it, this Commission has exceeded its lawful authority when it adopted an incompatible system which puts out of business every set there is today in the hands of the public -- 12 million sets, completely out of business.

Justice Frankfurter: Puts them out of business only if they want color.

Mr. Cahill: No, it puts them out of business if they want to listen to a CBS color broadcast, not if they want color at all. If they just want black and white, if they just say, "I just want what I bought this set to get," that has been taken away from them by this order, and they have a right to complain, and I say in doing that to them, the Commission took away a right which is lawfully protected.

Justice Frankfurter: I do not think I will go along with you at this moment, because --

Mr. Cahill: I am sorry, Mr. Justice, you do not.

Justice Frankfurter: Because even assuming that, sir, you

have to balance that, as the Commission, I take it, does, as against the advantage -- never mind what I think of it -- as against the advantage of also getting color, the exigent need of getting color, which breathes through these reports.

Mr. Cahill: Mr. Justice, we are all for color, and we are for color on a compatible basis -- that is, a basis which will enable the man who spent his money -- and there are 12 million of those families -- to get what he bought his receiver to obtain.

Justice Frankfurter: But the Commission says in effect, taking your figures of 12 million outstanding sets now getting 100 percent black and white from CBS, the disadvantage of reducing that to 40 as against the advantage of having color is a conservation of the public interest.

Mr. Cahill: There is no finding here that the only way to attain color is through the adoption of a system that will deprive the public of what they purchased their sets to get. There is no such finding in the record.

Justice Frankfurter: That is the balancing they did in the first report, and they will see what they can find at the end of six weeks, and at the end of six weeks, they could not wait any longer.

Mr. Cahill: Mr. Justice, there is no finding that the only way they could attain color was to take away from the public substantially what the public bought these millions of sets to

obtain. There is no such finding.

Counsel argues that at length, but the record is barren of any such finding.

Justice Frankfurter: But that underlies the whole conclusion, Mr. Cahill, does it not? It underlies their order.

Mr. Cahill: It underlies their order, that they were unwilling to give the moderate length of time that was necessary to a further look at those important respects, which I am now discussing, as to which they imperiled the interests of 45 million people by relegating them to mere speculation and hope, and that is not substantial evidence.

Justice Frankfurter: You must say, as a legal proposition, as I understand it, your argument is that it was not allowable for the Commission to make that balancing, to say that although "We decrease the black and white value of these sets, we increase the use of the air because of the depreciation of the black and white at the same time of the enhancement of a new joy of such a thing called television."

Mr. Cahill: Mr. Justice, I think there was no such balancing. That is my complaint. They did not wait to get a balance. They went ahead on what they confessed, and I used their words, was "mere speculation and hope," and I shall deal with how unreasonable their failure was in just a moment, if I may.

Justice Reed: Are you going to take up the order and

point out to us --

Mr. Cahill: Yes, indeed.

Justice Reed: -- and point out just exactly what it was that stopped you from doing?

Mr. Cahill: Yes, I shall.

I might say here, Mr. Justice, in response to your question, that the order in its form is an amendment of the Commission's Standards of so-called Good Engineering Practice, and by failure to allow the broadcast of a compatible color system it has the effect of prohibiting, there is no question about that.

Justice Reed: Do you have experimental channels?

Mr. Cahill: There are experimental channels.

Justice Reed: Are you allowed to use them?

Mr. Cahill: We are allowed for certain hours of the day to send over experimental channels, Your Honor, but we are not allowed to broadcast for commercial purposes.

Justice Reed: And --

Mr. Cahill: That is right.

Justice Reed: If the Commission thinks that you have a system that would be acceptable to the public, they could then allow you other channels?

Mr. Cahill: In theory, but we have already had a taste of what we will get, Mr. Justice, when we filed our petition before this order was adopted, asking them to look at accomplished facts set forth in our progress report, which had taken place

after the hearings had closed. It was denied out of hand with the statement that they were not worth looking at, that these were mere paper improvements -- and, mind you, the facts to which I refer were facts as ascertainable of objective view as the fact that we had three times the brightness on the face of our tri-color tube as we had at the time the hearing closed. That is, I think, an indication of the kind of arbitrary action with which this record is replete. In its failure to look I think the Commission was guilty of the most arbitrary action it has ever taken.

Justice Clark: Did you ask them to reopen the hearings?

Mr. Cahill: As the appellees say, in effect, our petition to look in substance was a petition to re-open. That was filed on October 4, several days before the order was adopted.

Justice Frankfurter: Could you tell me what page of the record that is?

Mr. Cahill: Yes.

Justice Frankfurter: Because there is a controversy about that. There is a controversy as to what it did or did not mean.

Mr. Cahill: I am quoting to you accurately what the appellees said in their brief in the District Court, that it was a petition in substance to re-open the record. That is on page 408 of the record.

Justice Clark: "Speculation and hope" was in the May 1 report, was it not?

Mr. Cahill: Yes, Your Honor, and there was no evidence taken.

Justice Frankfurter: September -- in the first report?

Mr. Cahill: Yes, the "speculation and Hope" was in the first report. But the point I wanted to make to Mr. Justice Clark is notwithstanding the propriety of the statements expressed by the Commission in three important respects -- that is, picture size, lack of picture definition, and lack of picture brightness -- no further evidence was taken.

Without any further evidence being taken, the Commission swallowed its "speculation and hope" and forthwith adopted the CBS incompatible system as the exclusive system.

Justice Clark: You did not ask it to re-open the hearing at that time, did you?

Mr. Cahill: We did.

Justice Clark: You did not ask them to re-open it, did you, when you heard about the "speculation and hope"?

Mr. Cahill: We did. Our petition of October 4, asking them to look at our improvements --

Justice Clark: That is after the order, is it not?

Mr. Cahill: No, that was before the order, several days before the order. Their order was dated October 10. We filed this petition October 4.

Justice Clark: When was the first report?

Mr. Cahill: The first report was in September.

Justice Clark: September 1?

Mr. Cahill: And as soon as that came down and we read it and submitted our comments, about which my colleague, Judge Rifkind, will talk, we filed this petition asking them to look, and they refused to look, which I think is arbitrary in the extreme.

Now the "speculation and hope," as I have said, is that in the hands of and at the expense of the public the bugs in this unready CBS system may be ironed out.

Now, whereas the Commission in one breath deprecates the RCA tri-color tube, one of the great inventions of the electronic art, as though it did not really exist, on the other hand, it expresses the hope that it may improve the CBS system.

The record is devoid of any demonstration that it will. We do not dispute, on the other hand, that our tri-color tube would be an improvement over the CBS system, but we say why shackle this modern miracle to the body of a Model T Ford?

Now there is no answer to the fact that, admittedly, so doing will not correct the incompatibility of the CBS system, will not improve their 60 percent loss of picture detail.

Now I should like to turn to this matter of picture detail because that is the second great area in which the Commission confessedly speculated and hoped. The 60 per cent loss of picture detail by CBS occurred when it crowded its color system into a six megacycle band; whereas, previously it had operated in a 16 megacycle band.

Now not even CBS thinks that this low definition system is good. Back in 1940, more than 10 years ago, CBS had a six megacycle color system which had 20 per cent more picture detail than it has today. But even that was considered inadequate by CBS, and that is the reason it went from six to 16 megacycles.

Now CBS is back behind the place that it was 10 years ago. The yardstick, according to this report in 1950 is that CBS should receive the accolade in progressing in 1950 to a point below where they were in 1940; and the entire body of the radio and television engineers should be castigated for making great progress in all-electronic compatible high-definition systems.

The Commission speculates again. It may be after the CBS system gets going that the use of another RCA technique called the horizontal dot interlace may improve the poor quality of the CBS picture.

I should like to turn to the last of the three great facets on which the Commission speculated and hoped. That

is the limitation on brightness in the CBS system.

I might say at this point that a careful reading of the Commission report is a rewarding study in semantics. Whenever CBS is considered, the findings open on a gentle note of apology for the deficiencies of that system and close on a pious expression of "speculation and hope" that maybe tomorrow may eradicate those defects.

That is nowhere better illustrated than in regard to brightness and flicker. Taking the summary of the Commission's finding on this point, which CBS itself made, I quote:

"That though the CBS system is susceptible to flicker to a greater degree than standard black and white, the problem is not serious since flicker, which results from brightness, does not appear at the brightness level which is adequate for home use."

Now in 1947 the Commission had the following to say about the brightness and flicker of the CBS system, and again I quote:

"In the absence of more convincing evidence on the point, the Commission is of the opinion that on the point of brightness and flicker alone the risk of approving the Columbia standards at this time is that color television might be forced to limp along with a picture that is not sufficiently bright for general home use or is subject to objectionable

flicker."

Now the brightness and flicker characteristics of the CBS system which the Commission has now adopted are precisely the same as those of the CBS-wide band system which the Commission rejected in those words in 1947.

As in many other important respects, the Commission report is more important for what it does not say regarding the brightness and flicker than for what it does say.

Now the vital fact not mentioned in the report, which is a matter of scientific principle, and which was nowhere disputed at the hearing, is that the RCA system permits nine to 10 times the flicker-free brightness than does the CBS system.

Now in concluding the first report of the Commission on which I have spent so much time, I want to turn finally to the all-important question which we have here discussed of the efficiency of channel utilization.

Now certainly this involves one of the Commission's most important duties, a duty which prompted the Congress to create the Commission, to conserve and to utilize most effectively the scarce radio spectrum space.

Every one of the Commission's cases in court heretofore have been based on the need to promote what this Court pointed out was their touchstone, the more effective utilization of these scarce channels.

The entire industry has been raised on that basis. Endless hearings are held on every subject to promote that worthy end.

Now here for the first time the Commission has picked a system least saving of channel utilization, because there can be no dispute that this system, the only incompatible system, is wasteful of channels.

It requires that in the same broadcast band and for the same service transmitters serving existing black and white operate and transmitters sending out CBS incompatible color also operate. They can not operate simultaneously on the same band, because they are sending out signals of different characteristics, one of 525 lines, the other 405, incompatible characteristics.

It is not possible for one transmitter on one wave length simultaneously to send out CBS type signals and standard signals. It just can not be done.

The Commission could not even "speculate and hope" on that. It is out of the question.

In this area of the case we can not even draw the charitable curtain of "speculation and hope" about the Commission's action.

Now, on the other hand, in the RCA system we have the utmost utilization of this great national heritage of channels, because all that has to be done is to add certain color

characteristics which will enable color receivers to receive those transmissions in color.

Now if black and white and color television were truly separate services, the Commission would have no concern about the number of receivers in the hands of the public, which can not get CBS color, even as degraded black and white.

In its first report the Commission clearly recognized its need for further information before it would adopt an order setting the CBS system as the standard. The Commission also said that it needed further information about the RCA system.

Nevertheless, as I have said, it went ahead anyway.

Now the Commission in its first report set forth two conditions on which it would listen to further evidence. These had to do with something that had never been discussed in the hearings at all, never mentioned. They were not set forth in the notice of the hearings.

(11) They were something called bracket standards, about which my colleague, Judge Rifkind, will argue at length. All I want to say of them is that the Commission called for formal written comments on bracket standards.

RCA submitted its comments on this novel proposal, never heard before, and it also submitted not only the RCA progress report, but as well the report of the so-called Condon Committee.

Now the Condon Committee is the most distinguished group of scientists ever to have studied and reported on color television. This Committee was organized at the request of the Chairman of the United States Senate Committee on Interstate and Foreign Commerce.

It was headed by the Director of the National Bureau of Standards of the United States, and none of its members was connected with any television manufacturer or broadcaster. These scientists in their report made findings on the highly technical matters involved in a judgment of the relative merits of the respective color systems.

With respect to the Condon Report, the majority of the District Courts said, and I quote,

"No doubt this report refutes numerous of the findings made by the Commission and gives a far more favorable appraisal of the RCA system than that attributed to it by the Commission."

These two reports, the RCA progress report and the Condon

Report, were entirely ignored.

Justice Frankfurter: What was the date of the Condon Report? I do not seem to find it in the documents.

Mr. Cahill: July 10, 1950, almost six weeks prior to the first report.

Justice Frankfurter: When did the hearings close before the Commission?

Mr. Cahill: At the end of May.

Justice Frankfurter. Was this report explicitly called to each of their attention --

Mr. Cahill: It was.

Justice Frankfurter: -- by subsequent document?

Mr. Cahill: Yes, Your Honor, it was called to their attention in the RCA comments that were submitted; and I should like to say before I turn to the points that I will argue, Mr. Chief Justice, that the effective date of this order was November 20, as I recall, and has been stayed by a restraining order of the District Court, and I have a motion here to extend the stay beyond April 1st, because that is the termination date of the stay by the order of the District Court, and I have submitted that motion.

Now I shall argue four points:

First, that the adoption of the CBS system is contrary to the standards of the public interest, convenience, and necessity, as defined by the Commission itself;

Second, that the action of the Commission in adopting the CBS system and rejecting the RCA system is not on the basis of the record taken as a whole supported by substantial evidence;

Third, the outlawing of the commercial broadcasting of compatible color in competition with the incompatible CBS system is contrary to law; and

Last, that the Commission's reliance upon a member of its staff who had an interest in the outcome was improper.

Justice Reed: Can there be any commercial color broadcasting now?

Mr. Cahill: There cannot, Your Honor, under the terms of the stay.

Justice Reed: No, but I mean before this order was tendered.

Mr. Cahill: No.

Justice Reed: There has never been any, as I understand it?

Mr. Cahill: No.

Justice Reed: No commercial color broadcast?

Mr. Cahill: No.

Not, as early as 1940 --

Justice Reed: Excuse me, just a moment. This order on page 432 -- is that the order we are dealing with at this time?

Mr. Cahill: Yes, sir; that is correct.

Justice Reed: What that does is give CBS certain bands?

Mr. Cahill: No.

Justice Reed: Channels?

Mr. Cahill: No. It amends the capitalized standards of good engineering practice to provide the characteristics of signals that may be broadcast, and those are the characteristics of the CBS system.

Justice Reed: Well, that would do them no good unless they had a channel, would it not, CBS? Perhaps I do not understand.

Mr. Cahill: They have existing licenses.

Justice Reed: They have already an existing channel that they can use?

Mr. Cahill: Yes, they have existing licenses.

Justice Frankfurter. Anybody else can produce color if they come within the standards?

Mr. Cahill: You can do it if you come within the CBS system. You can not do it if you do not.

Justice Frankfurter: They do not say CBS.

Mr. Cahill: They do not say CBS, but that is the effect. You tailor to fit CBS and nobody else.

Justice Reed: The specifications fit one person and nobody else.

Mr. Cahill: It fits one and nobody else.

Justice Reed: If CBS broadcasts on the channels allotted

to it in color, it can broadcast that much less in black and white; is that right or wrong?

Mr. Cahill: That is right. That is so. Now as early as 1940 the Commission --

Justice Reed: I have just one more question.

Mr. Cahill: That is all right.

Justice Reed: And if RCA develops a color system that the Commission thinks is effective, they can use their channels for that new color system?

Mr. Cahill: Not under this order; they are prohibited.

Justice Reed: Not under this order, but there is no reason why the Commission could not give them an order to use that system, too.

Mr. Cahill: Sir, as I say, we have little reason to hope that will happen, because we tried to show the Commission what we had by way of improvements.

Justice Reed: They said you had none.

Mr. Cahill: They said that without looking at it. They would not look.

Justice Reed: They said, "You have nothing that we can appreciate now and we will wait until later"; is that it?

Mr. Cahill: No, they just say, "We won't look at it."

Justice Frankfurter: That does not prevent you from going before them next June --

Mr. Cahill: I know, but the treatment we have received

at their hands with respect to the great accomplishment that we made in brightness does not give us the slightest confidence that we are going to get anything but the back of their hands again.

Justice Frankfurter: Isn't the situation that although you may come before them next June or next October with something far in advance, concededly, of anything that then existed and cheaper in every other way, is there anything that leads you to say they would not listen to you then or is your argument that even though they listen to you, the situation will have been created which complicates the situation?

Mr. Cahill: That is the second part of my argument. By that time the public would have been put to the expenditure of millions on a system that is obsolete before it ever is put out.

This system is as archaic as the old disco discs that they used to produce color in the movies years ago, and by that time great damage would have been done to the public because this system is an unready system.

Now turning to the Commission's own concept of the public's interest ten years ago, the Commission laid these three principles down for television standards. They said, first, that the standards must permit all receivers to obtain pictures from all transmissions. Certainly CBS does not live up

to that standard.

Second, that they must permit the highest quality of service known to the art. Well, it is the unanimous approval on the record here, except for CBS, that that is not true. This is a low-definition system, with 60 per cent loss of picture detail.

Third, they are adopted only after the potentialities of basic research are exhausted. Well, it is quite apparent that the potentialities of basic research are not exhausted. In fact, the Commission report says it recognizes that great inventions do not occur on schedule, and it may be that great developments in this field are now just pouring out of the laboratories.

Nevertheless, it shuts the door in the face of those developments and adopts this obsolete system.

I submit that any system which violates all three of the Commission's own fundamental principles is too high a price to pay for color.

Justice Frankfurter: Suppose, Mr. Cahill, that CBS had come before the Commission on exactly the same record, nothing more than what we now have, before them, but with no competing color scheme which had been put before them, would they then not have been justified in making this order? Suppose nothing else had been put before them.

Mr. Cahill: Mr. Justice, I would say to take from the

public what they spent \$3 billion to get is too high a price to pay for a mechanical, degraded, incompatible, low-definition system of color.

Justice Frankfurter: That is, you would say that they should have said --

Mr. Cahill: Let us wait.

Justice Frankfurter: (Continuing) -- let us wait.

Mr. Cahill: Let us wait and get something that will not

--

Justice Frankfurter: Even though there is something where there is no alternative proposed.

Mr. Cahill: The rationale of these two reports --

Justice Frankfurter: I am not suggesting the situation is the same.

Mr. Cahill: It does not exist. It is purely hypothetical. But you know there is a catch phrase on which they swing these reports, and that is that compatibility is too high a price to pay for color.

Well, I say what price color? I say when you put out of business the \$3 billion which the people of this country have invested in this system, it is too high a price to pay for a system that in ten years of testing affords no promise of licking its most basic defect, and that is the incompatibility.

Justice Frankfurter: I might say to you that the Com-

mission is probably presumably better capable of ascertaining that indefinable something called public opinion or public interest than nine lawyers or judges.

Mr. Cahill: No, but I say when what the public wants is so easily ascertained as it is in this field that is not true.

Justice Frankfurter: What?

Mr. Cahill: When the public is buying 90 per cent of sets 16 inches and over and this Commission seeks to foist on them a maximum size of 12 1/2 inches, I say then that no Commission --

Justice Frankfurter: Plus color?

Mr. Cahill: No, Mr. Justice. May I say --

Justice Frankfurter: How can I determine what the appetite of the public is in color?

Mr. Cahill: Mr. Justice, may I state for the moment --

Justice Frankfurter: I am sure it is not mine to determine.

Mr. Cahill: May I state for the moment what has been done here and may I say for the moment when they give them a degraded black and white picture, a picture only 40 per cent as good as what they are getting today, I say people can judge these things, these objective facts, as well as this Commission.

Justice Clark: You say the objective is color. How much would it cost me to get your color?

Mr. Cahill: That is true.

Justice Clark: Suppose they adopted your system.

Mr. Cahill: Mr. Justice, you would get the existing black and white on our system without spending a penny.

Justice Clark: No, on color.

Mr. Cahill: If you want color, Mr. Justice --

Justice Clark: Yes.

Mr. Cahill: -- color receivers will be available on our system.

Justice Clark: What will that cost me?

Mr. Cahill: I beg your pardon?

Justice Clark: What will that cost me?

Mr. Cahill: It is futile to estimate what these things will cost today. Nobody is tooled up.

Justice Clark: You can not estimate what that new set will cost?

Mr. Cahill: No. So far as this record is concerned, no demonstrations were made of our converter, but we tried to show in our petition of October 4 prototypes of our converter, and that was the petition denied out of hand and we described on this record what our converter would be like, but so great was the speed that nobody took time to see it.

Justice Clark: Let us see. They heard the testimony for nine months?

Mr. Cahill: Yes, Mr. Justice, but bear in mind the one

all important thing --

Justice Clark: Why didn't you show your converter then?

Mr. Cahill: Because, Mr. Justice, we were pushing along at the maximum rate possible. We did not come out with our tri-color tube until these hearings were more than half over. Our men were working 24 hours a day.

This hearing was called unexpectedly early. The testimony of this Commission before the Congress was that it would take three or four years more to have these compatible sets attain their objective. Nevertheless and notwithstanding that testimony, this hearing was called within two years, so that the laboratories of these companies that are working on high-definition compatible systems certainly sweated it out while these hearings were on.

Justice Frankfurter: Isn't that the real down-to-the-bottom basis of the case so far as you have got one? Namely, that you are dealing with a revolutionary process which is still in its earliest stages, and a decision should not have been reached. Isn't that the real bottom?

Mr. Cahill: It certainly is one. You are dealing with the most dynamic scientific art that has ever been known, and you are going to put a mechanical system into an all-electronic art.

As I say, it is like foisting a magic lantern on the modern movie projector. That is what they have done here, and

they shut the door on the greatest series of inventions that have come along. They just would not look at them. They denied them out of hand and said they were not worth looking at, they said they were just paper developments.

Justice Black: Pardon me, I have not yet understood why that has necessarily shut the door. I mean this:

Suppose your company should invent something better? Suppose your company should invent something undoubtedly better as I know your company --

Mr. Cahill: We think we have, Mr. Justice.

Justice Black: Suppose they do and you get it so much better that you can show it beyond any doubt, and you go down to the Commission and they still do something to keep you from showing it. Then I presume that would be what you would call an arbitrary denial, and you are saying now this is arbitrary.

Mr. Cahill: We have had it already.

Justice Black: But the trouble I have up to date, frankly, I am not sufficiently familiar with the issues --

Mr. Cahill: Yes.

Justice Black: It seems to me that the argument you are making would be a very persuasive argument up to date if I were a member of the Commission, but I am not sure what the legal effect of it is.

Mr. Cahill: No, Mr. Justice, we have had the arbitrary

and capricious action, in refusing to look. I will take that up after the recess.

(Mid-session recess, 2:00 to 2:30 p.m.)

Mr. Cahill: Mr. Justice, we were on the question of arbitrary and capricious action, and you were just asking a question.

Justice Black: And why it can be said that the door is shut against these improvements --

Mr. Cahill: Yes.

Justice Black: -- and putting them into effect if they happen.

Mr. Cahill: Yes, I will take as my example, in answer to your question, the action with respect to our petition of early October.

After the first report and prior to the adoption of the order -- I will cite that for this purpose as being the most arbitrary action the Commission has ever taken, because, taking just one facet of that report, the question of brightness of the picture on our tri-color tube, the first report had criticized the lack of brightness.

We showed in our progress report that the picture brightness had been increased three times, you see. There is an objective ascertainable fact. We asked the Commission to "Look before you leap" and "don't make an order here until you have looked."

Well, we had all this protestation that they would look, and the like, but without ever looking, and in respect to that most objective fact, they just closed the door and said, "Denied", without more.

I cite that as the kind of arbitrary and capricious action I think you are asking me about.

Justice Black: Suppose that is not enough. Suppose that is not enough and the situation here is that he made a decision which was allowable on the facts. Does their order, such as it is, do that which I have understood you to have said several times, to block you in the future, and if so, why?

Mr. Cahill: Yes, sir; it blocks us certainly from a competitive standpoint, and that I would like to argue now.

Let us face up to how it does it: I will use a railroad analogy on this argument. Television up to now has operated on what I shall call standard-gauge track. Appellees proposed to set up a new narrow gauge track.

That is startling enough because it is unnecessary, but when they carry their narrow-gauge track to the extreme that they prohibit the carrying of all possible traffic on the standard-gauge track, then they have violated the fundamental policy behind the creation of the Commission -- namely, the full utilization of that great national heritage, the scarce radio spectrum.

Not only that, but I submit they violated the competitive philosophy which this Court has held they are obliged to enforce.

By this order the Commission says that you can not pull colored cars over standard-gauge track. You may only draw black and white cars over that track.

Now it is as absurd as that, because concededly you can draw colored cars over standard-gauge track as well as black and white cars without interfering with anybody, even the narrow-gauge fellow, CBS. That is the undisputed testimony of the developer of the CBS system, its vice president and chief research engineer, Dr. Goldmark, who said, and I quote:

"I couldn't sit here and tell you not to adopt standards referring to the RCA system because nobody would get hurt by it if you did."

As I have said, all the RCA color system does, the compatible system, is to add color characteristics to the existing signal, and the color transmission takes place over the existing wave length. You do not have to use two wave lengths. It does not crowd the air one iota when you use the RCA color system.

Now it is the CBS system, because it is incompatible, which crowds the air because you can not simultaneously over the one channel transmit the standard black and white and

the proposed incompatible CBS signals.

Justice Black: Do I understand by that it is your claim that your client has a color system now ready to use which is equal to theirs?

Mr. Cahill: That is our claim.

Justice Black: And they are ready to put it on right away, and you claim they have selected theirs over yours?

Mr. Cahill: Yes.

(15)
Justice Frankfurter: As of September 30, the Commission denied that.

What you are employing is that the showing you were prepared to make as of September 30, by your notice dated October 4, you invited the Commission to find that you now have a claim which would be as good as the CBS, is that it?

Mr. Cahill: No, that is not my position.

There is absolutely no showing, Mr. Justice, and that is my point here, that the Commission denied that on September 30. There is no showing on either of these reports that the Commission ever considered the question of whether the RCA system should be permitted to go ahead in commercial competition simultaneous with the CBS system.

Justice Frankfurter: Did they not find it unsatisfactory by the standards which they thought were appropriate?

Mr. Cahill: The RCA system has never been found to be so bad that it should not be allowed to go ahead in competition with the CBS system.

This argument that the RCA color system is so bad that it should not be allowed to compete with CBS comes, strangely, from the lips of those who seek to be protected against that very competition.

In contrast to that are the comments of the members of the Commission on the quality of RCA color.

The Acting Chairman said on the record, of RCA color:

"Your picture is greatly improved since your first showing."

Another Commissioner:

"We have seen the RCA system and it produced beautiful color."

The same Commissioner:

"I noticed the marked improvement in your color the other morning at Laurel, and I think we all did, and I was completely surprised particularly in the final RCA picture where the man inserted flowers in that shallow dish."

Justice Clark: When was that? Can I get in the record what date those remarks were made?

Mr. Cahill: The record date, if your Honor please, of the last remark, was February 27, after half the hearing had been going on.

Justice Clark: 1950?

Mr. Cahill: 1950. The other was March 16, 1950, and the third one was April 11, 1950.

Justice Clark: They held, did they not, that yours was not good?

Mr. Cahill: I beg your pardon?

Justice Clark: The Commission held yours was not equal to the other system after that date.

Mr. Cahill: No, but these are remarks of the Commission

that are addressed to the hyperbole of Commission advocacy, which went so far that in the District Court in this case they told the District Court that the RCA system produced mere splotches of color in the laboratory.

Justice Clark: That was not your improved system?

Mr. Cahill: The system to which these comments refer?

Justice Clark: Yes.

Mr. Cahill: Yes, this is not our improved system alone.

It is our tri-color tube they are referring to there.

Justice Clark: The Commission saw it, too? They saw it then?

Mr. Cahill: The Commission saw it towards the end and, on the one hand, treats it as though it does not exist, and, on the other hand, it says it may help the CBS system, although it has not demonstrated that it will.

Justice Black: Is your objection to that order that it permits CBS to use this or that it does not also permit you to use yours?

Mr. Cahill: On this phase of the argument, my objection is the latter, that it does not permit the public to see ours, that nobody can be hurt by allowing the public to see ours as well as the CBS'.

If our system is bad, we are the only ones who will be hurt because we have a trade name for turning out good merchandise.

CBS has admitted through its chief engineer that nobody

will be hurt -- and I am quoting him -- "if compatible color television is allowed competitively alongside incompatible."

Justice Frankfurter: In what context did the chief engineer of CBS say that? Because, as you quote it, it seems to contradict their whole position.

Mr. Cahill: Well, that is it, and it is in respect of this very field that we are talking about.

You know, they say here, Mr. Justice, that this matter was even considered before the Commission. That is not so.

General Sarnoff, chairman of the Board of the RCA, testified here, and he said that if an incompatible system were to be adopted, then the Commission should as well go along and let a compatible system go on the air, because the existing service thereby would be preserved and the public would be the jury in accordance with the good old American way of letting the public decide.

Justice Frankfurter: If they allowed you to have your compatible system, I doubt very much whether you would be in a position to object to their allowing an incompatible system, CBS, because I do not think you would be a party in interest to that, and I do not think you would be affected by it.

Mr. Cahill: Mr. Justice, on this facet, on this point, I am talking solely, your Honor, now, that the order is violative of the public interest because it does not allow free competition between incompatible color and the compatible color.

To sum it up --

Justice Black: May I just ask you this one question?

Mr. Cahill: Surely.

Justice Black: Your time is up, so I will ask you a question on my time.

Mr. Cahill: Thank you very much.

Justice Black: What is your claim with reference -- Where do they say they find in the statute, what section of the statute do they rely on to say that there shall not be a chance to compete if you can put on a better color system than the other people that the public wants to buy?

Mr. Cahill: They can cite no section, they cite no section, they rely on nothing.

Justice Black: Do they rely on some section?

Mr. Cahill: They rely on nothing. This is the first time, Mr. Justice, in my research -- and I think I am very familiar with this act -- where the Commission has departed from the field of unlimited competition.

Here, for the first time, without any authorization, without any citation, they go in for restraint of competition. In other words, under their order there will be three classes of competition.

There will be competition between existing black and white, between the low-definition CBS black and white, and the incompatible CBS color. The fourth class of competition would

be that of compatible color. That they debar, and they do that solely on their argument of confusion. That is the only argument that is --

Justice Black: Confusion in the air?

Mr. Cahill: Confusion in the public mind. There is no confusion in the air. It is conceded that we create no confusion, no electrical interference, if we add color characteristics to our existing signals.

Justice Black: You mean the basis of it is, so far as you know, if you are permitted to offer to the public your comparative color system, that that would somehow confuse the public?

Mr. Cahill: That is right, plus the argument that I had with Mr. Justice Frankfurter a minute ago, that CBS argues that our system is so bad colorwise that it should not be allowed to go on the air, you see. It is on that dual facet that they rely.

Justice Frankfurter: Should not be allowed? Why? Who would be hurt?

Mr. Cahill: I concede that nobody would be hurt, because, as they concede, nobody would be hurt; and we, as a manufacturer, would be taking the chance. The public will decide; the public will go into stores, they will see CBS color alongside our color, and they will make their choice.

If we are wrong, we are the ones who lose. CBS will not

lose if they are wrong. CBS is not backing this one iota in the manufacturing business.

Justice Black: Who has the patents?

Mr. Cahill: If your Honor please, I suppose we have.

Justice Black: I presume that is the basis of it, that each one was getting the patents, and each one wanted his system adopted.

Mr. Cahill: That is not the basis of it, so far as we are concerned, Mr. Justice. We have a moral responsibility towards the millions of people who have bought these sets that are now in use to see to it that they get the service for which they paid their money, and under this order a substantial part of the service for which they paid is going to be taken away from them.

The Chief Justice: Do you not think though that the Commission has some responsibility in seeing that if color goes on the air, it is good color? You say that you run the risk. Well, you might lose in that battle, but has not the Commission a responsibility in determining whether any old color may go on the air?

Mr. Cahill: Mr. Chief Justice, let me say first that I do not concede, of course, that our color is not good color.

The Chief Justice. I know, but you are arguing if it were bad, that you are the only person in interest and that you would lose in competition and lose money.

Mr. Cahill: No, I am arguing, Mr. Chief Justice, where you have the state of facts that you have here, where to add color characteristics to the existing system does not in any way interfere or impede the existing system --

The Chief Justice: I understood that, but I understood you to say -- and I want to see if it is clear -- that you said it was up to the public to determine whether yours was good or bad and that you would run the risk, and if you lost you would lose a stake and that you, maybe X, Y, Z, who had different systems, should be permitted to put it on the air.

Mr. Cahill: Yes.

The Chief Justice: It seems to me that the Commission has responsibility in determining what goes on the air.

Mr. Cahill: Mr. Chief Justice, the Commission has a certain responsibility but you have my point, that where you have a compatible system, where you add signals that give color characteristics without interfering with the existing service, that where you interfere with nobody else on the air and the question is only, really, the quality of the receivers, because that is the point we are talking about -- we are not talking of transmissions here -- in this phase of our argument we are talking only of receivers -- and there is no question under the law that this Commission has no jurisdiction over the components of the receivers that are manufactured.

Justice Frankfurter: Am I right in understanding that there

is involved in this order to no extent or in no way wavelengths, distribution of available channels, use of the aid, but really what you can receive through what you now have?

Mr. Cahill: To this extent: Wavelengths are involved to the extent that it is impossible for a broadcaster simultaneously to broadcast under the CBS incompatible color system and the existing black and white. He cannot do it.

Justice Frankfurter: I understand that.

Mr. Cahill: That is most important.

Justice Frankfurter: If what you want you have got, you would not be getting any more or any better wavelength.

Mr. Cahill: If we got what we want, we would not be taking up one iota more of channel space.

Justice Frankfurter: Yes.

Mr. Cahill: We would simply be more fully utilizing what we now have. We would simply be drawing colored cars on the tracks that we now use to draw black and white cars. We would not be doing anything except giving additional competition of a system for which all the industry engineers in basic principle -- that is, the compatible system -- advocated, because unless a system is compatible and unless it is all-electronic, you are harnessing an all-electronic art to a mechanical, archaic structure.

Justice Frankfurter: Is the jurisdiction of the Commission in this matter, the whole basis of this order, referable to the

fact that the Commission may determine the uses to which -- I am not talking about -- but the uses to which the wavelengths may be put. Is that the question, the basic of the Commission's jurisdiction?

Mr. Cahill: Well, I would think --

Justice Frankfurter: Otherwise, what jurisdiction has it as to what set I should have in my house?

Mr. Cahill: It has none, and Judge Rifkind, of course, is going to devote himself entirely to that point. I do not want to take his time, because that is a very important phase of the case to which he is going to devote himself exclusively.

Justice Clark: It does have the authority to promulgate standards, does it not?

Mr. Cahill: Well, its authority has never been challenged in that regard, because heretofore the Commission has adhered to the proposition that all receivers must be able to receive all transmissions.

Now, we have all agreed to that. This is the first time, Mr. Justice, when they have decided to violate that principle, and that is the reason, among others, that we are here. They are going to put a substantial number, 12,000,000 receivers, out of business unless the people have the money to dig up to make the change with these adapters and these converters.

Justice Clark: I wonder, if you had two standards -- You would have to have two standards to give you and CBS both the

right to broadcast color television; would you not?

Mr. Cahill: Yes, but you would not have to change anything about our channels. We would operate --

Justice Clark: You would have two standards.

Mr. Cahill: We would operate just as we are today.

Justice Clark: If I wanted to listen to your system tonight, say, at eight o'clock, and then there was a program on CBS at nine o'clock, I would have to have one of your receivers, would I not, and I would have to have one of CBS receivers --

Mr. Cahill: No.

Justice Clark: -- to get both of them?

Mr. Cahill: No, if you started at eight o'clock tonight, you would do nothing to your receiver to get ours, and if you wanted it in black and white --

Justice Clark: I am talking about color; I love color.

Mr. Cahill: Oh, all right.

(Laughter.)

Justice Clark: So, tonight at eight o'clock you have a terrific program on color and I want to get it. Now, I have to buy one of your sets, do I not?

Mr. Cahill: Well, it is not necessary. Mr. Adrian Murphy of CBS was asked that precise question by Commissioner Hennock at the hearing. The question was put to him as follows, and I would like to quote it:

"Commissioner Hennock: Now, can you envision a RCA color set with that new RCA tube in it and all the other equipment that goes with the RCA color set, and assuming that there was a Columbia adapter in that set, and then one of those converters of Mr. Chapin's in that set, would you be able to get both the Columbia color system and the RCA system through that set?

"The Witness: Yes, Miss Hennock, you would.

"Commissioner Hennock: Then, what is wrong with that idea?

"The Witness: That is a fine idea."

Then, with an omission that is immaterial:

"I said before" -- continued the vice president of CBS in charge of color -- "I said before that the Commission has a choice of saying whether there will be one system or there will be two or more systems."

Justice Clark: And you could not, if you had the right to the patents, manufacture a set that had CBS receiving potential and also yours?

Mr. Cahill: Well, there is no question as to the patents so far as we are concerned, because we license freely all applicants at reasonable rates of royalty and have for years. Our patents are open to everybody; they are on the public register.

Justice Reed: Is there a problem of multiple standards

here?

Mr. Cahill: Yes, on the competition point, that is it precisely, Mr. Justice Reed.

Justice Reed: Now, the Government brief says that question was never raised, as I understand it.

Mr. Cahill: I am most sorry to differ with the Government in that respect. Brigadier General David Sarnoff, chairman of the Board of RCA, was asked that very question, and he said that if an incompatible system were adopted, that there should be competition in the public interest with compatible color television as well. The point was raised as directly as that.

Justice Reed: What the Government brief says is that no alternative was formally proposed and there was no dispute before the Commission that single standards were to be preferred.

Mr. Cahill: There is no question, Mr. Justice Reed, that we would prefer to have only compatible color, and that was our position. But our position as well as taken as expressly as I have put it to you, that if the Commission were to adopt incompatible color, then by all means that there be compatible color as well.

Justice Reed: How would that be presented to the Commission, by a motion or by a petition for rehearing, or does the mere fact that General Sarnoff testified to it, in your view, bring that before the Commission?

Mr. Cahill: I think very definitely.

Justice Reed: Do you have an exception to the order because it did not grant you multiple -- because it did not create multiple standards?

Mr. Cahill: I think so. I think there is no question that is here, and the lower court so treated it, and I think it is one of the important facets of the case, because, Mr. Justice, this Court has held heretofore that the principles of the antitrust law are implicit in this Act, and that this Commission is charged with the duty to enforce them.

Now, here for the first time is a --

Justice Reed: But as Justice Black suggested a moment ago, there is no reason why you cannot go and ask for permission to use the channels in pursuit of your color or to go to color broadcasting if you later prove it to the satisfaction of the Commission.

Mr. Cahill: We have already satisfied that, and been denied, and that is why we are here.

Justice Reed: They said at that time you were not sufficiently advanced?

Mr. Cahill: Without looking. There is no question, they did not look. It is conceded that they did not look. They would not take the time; they denied it out of hand. They said these were paper developments, although in respect of the greatest invention I think I have seen in my 25 years' professional connection with this industry, the tri-color tube, we

had increased from 300,000 to 600,000 the number of dots on the face of the tube. Would they look at it? No, they would not.

The Chief Justice: Did you not have also something else tacked onto that asking them to look at it? Was there not something in regard to continuing the matter to one of two dates?

Mr. Cahill: Yes, but they could have adopted the date, Mr. Chief Justice.

The Chief Justice: How long after that motion was denied did they come down with their order?

Mr. Cahill: The order came down the day it was denied, and, Mr. Chief Justice, the period we asked them was very closely referable to the period the Commission was willing to have granted had we acceded to what we believed were the illegal and impossible conditions that were appended as the price for getting more time to the first report.

(19)
Those are the proposals which the dissenting Commissioner, the former Chief Engineer of the Commission, said we had never been apprised of during the hearing and were never mentioned in the notice, you see, the so-called bracket standards proposal about which Judge Rifkind will argue.

The Chief Justice: Thank you.

Mr. Cahill: Thank you, Mr. Chief Justice.

The Chief Justice: Judge Rifkind.

ARGUMENT ON BEHALF OF APPELLANT EMERSON

by Mr. Rifkind.

Mr. Rifkind: Mr. Chief Justice, do I have 20 minutes from this point forward?

The Chief Justice: Yes.

Mr. Rifkind: Thank you.

In view of the limitation of time, I should like to dispense with the amenities that sometimes accompany an argument of this kind. I shall skip and omit some of the things that I thought I would address myself to and get down to the precise points that I want to make.

I should like to state those points now, so that the Court might have an idea of the territory I intend to cover, which is not coterminus with the entire argument.

I am going to argue first in establishing the context of this whole case that this is one of the extraordinary cases, the unusual cases of review of administrative action, where

the wisdom of the agency is in issue.

I recognize how great a burden it is to suggest such a course to this Court, but I make bold to say that is precisely what we propose to do, that this is a case where the Commission departed so far from the standards of ordinary wisdom that its action may be called arbitrary.

More specifically, and dealing with the action of the Court, I shall assert that this was not a case to which the remedy of summary judgment was a suitable and appropriate remedy; that this was not a case which came within the requirements of the rules concerning summary judgment.

I shall argue that we have not had until this minute a judicial review of the order made by the Commission.

And now, to get to the Commission's order, I shall state in advance that I shall not at all deal with the evidence. I shall not deal with it for the simple reason that the Commission, having denied my clients the right to appear before the Commission, I do not know the evidence, but I do know the findings made by the Commission; and my entire argument will therefore be focused upon the adequacy of the findings to support the order rather than on the adequacy of the evidence to support the findings; and in that respect I shall assert and argue that the order made by the Commission was invalid because it is not supported by the findings which underlie it.

I shall say that the order is invalid because it is the

product of an unlawful attempt on the part of the Commission to regulate an industry with respect to which Congress has not conferred regulatory power upon the agency.

I shall further argue that the order is invalid because the findings themselves do not support the major implicit premise of this order -- namely, that the time has come for any color, not whether one or another system is superior.

And, finally, that the order is invalid because they do not support, if we are to have any color, they do not support the conclusion that only one system rather than a multiplicity of systems shall be allowed to go on the air.

That is the major framework of my discussion. I should like to say at the outset that we are dealing here with what at first blush seems like a very complicated science, but in the final analysis is not a very complicated question of law.

This is the familiar problem of regulating transportation agencies, because television is a transportation system.

By means of television images, visual images are transported from the point of origin, which is the broadcasting station, to the multiple points of destination, which are the receivers in the homes of the audience.

What we are concerned with here is the attempt to introduce a new style of transmission -- namely, a style of transporting color images -- and what the Commission is concerned with is to determine, or ought to be concerned with, is to

determine whether the art had reached a stage where such an innovation is in the public interest, and, secondly, if it is in the public interest, and the art has achieved that status, by what track, what gauge track, shall those color images move from the broadcaster to the radio receiving sets of the audience?

Now this case, I think, has lost something in the fact that two great corporations happen to be named as litigants and the result is that I suspect that both in the Commission and in the court below and possibly here there is a misconception as to what the issue is.

It is not whether RCA may broadcast or whether CBS may broadcast. Neither CBS nor RCA appears in this Court today in their roles as broadcasters. Broadcasting is performed by radio or television stations, each of whom holds a license issued by the Federal Communications Commission.

That is not the role in which CBS appears here this morning, nor RCA appears here. They happen to appear here as champions, champions of particular idea, but those ideas are of general application.

In other words, if the Commission adopts one system of trackage, then all broadcasters Station A, B, C, all through the land, they may use that system of trackage. It may be they must use the system of trackage or lose their license if the Commission should find that by their failure to take advantage

of that permission they have not adequately served the public interest.

But that becomes a highway, an electronic highway, for the transportation of images from any broadcaster to any receiving set.

That is what we are talking about, and in order to simplify that issue I should like to forget about RCA and CBS and talk about two numbers. These two numbers are easily remembered.

The CBS System operates on a number, 405, and the RCA System operates on a number, 525.

Now there are a great many other differences between the two systems, but it is sufficient for us to know that 405 means the scanning of 405 lines per second in the transmission of the picture; whereas, 525 has the same reference to that number of lines.

Now the significance of those numbers in the study here today is that whereas we are today, everybody, all stations all over the United States are today sending monochrome pictures through the air on 525 lines, a 525 gauge system; the Commission now proposes that color pictures should be sent by a different system.

If we could send colored pictures on 525, it follows that the same set could get images no matter what the broadcaster was broadcasting, whether color images or black and white images. They would arrive on the same system or same highway.

If we change to 405, then those sets which are equipped for 525 reception will not get anything, will not get anything unless they are changed in some important respects.

Now, Mr. Justice Black asked a question, which is: What is there in this order which would prevent some other proponent of a system from coming before the Commission a month hence or three months hence and say, "We now have a system which is superior to the one you have approved in your order of October 10, why don't you now authorize this new system, either as an additional system or as a substitute system?"

Of course, I think that question goes to the heart of the issue here, because the answer, regardless of what the law may say about that, as a practical matter, once this decision is allowed to stand, such change is foreclosed for at least a generation.

Justice Black: Why?

Mr. Rifkind: The reason is very simple. Highly complex and expensive equipment is involved in installing the present proposed system. Consequently, if you accommodate the receiving equipment and transmitting equipment to a 405-line system, it would involve a tremendous expense, a tremendous outlay of money, to change to a new system.

It is comparable to trying now to build a locomotive with a different gauge distance between their wheels. It would involve practically reconstructing the trackage of the United

States.

Even though I might come forward and persuade the I.C.C. that a locomotive with twice the width of axle distance is a better locomotive, as a practical matter nobody could introduce such a locomotive because you could not tear up the tracks all over the United States.

Justice Black: Would it be quite that expensive if the other people were permitted to do it?

Mr. Rifkind: It would be inexpensive if the other system were introduced now because then the consumer would have a choice. He could either wait, and the manufacturer would have a choice, he could tell the consumer to wait, "You will get all the broadcasts that are coming out over the air. Very true, you will get it in black and white even though it is broadcast in color, but you will get the picture; if your favorite actor is Jones or Smith, you will see Jones and Smith; but wait until we give you a gadget, a receiver or a tube, which will not make your set obsolete."

Justice Black: May I ask you, is your client interested because it prefers the Columbia System, the RCA System, or because it wants it left open for a different system?

Mr. Rifkind: I will answer that question directly. My client is a manufacturer of television equipment, receiving equipment. It is utterly unconcerned whether it is the CBS System or the RCA System or the CFI System or a system as yet

undeveloped.

It has one concern. Having sold over 700,000 sets to the public, it does not, in obedience to the dictates of its own self-interest, want to see those sets made obsolete.

No. 2, it does not want by competitive necessity to be subjected to the need of selling a new piece of equipment -- converters and adapters, and so forth -- to adapt and convert its equipment, which in its opinion, and supported by the findings, I might say, will be obsolete in very short order.

Justice Black: Could you not do it without any extra expense except what it cost to manufacture it? Would this independent manufacturer be left free to manufacture the Columbia equipment?

Mr. Rifkind: Yes. There would be nothing to prevent Emerson from producing sets which will receive images transmitted on the Columbia System by any station in the United States.

Justice Black: How would you be hurt by either order?

Mr. Rifkind: I beg your pardon?

Justice Black: How would you be hurt by either order?

Mr. Rifkind: We'll be hurt because, No. 1, the consumers who now have Emerson sets -- and the same goes for all the other manufacturers -- I should say that in the District Court I held the flag of all of these manufacturers, who united on this proposition -- they do not want to see those sets become obsolete.

today --

Justice Black: Why?

Mr. Rifkind: -- which in effect they would be.

Justice Black: Ordinarily I have not seen any reluctance about that.

Mr. Rifkind: Normally you are right, that a manufacturer is interested in change, and these manufacturers are interested in change. They have embraced every change that has come along in the television industry and in the radio industry from its very beginning.

They are the ones, after all, who pioneered the cheapening of the large screen, which is today the greatly desired article in television, but they do not want to make a change which is going to ruin their reputations, and they say, the manufacturers, who after all have the pulse of the public, they sell them this commodity, they say that the public will not be content with 7 or 8 or 9 or 10-inch pictures on 12-inch tubes; they will not be content with whirling, spinning wheels, in front of their sets; and, moreover, they will be unhappy because a vast majority of the outstanding sets cannot physically be converted.

Justice Black: Why would you have to manufacture and sell those if you are afraid it will hurt your business?

Mr. Rifkind: Well, it is true that we have a sort of common law right not to stay in business.

Justice Black: Why would you have to go out of business?

I do not quite understand that.

Mr. Rifkind: Once the public is told that you can get color over the air and you can get color over the air by this system, they will come in and ask for color television sets.

Justice Black: Suppose they sort of left it free for the other people also to have color. Would you then have no objection?

Mr. Rifkind: We have less objection.

Justice Black: Why would you have any?

Mr. Rifkind: We would have less objection because we would then be able to offer our customers a choice, but we would still have objection because we still think that we would be offering the public, to the extent that we sold them these new devices which the CBS System requires, in our judgment we would be giving them shoddy merchandise, substandard merchandise.

Justice Clark: You say a choice; could you give him both in one rather than a choice?

Mr. Rifkind: The Commission suggested that possibility by throwing it out like a bolt out of the blue in the September first order; they invited the industry -- I think threatened the industry -- that unless they came up with just such a suggestion as Mr. Justice Clark has now proposed, they would impose the system, which they said was not good enough to be accepted.

The industry almost unanimously -- unanimously so far as I know -- produced the facts, and the answer, which indicated that the idea has not yet been developed to the point of commercial exploitation.

Justice Clark: In other words, you could not do it insofar as your present knowledge of the subject is concerned?

Mr. Rifkind: And that, assuming that you could do both, you still could not do without the whirling, spinning wheel, or the gadget which is necessary in order to introduce the idea of color onto the picture.

The Chief Justice: I assume that you have not got any CBS in here and you have no order from the Commission and the situation is in the state of development, as it is, and Communications would issue an order favoring the RCA device, would your position be the same?

Mr. Rifkind: Our position would be different, and there is a reason. The RCA set being compatible -- in other words, since it operates on 525 lines -- we can sell every set we now have without changing it and the public would not be injured in the slightest.

The Chief Justice: Well, your position would not be changed completely; it would be changed in degree, would it not? You still would, would you not, think that the color might not be good?

Mr. Rifkind: Well, if you ask me to make a choice, I would

say that we think this F.C.C. ought to do what the BBC has done, the British Broadcasting, which is to say color has not arrived yet. That is the fact which these findings sustain.

The Chief Justice: So then while you would not have the exact same attitude as to the whole because you have black and white on the RCA, your objection as to color --

Mr. Rifkind: Would still be the same.

The Chief Justice: -- would still be the same.

Mr. Rifkind: That is true, but it would be of a very minute order, since we could continue manufacturing and selling the identical sets we have been manufacturing and selling without in any way misrepresenting the situation to the public.

The Chief Justice: As I understand it, you think this Court should in effect make the determination that the time has not arrived for color to go on the air.

Mr. Rifkind: No, I do not say that. I would not ask this Court to act as a surrogate for the Commission, to make a decision which the Commission should make.

I say that the findings made by the Commission, their findings, not mine or this Court's, sustain only one answer; and that is it is not ripe, it is not ready, and just to indicate a detail which supports that proposition, and in line with the question of both the Chief Justice and Mr. Justice Black, which they asked, on page 419 of the record the Commission called attention in its second report to the fact that by

adopting this order they realize that they are closing the door to two lines of improvement, or three lines of improvement, to which they adverted in their first report.

For instance, they say:

"Since receivers without brackets could not"--

Justice Black: Which part of the page?

Mr. Rifkind: I beg your pardon?

Justice Black: What part of the page?

Mr. Rifkind: It is page 419, and is the last few lines of the uppermost section --

Justice Black: I see.

Mr. Rifkind: "Since receivers without brackets could not be adjusted to a different line rate, our inability to adopt brackets at this time probably means as a practical matter when and if horizontal interlace is adopted, the improvement may be confined only to horizontal resolution and not to vertical resolution."

Although they had expressed the hope that we could have both horizontal and vertical -- that is what they said.

There is the same thing in the next paragraph, where they talk about long persistence phosphors, the last sentence of that paragraph states:

"Since we are not able to adopt bracket standards, improvements from long persistence phosphors might as a practical matter be limited to increasing brightness without objectionable

flicker."

But the other virtues of this device, about which I know little, could not be achieved.

Justice Reed: Now turn that page, Judge Rifkind, to page 420.

Mr. Rifkind: 420?

Justice Reed: Yes.

Mr. Rifkind: Yes, I have read that section, Mr. Justice.

Justice Reed: They seem to imply there, if I read it correctly, that there is to be further experimentation that is to be generally offered.

Mr. Rifkind: I again call attention to the fact that it is legally possible, it is conceivable, but I suggest to Your Honor that the burden which would have to be overcome by somebody who would come along a year from now or two years from now and who would suggest that his system requires the scrapping of 12 or 15 million sets or 20 or 30 million sets, at the rate of which they are being sold today, that would be a burden no Commission would carry because Commissions are composed of human beings who have to account to the Congress.

Justice Frankfurter: The countervailing consideration is, as I get the Commission's decision, the countervailing consideration is that if we wait, as Commissioner Hennock suggested, at least for the time, if we wait, in the meantime these 12 million sets may become -- they multiply like rabbits.

(Laughter.)

And these sets a year from now or two years from now might be, whatever they are, 20 million, and by that time too there may be no improvements in the art beyond what CBS now offers, and by that time the replacement of or the converting or adapting requirements would be so vast that there would be that objection to adopting CBS, when in the meantime there would be no improvement. Is that not their case?

Mr. Rifkind: Yes, but, Your Honor, if that were so and if the Commission acted on this premise, then they would have to tear up their order because the only reason they said they could get by in this order is because they have the hope of the tri-colored tube.

If the tri-colored tube, which makes the RCA System feasible, were not available, then this order would never have been made. They agree that this little picture is not what the public is going to stand for, but they say, "We hope that the tri-colored tube is going to correct that," that is when they used that pretty language about "an important part of our decision is based on speculation and hope" -- that and three or four other items.

So the fact is that the Commission knows that this industry is bursting and bubbling with inventiveness. Why, Your Honor, between the time these hearings opened and the time the hearings closed the opening pages read like some

archaeological document. That is how rapid the rate of change that took place in this very fecund industry -- it was that rapid.

Now, the Commission is aware of that. They know there is an automobile on the horizon, but they are discussing whether we should standardize on the horse or the mule.

Justice Frankfurter: But, Mr. Rifkind, the public craze for color is the underlying thesis of this decision.

Mr. Rifkind: I suggest, Your Honor, the only man who cried for color is one member of the Commission, who on page 193, I think, of my record, says:

"I am for color now."

That is his major premise. He does not say why. He does not say how. He does not say:

"Is color ready?"

He says: "I am for color now."

That is an article of faith. That kind of an article of faith I call an obsession, because --

Justice Frankfurter: Yes, but he was not alone. One man could not have made this order.

Mr. Rifkind: Oh, he persuaded the others to adopt it.

(Laughter.)

This idolatrous conception, because it is manifest, Your Honor, that once you say you have to have color now regardless, then quality, public interest, cost, effect on future invention,

everything goes by the board.

But I say that "I am for color now" is a hope, a prayer -- it is not a reason. It is not a rational thing. It is not something --

Justice Frankfurter: But it is an intuitive Gallup poll.

Mr. Rifkind: It is an intuitive Gallup poll but he is the only person being questioned.

The Chief Justice: Did you understand Mr. Cahill to say that "We were all for color"?

Mr. Rifkind: I dissent from that. (Laughter)

Mr. Chief Justice, I am for color when color is ready. I will be for color when they manufacture a device which we will be glad to sell, which will receive color for the average consumer in a satisfactory quality and at a price he can pay.

I say to Your Honor that these findings will demonstrate to you, these findings, not the evidence, that that has not yet happened, as far as this record is concerned.

Justice Frankfurter: By findings you mean these numbered paragraphs?

Mr. Rifkind: They call it their findings. I call it that because the Commission calls it that.

Justice Frankfurter: I just want to identify it.

The Chief Justice: Your time has expired.

Mr. Rifkind: My time has expired? Thank you, s'r.

ARGUMENT ON BEHALF OF APPELLANT INTERNATIONAL BROTHER-

HOOD OF ELECTRICAL WORKERS

By Mr. Kamin

Mr. Kamin: May it please the Court, I represent before Your Honors a labor organization which has a membership of 21,000 people, 18,000 of whom are employed in and around Chicago by manufacturers of television receivers and of parts and equipment therefor.

These workers whom I represent average in their aggregate annual earnings of about \$50 million a year. Their very substantial interest was recognized by the court below which, over the objections of the defendants, gave the union leave to intervene in the proceedings.

The union took no part in the proceedings before the Commission, and we shall explain that very shortly. It is one of the points that we raised.

Before the court and before this Court, the union asserted the rights and interests of its members not only as employees in the television manufacturing business, but as owners and operators of television receiver equipment.

Now, if Your Honors, please, the union's contentions in this matter are brief and rather narrow. We assert that proceedings, developments in the television industry while the proceedings were going on before the Federal Communications Commission were so fast and so rapid that before the record was closed, before the data upon which the Commission relied in its ultimate findings, the data were obsolete, so obsolete that they did not relate at all to an existing economic situation.

Because the Commission relied upon obsolete data it departed so far from its notice of rule making as to deprive parties in the position of this appellant, television manufacturers, other persons similarly situated, of the right

and opportunity to be heard in the rule making proceedings.

We assert, Your Honors, that a court which is reviewing agency action in a rule making proceeding wherein an effort is made to fix standards for long-term regulation, such a court may inquire into the validity, the current validity, of the data upon which the agency action is predicated.

This Court may do so in order to determine whether or not there is a rational basis for the action of the agency, not by way of appraising the agency policy, not by way of substituting judicial judgment for administrative judgment, but to determine whether or not there is some real basis in fact for the agency's action.

Now, if Your Honors please, the Nation's television system consists of 107 broadcasting stations and 12 million receiving stations. These receiving stations are in the homes of the Nation.

When the Commission's hearing started in September, 1949 -- that is just eighteen months ago today -- they proceeded on the basis of the receiver survey made during the month of March, 1949.

This survey showed that there were slightly over one million sets in use in the country, 82 percent of which were 10-inch sets or smaller, 15 percent of which were 12-inch sets, and only 3 percent of which were larger than 12-1/2. All demonstrations of adaptation and conversion systems before the

Commission were not of the sets that are being manufactured, being purchased today. They were of small, obsolete, or antiquated, in any event, 7, 10, and 12-inch sets.

Let me demonstrate, Your Honors. This is a Du Mont receiver, about as compact an 18- or 19-inch receiver as you can find. This is the viewing area here in white.

I place over this area the viewing surface of a 12-inch tube. This is the largest set that was being made in quantity at the time the Commission's proceedings started. So that we have an inventory, a national inventory, at that time of about a million receivers, most of which are that size.

Now what has happened since the Commission started its hearings is that the manufacturing industry has gone ahead with all this talk about the public clamor for color -- the fact is they have been buying and buying sets in great quantity, with all of the publicity given to the proceedings before the Commission.

Now there are 6 million sets today in America, Your Honors, of this larger size. This smaller size represents the maximum color picture that may be obtained.

Now when the Commission talks about converting and adapting -- when the Commission talks of adapting and converting a larger set, the record is somewhat confused. Actually, if they were frank about it, it would have to be found that on the basis of the standards they set, it is impossible to convert and adapt

a set of 16 inches completely so that it will receive the color broadcast.

This, Your Honors, represents the largest wheel that the Commission recommends, 26 inches in diameter. They say if it gets any larger than this, you cannot get it in the home, it will put the family out of the living room.

Now, this must be on a conversion placed in some relationship to the tube. On this very compact set, if we place it on the set in relationship to the tube, making all reasonable allowances for a motor on the top of the set, that is the coverage we get. Even if we reduced the picture in here -- and mind you, Your Honors, there is no device invented yet, you can search this record, you can search the records of the United States Patent Office -- there is no device invented whereby the picture on the tube this size can be reduced down to this size for Columbia color.

But even assuming that it could, the relationship of this wheel to the set demonstrates on the basis of simple arithmetic and geometry that sets in this size cannot be converted; they cannot be converted to color, existing receivers.

Then, what are we left with?

Justice Black: What does this wheel do?

Mr. Kamin: This wheel rotates with filters across the face of the tube.

Justice Black: How fast?

Mr. Kamin: 1440 times per minute. There are 6 filters in there. As each color field comes off this Columbia field sequential system, it is supposed to match one of these filters and that is how you get the color. You get the illusion of color.

This is mechanical color. It is not color inside the set. It is color imposed from outside the set.

Now, Your Honors, the net effect then from a legal --

Justice Black: How is it guarded?

Mr. Kamin: I beg your pardon?

Justice Black: How is it guarded?

Mr. Kamin: I assume that there will be a housing; on the smaller sets, I do not mind saying that CBS has cooked up some rather attractive designs that contain this small wheel, so that they are fully protected.

There has never been a demonstration of the CBS wheel on a set even as large as 12-1/2 inches having a tube of 12-1/2 inches. Certainly no demonstration has been had of a CBS wheel on a 16-inch or a 19-inch set. The record is devoid of it.

In all of the proceedings before the Commission and all of these demonstrations of the CBS system, the record is devoid of it, so we wind up, Your Honors, with the fact that in terms of the inventory of available sets throughout this country today this Commission's order does not establish for these 12 million American families a standard of color broadcasting, but a

second standard of black and white broadcasting.

I wish I had time to go into that. Thank you.

The Chief Justice: Judge Rosenman.

ARGUMENT ON BEHALF OF APPELLEE COLUMBIA BROADCASTING SYSTEM

By Mr. Rosenman

Mr. Rosenman: If the Court please, I represent here the Columbia Broadcasting System, which before the Commission was a proponent of its so-called field sequential color system, and as I sat here and listened to the arguments of the appellants today, I am sure that some of you must believe that this Commission of seven people, appointed by the President and confirmed by the Senate, were perverse individuals, who were mischievous and with malice went out of their way to find an incompatible system when they had the choice of selecting a good, workable compatible system; that they thought it would be too easy to adopt a compatible system, it would be too easy on the public, it would create no problems; and, therefore, they went out of their way to say, "Let us adopt an incompatible system and cause all this confusion."

Justice Frankfurter: It has been known, even in this Court, that a single dissenting voice eventually becomes the voice of wisdom.

Mr. Rosenman: In this case, Your Honor, they had no single dissenting voice because they had no choice at all.

Justice Frankfurter: I mean, Commissioner Hennock's view

was different from the others.

Mr. Rosenman: I will come to Commissioner Hennock's view, Your Honor, especially in connection with the second report.

In this case they had no choice. They had tried compatible systems and had tried them for ten years, and they had two compatible systems before them, so-called dot sequential system, the RCA system, and the so-called line sequential system, the CTI system.

They found, Your Honors, that there was no choice; that the only one that could work, the only one that could produce a satisfactory color picture, was the incompatible system, and that that had been true for ten years.

They went further and found that from the very nature of the dot sequential system and the line sequential system that the probability was that a compatible system would never work.

I shall come to point out to Your Honors the inaccuracy of Mr. Cahill's argument that the Commission's first report was based on speculation and hope, but I think that it will be conceded that the Commission found that so far as a compatible system was concerned there probably was no hope and never would be any hope that it would work.

Now these facts were all sustained by the record before the Commission, and we shall come to the record and quote from it, and we will show the certainty of the findings by the reference to the record.

Now the appellants take exception to the fact that we rely exclusively on the record, and they make the astounding statement in their brief, as a sort of climax to their argument charging us, the appellees, and I quote this extraordinary statement, that we "take refuge in the existence of a record and in rubrics relating to administrative finality and the limitations on judicial review."

We plead guilty to those charges that we do look to the record made before the Commission, that we do call this Court's attention to the well defined precedents on judicial review.

Now we go to the record to find out, Your Honors, exactly what the Federal Communications Commission did, how carefully and thoroughly and rationally and how soundly they considered all of the facts of these three systems and how every finding that they made and every action that they took was based on evidence before them, and how their findings and conclusions were based on common sense and upon public policy and carried out the public convenience, interest and necessity, as it was their duty to do.

Now a word about the proceedings which took place before this Commission. These proceedings were conducted in a formal manner, although the statute does not require it.

The hearing record consumed some 10,000 pages of testimony and over 260 exhibits. There were 53 witnesses who testified, occupying 62 actual trial days.

In addition to this testimony, Your Honors -- and this is very important -- these Commissioners saw eight demonstrations on the record of these systems. There was a demonstration on an actual receiving set of RCA, there was one of CBS, there was one of CTI.

In addition to that, they had comparative demonstrations, which means that on two occasions they placed a receiving set for a dot sequential system, RCA, and receiving set for a field sequential system, and they compared those two pictures, and their findings are based on those demonstrations, on what those Commissioners saw with their own eyes in looking at these color pictures.

In addition to that, they had reports of certain public reaction surveys. It was not a one-man intuitive Gallup poll, Your Honor. There were three actual public reaction surveys. One was conducted only for doctors viewing a telecast in color in Washington of an operation which was being performed in the Johns Hopkins Hospital.

In addition to that, there were two series in the Walker Building here in Washington to which people were invited, and to which the general public were admitted, and with respect to each of these surveys' questionnaires were distributed and filled out and submitted on the record and are in the record.

After these were done, the Commission, after the close of the hearing in May of 1950, the Commission deliberated about

this matter for three months and then issued its first report, which covers 157 different paragraphs, each one containing findings, and then later a second report, and the answer to every charge which has been made here by the appellants will be found within the confines of those reports.

In order to present the background against which these findings were made and the reports were issued it will be necessary for me to tell Your Honors something about these three systems -- rather, two systems, because only two are here, because neither of the appellants has as yet undertaken to tell you anything about the way these systems work.

The reason I am impelled to do that is so that Your Honors will realize the basis on which this Commission, after hearing the testimony and after seeing the pictures, came to the conclusion that the so-called dot sequential system, RCA system, would probably never work.

First, about black and white television, with which Your Honors are familiar, I am sure, you have a camera some place in the studio or out on a football field; you have a receiving set in your own home.

At that camera an electron beam scans the picture which is being taken, and it scans it from left to right in lines. Your Honors have been able to see the lines. That line starts up here and goes across and goes down to the bottom right and then is snapped up again and does the same thing.

Each time it goes down from the upper left to the lower right it has covered a field, and when it covers two fields, it has covered a frame.

Now in black and white, Your Honors, under the standards set by this Commission some nine years ago that electron beam goes down to the bottom and back again 60 fields each second; it goes from here to there 60 times each second, and at least theoretically there are 525 lines on each of those fields. That is called the vertical resolution. That electron beam picks up parts of the picture as it goes along, just as is reflected on a photographic plate, the high black and the low white and the grays, the intermediate mixtures, so that when that is transmitted to the receiver, you see an accurate picture of what the camera saw.

Now color must be done differently. It is impossible for a camera to pick up a color and send it out in one fell swoop. The camera must do it by picking up three separate colors, which we call the primary colors, in this case red, blue, and green; and there are two ways of sending those colors out. It can do it either by trying to send them all out at once, simultaneously, by three cameras or three tubes, that is called the simultaneous system, which I will come to in a minute; but the systems which were used here were systems of sending those colors out sequentially, one after the other, so fast that the retina of the eye retains them and they are

blended on the retina of the eye to produce color. So that red, blue, green, if put together on the retina, will produce the color, depending upon the intensity of the red and the blue and the green which are sent.

The field sequential system, Your Honors, which is the CBS system -- and I must say here I am sure Mr. Cahill did this inadvertently, but he misrepresented to the Court that the CBS system, the field sequential system, could be sent only by CBS -- that is not so.

It is called the CBS system because we are the one who proposed it. Its technical name is the field sequential system, and this order in adopting it permits anybody who wants to broadcast that system. Du Mont can do it, RCA can do it, every station here in Washington can do it if they want to. It compels nobody to do it.

Justice Black: What is the real meat of the controversy between you? Columbia does intend to do it --

Mr. Rosenman: I would say, sir, that the Commission found -- and we say properly -- that Columbia can start to do it tomorrow, Columbia can start to do it tomorrow -- anybody who wants to build the equipment can do it the day after tomorrow, but that nobody can send out a dot sequential or an RCA system because the system will not work.

Justice Frankfurter: Well, if a thing does not work, what would be the harm in letting people try it?

Mr. Rosenman: The harm, Your Honor, is threefold, and I will come to that when I talk about multiple standards, if you will permit me first to show you --

Justice Frankfurter: We will permit that.

Mr. Rosenman: -- why the Commission held it cannot possibly work.

Justice Frankfurter: "Never" is an awfully big word in this Court.

Mr. Rosenman: Maybe when I explain the complexity of this, the Commission's finding at least will be held reasonable. It did not have to go so far as to say it never would work. It is sufficient if it says as between the two it does not work now, and there is no probability that it will work within the foreseeable future, and that is the actual finding of the Commission.

Justice Clark: Does CBS make the receivers?

Mr. Rosenman: No, sir.

Justice Black: Where would Columbia be heard if others were left free to use the other system? Where would Columbia be heard?

Mr. Rosenman: That, too, Mr. Justice Black, is a question of multiple standards which I wish you would let me defer until I finish the exposition of this system.

Justice Black: All right.

Mr. Rosenman: The Columbia field sequential system is a

system of taking one field, as I explained to Your Honors, in one color and sending it out. Then they would take the next one in the second color and send it out -- red, blue, green, red, blue, green -- so that the color changes each 1/44th of a second and the color goes out as complete fields.

When they are received, they are merged into an accurate color picture.

Justice Burton: It is the same way they print a color picture on a printed page, first one and then another until they have it?

Mr. Rosenman: Yes, that is about the same. Roughly, they use different colors for primary colors, but it is roughly the same. When they merge, you get an accurate color picture. You get an accurate picture of the red, maroon, and the different colors by sending out red, blue, and green.

Now, the so-called RCA system, which is the dot sequential system, works very differently, and the reason it works differently is they have tried to maintain the 525 lines.

We have realized that in the field sequential system we cannot maintain the 525 lines and at the same time increase the field rate from 60 to 144 and still keep it within 6 megacycles; but if you want to keep it in 6 megacycles and keep the same lines, the field rate and the line rate the same as the dot sequential system does, then you run into difficulties.

In the dot sequential system what is transmitted from the

camera over the air to your receiver is not a field of red followed by a field of blue, by a field of green, but as this electron beam moves along the line it picks up first a red dot, then a blue dot, then a green dot, and that is why it is called the dot sequential system, and it sends that out each line being in different dots, and those dots appear on your color receiver at home.

Now because we send them out in fields, our color switches 144 times a second, and because the RCA system sends them out in dots, the color changes 11 million times per second.

In addition to that, coming to apparatus, the apparatus of the RCA camera consists of three tubes, each of which picks out a different color and sends it out.

These three tubes in the camera must be placed so minutely, so nicely, that the image of the three will hit the same point on the transmitting apparatus -- physically they must be in one position, and if they move so much as 2/1000 of an inch, if some one were to bump up against the camera, it would immediately throw it out of focus.

In addition to that, the phosphor, the face of these tubes, the chemical substance on the tube, must be exactly the same. Otherwise, the emissions that go out will not be correct.

These phosphors deteriorate as a matter of physical science, and they must be deteriorate at exactly the same rate, not only with each other, but the surface must deteriorate at

exactly the same rate.

Now if all those things happen, and if there is no mistake in the $1/11,000,000$ of a second, the system will work.

Now the fact is that if there is a mistake in $1/11,000,000$ of a second, you will get a red when you should get a blue or you will get a green when you should get a red, and I saw that happen at these demonstrations, while what I saw is not in the record, what the Commissioners saw with their own eyes is in the record.

Now an independent consulting engineer, testifying not for us, but testifying for CTI, a third proponent of a system, the so-called line sequential system, testified as a physicist as an expert in this business that as a result of these critical tolerances, as a result of this extreme nicety which must be maintained not only in the system but in the apparatus through which the system works, that if there is a variation of $1/7,000,000,000$ of a second -- $1/7,000,000,000$ of a second -- there will be a mixture of color, and this he computed was the same as hitting a target 400 feet wide on the sun 93 million miles away.

Transferring that into non-astronomical language, it is like hitting a 1-inch target some 19,000 miles away.

Now sometimes the dot sequential system will do it, but the Commissioners held and found that within a reasonable time it just cannot maintain the accuracy which that requires.

Justice Black: The way you described it, just to a layman, it sounds to me when that is done, that will be a very excellent method.

Mr. Rosenman. If it is done.

Justice.Black: That would be an estimate.

Mr. Rosenman: The Commission has found, s'r, from viewing the demonstrations that it cannot be done, that the color fidelity cannot be maintained, and what the Commission did in making its findings was to set up, after finding that color was a fundamental improvement to television, not merely a social amenity, as one of the appellants' briefs contend here, but a fundamental improvement which adds realism and opens new fields for effective broadcasting, the Commission found, after finding that of color, set up certain criteria which it said formed the almost minimum of a decent color system.

Those criteria are set forth in the record at page 155, and they provide, first, that a color system to be adopted -- and this was the Commission performing its statutory duty of protecting the public interest by setting a minimum which it would take before they would permit a color system to be broadcast -- the first is that it go in 6 megacycles.

That is one of the things that causes the difficulty, and the reason they kept it in 6 megacycles is that is what the present black and white gauge is and they do not want to waste frequencies; so they said, "You must have it in 6 megacycles."

Then they said for No. 2 that it must be capable of producing a color picture which has a high quality of color fidelity. The meaning of that is obvious.

That it has adequate apparent definition; and that it has a good picture texture, and that it is not marred by such defects as misregistration, line crawl, jitter, or unduly prominent dot or other structure. I would like to explain a few of those phrases.

You will notice it says that it must have adequate apparent definition. You have heard Mr. Cahill refer several times to a degraded resolution. By that he means that the 525 has been reduced to 405, and 380 horizontal resolution has been reduced to 205.

It is true that those theoretical picture elements have been reduced in the CBS color. That is what makes it incompatible, and that is the way we get it into 6 megacycles.

What the Commission said was that the listener and the viewer in the home was not interested in some geometry of resolution. What the viewer in the home was interested in was what he saw, what was the definition of this picture, what was the apparent definition, and that was the combination of this geometric resolution, it was a combination of that and color and contrast and crispness and sharpness, and that is what the Commission found, and they based it not only on the testimony, but what they saw coming into a receiver receiving the

CBS system.

Justice Frankfurter: Do I infer from that statement that you challenge --

Mr. Rosenman: I beg your pardon?

Justice Frankfurter: You challenge the argument that the CBS color scheme would involve a reduction in the black and white reception? I do not mean an abstract mathematical matter to the viewer, but those remarks were directed to meet that.

Mr. Rosenman: That is right, and when you get a color picture, its apparent definition, with the color and the contrast and the crispness, presents a much better picture than the black and white picture which you get.

Justice Frankfurter: But if I do not want or some one does not want the color, his black and white would be reduced in definition; is that right?

Mr. Rosenman: No.

Justice Frankfurter: As I understood that, that was the argument.

Mr. Rosenman: That is not so, Your Honor. I am sure you misunderstood what either Mr. Cahill said or he must have misunderstood your question.

Justice Frankfurter: I do not know what the 40 percent means. What did he mean? What did he mean by that?

Mr. Rosenman: The 40 percent means this: If CBS is broadcasting in color and they put an adapter on or a receiver

puts an adapter on so that he gets that color in black and white that will be a reduced resolution picture. That's true.

Justice Frankfurter: Not merely for color but also black and white?

Mr. Rosenman: Black and white. He will not get it in color, but he will get it in black and white.

Justice Frankfurter: Black and white?

Mr. Rosenman: That is right.

Justice Frankfurter: What he will see will be less sensible than what he saw before.

Mr. Rosenman: That is right. That is equally true, Your Honor, and the Commission so found of the RCA color system. When the RCA color system is broadcast, you do not need an adapter to see black and white on it, but the black and white you see is a reduced picture from what you would be getting from straight black and white from RCA.

Justice Frankfurter: He did not leave that impression on me; I dare say he said it.

Justice Clark: Your contention is that the black and white on neither system would be the same?

Mr. Rosenman: Sir?

Justice Clark: If the systems were in color but you wanted to get them in black and white, why, they would be about the same in black and white.

Mr. Rosenman: I am afraid I can't say they would be the

same, Your Honor, because the CBS color, which comes in when it is changed to black and white, has the 405 lines instead of the 525 lines.

Justice Frankfurter: You are now getting at what is called, if I may use the classic term of the day, the package; you get a black and white and color package which reduces the form of good black and white but it is worth it, is that it?

Mr. Rosenman: It is not only worth it, Your Honor, but if I may add one other thing that you get with CBS that you do not get with the dot sequential system -- and I do not think Mr. Cahill frankly answered that question -- is that in CBS if you have a black and white set in your home and we begin to broadcast in color, most of the sets can be converted -- I am not talking about this kind of thing we saw here -- but most of the sets, and we demonstrated those, we had them in the Walker Building and nobody complained about them there, they converted your black and white which you have at home to receiving CBS color, and they did it by putting, not a whirling disc, but a piece of furniture, a contraption which had a disc in it, which no one saw, which revolved in there so fast that no one can see it -- certainly no one at the Walker Building objected to it, and they were asked, "What defects do you see?"

Now, CBS can convert to color and can take your set, Mr. Justice Frankfurter, which you have at home, if it is a table set, and can put a converter in front of it so that when

we begin to broadcast color here, you will get it in color,
and that is what we are interested in here -- color -- and not
black and white.

Now if RCA were to try to broadcast the dot sequential system or if anybody were to try to broadcast the dot sequential system, so far as this record shows, no matter what you spent and no matter how hard you tried, you can not convert that set to color. It is useless.

Justice Minton: The Commission had as a result of the question then a choice between compatibility and no color and incompatibility and color.

Mr. Rosenman: That is exactly right, Mr. Justice Minton. That is what the Commission meant when it said that compatibility is too high a price to pay for color. In other words, we want color, we contend that it is reasonable for this Commission, charged with the public interest, to say, "We want color, here is something new and exciting, we want to give color to the public." Now if the only way we can do it is by an incompatible system, is it not reasonable or certainly is it arbitrary and capricious for this group of seven people to say, "We will give color to the public even though we have to give it in an incompatible system"?

Justice Frankfurter: Is that the real issue? Is it the real issue between incompatibility and color or compatibility and no color? Is not rather the issue a little different: color and incompatibility now or color and incompatibility exclusively?

Mr. Rosenman: Color and incompatibility what?

Justice Frankfurter: Exclusively.

Mr. Rosenman: Well, I will come right now to these multiple standards, as long as you press me.

Justice Frankfurter: No, you take your time.

Mr. Rosenman: Sir?

Justice Frankfurter: You take the order of your argument because you are prepared to report and I am not.

Mr. Rosenman: I am prepared for that, but I assure you I am coming to multiple standards.

Now after they set these criteria -- I have not finished the criteria yet, I got off on other things -- but they had the criteria, that the color picture must be sufficiently bright so as to permit an adequate contrast range at home and so that under normal home conditions you can look at them.

Then it said it must operate through a receiver which would not cost too much, so that the normal American citizen could buy it.

It said it would have to operate from a camera which would not cost too much and would not be so complex that the ordinary station owner could not afford to operate it because he did not have enough research men and engineers.

Then they went on to add another criterion, number F, that it must not be unduly susceptible to interference with the present monochrome system. I have to explain that to your

Honors.

Your Honors each have a black and white television set which receives signals.

It does something else which you do not realize. It emits signals. It emits weak signals. That is called oscillator radiation, and the Commission in pursuing the public interest, convenience and necessity has said that if we are going to adopt a color system, we want to adopt a color system which at least will not be too susceptible to this, because if it is, what good is it?

As I shall come later on, they found that the dot sequential system is very susceptible to this, and the field sequential system is not.

Then it said as another criterion, a minimum criterion, that a good television system must be capable of transmitting color programs over intercity relay facilities. That means if we broadcast a Senate hearing here in Washington, we should be able to transmit it in color over the coaxial cable which runs between Washington and New York. That would seem to be a legitimate criterion.

All of these criteria we urge your Honors are reasonable. None of them is capricious. None of them is arbitrary. They were the criteria which were laid down by this Commission, charged with the job of doing that.

Justice Frankfurter. Is any one of these criteria

specifically challenged by the appellants?

Mr. Rosenman: They are not challenged directly. They are challenged in two ways, your Honor:

First, they say the Commission should have adopted additional criteria. They also say the Commission should have paid more attention to one of the criteria than they did.

Now after laying down these criteria, the Commission did the normal thing which any judge of the facts would do. They laid as against these criteria the two systems -- dot sequential system and field sequential system.

They also laid the line sequential system and found it so faulty -- and it is not a party here, so I will disregard it -- and their over-all conclusion was that in almost every important respect the field sequential system meets the criteria and that in almost every important respect the dot sequential system does not meet the criteria.

The findings and conclusions with respect to that are all set out in pages 8 to 23 of our brief, which obviously I do not have to take up seriatim, but your Honors will find them all there with the record references sustaining the findings.

Their conclusions, for example, as to the RCA system -- I call it that, it is the dot sequential system which they proposed -- their conclusions are set forth in the reports.

First of all, its color fidelity is not satisfactory.

That means if they are broadcasting a red sweater, it does not appear as a red sweater, it is not faithful to the color.

They further went and said there is no reasonable prospect of overcoming this difficulty. The reason they said there is no reasonable prospect of overcoming this difficulty -- and it is all in the findings -- is that, one, there is mis-registration. That means these three tubes do not hit.

Two, the principle of mixed highs as used is fundamental to the RCA system.

I must take a word to explain what that is. You see, we have four megacycles of the six in which to broadcast video and two megacycles to broadcast sound. So what you get on your television is four megacycles of sight and two megacycles of sound, and a little bit to take care of the next channel.

What the RCA system does, because they insist on keeping the 525, they insist on that, so what they have to do in order to crowd everything into this four megacycles, they have adopted something called the mixed highs, which means that their contention is that the human eye does not see the fine detail of color, it only sees the coarse detail of color; therefore, they do not send four megacycles of color out, they only send two megacycles of color, and then they send two megacycles of gray, mixed highs, mixed black and mixed white, and that is gray, and that goes out in two

megacycles and two megacycles of color, and these combine and produce what they call a color and what the Commission said is not a faithful color.

Then the Commission found that no reasonable prospect of overcoming color infidelity existed because of cross-talk. Cross-talk, I must explain, is the diffusion of a red dot over into a blue dot or a green dot into a red dot, something which the Commission found happens in the dot sequential system.

Above all, they said they do not think this difficulty will ever be overcome in a normal home receiver because of this terrific switching rate of 11,000,000 times per second.

Justice Black: Haven't more impossible things than that happened?

Mr. Rosenman: The Commission, sir, charged with determining whether they would be willing now to authorize anyone to transmit a dot sequential system, it seems to me, sir, had to decide whether or not this would be hurtful to the public to permit --

Justice Black: You are talking about now. But if the order goes far enough to do something which precludes it so that we will never do it, it gives me pause.

Mr. Rosenman: The second order, sir, does not do that. The second order says very distinctly it is not foreclosing all systems forever. It is foreclosing the dot sequential

system as of now, because of these difficulties that I refer to; but I think it was your Honor who called Judge Rifkind's attention to page 420, the statement in the second report, 420 of the record, where the Commission said that when such improvement does come along -- that means a system which works, another system which works -- the Commission can not refuse to consider it merely because the owners of existing receivers might be compelled to spend additional money to continue receiving programs.

In other words, the Commission, although it said that the RCA system would be hurtful to the public -- and, if your Honor please, I want to call your Honor's attention to that specific finding, because both Judge Rifkind and Mr. Cahill denied that there was such a finding -- if you will look at the record page 159, you will find a direct finding that to permit the dot sequential system to be broadcast -- in the first place, it says in paragraph 132 there on page 159:

"The RCA system also falls short of the criteria set forth above. In the first place, the color fidelity of the RCA picture is not satisfactory, and it would obviously not be in the public interest to adopt as standard a color system which does not produce a satisfactory color picture."

That is what they found happens in the dot sequential system.

The Chief Justice: Just below that they have these words:

"There appears to be no reasonable prospect that these difficulties of the RCA system can be overcome -- mis-registration, mixed highs, cross-talk between picture elements" --

and then your 1/11,000,000th.

Justice Frankfurter: Do you think such a statement is in the domain of expertise, not in the light of what I know about it, but I know enough of the history of science to know that science is the achievement of the impossible.

Mr. Rosenman: But certainly, your Honor, is it not enough to warrant the Commission in refusing to permit the dot sequential system to be broadcast as of now? I think what they --

Justice Frankfurter: If there is the establishment of harm in doing so, but not merely because today it is a still unrealized thing.

Mr. Rosenman: The establishment of harm, your Honor -- and I will come to that now -- the establishment of harm is that if I know, as a citizen of the United States, that the Federal Communications Commission of the United States has authorized the broadcasting of the dot sequential system, I certainly am entitled to rely upon that authorization to go out and buy me a color set which would receive RCA color.

Now the Commission has found that it would not be in the

public interest to permit that because as of now a very unsatisfactory picture is presented and not only is an unsatisfactory picture presented, but all of the other inadequacies of the RCA system would prevail.

For example -- well, one example, as yet there is no assurance, as the Commission found, that an RCA system can go over the coaxial cable. That would be a hurt to the public.

If the public bought a color set thinking that this will produce a color picture and it does not produce a color picture, that would be a hurt to the public.

If, as a matter of fact, it is found, as it was by the Commission, that this color system is susceptible to oscillator radiation, that it loses color as a result of it, it seems to me that it is against the public interest for the Commission to permit it.

Justice Frankfurter: You mean that the Commission's authorization is a kind of representation of desirability?

Mr. Rosenman: I do not think it has to go that far, sir, but if I know that the Federal Communications Commission has authorized an RCA color, and I read that an RCA color set is around for me to buy, I am led to buy it on the representation that what I am going to get is my money's worth.

Justice Frankfurter: It all depends on what representations are made by public agencies. It all depends on what overbalancing, if any, considerations there are in closing the

door to quick unexpected results of experimentation which may be balked because you have built up vested interests in denying the right to make those experiments.

Mr. Rosenman: I do not think, sir, that the door has been foreclosed.

Justice Frankfurter: Practically it happens.

Mr. Rosenman: In what way?

Justice Frankfurter: In creating financial interests of too great an importance to allow future permissions to do experimentation, to conduct new experiments.

Mr. Rosenman: It has said that if experimentation were to continue and if a satisfactory result were to be produced, that it would not hesitate to validate and authorize that satisfactory result merely because it would cause an additional expense.

Justice Frankfurter: I do not think men can legislate against the weight and momentum of existing interests. The industry would not be affected by it.

Mr. Rosenman: So far as the law is concerned, your Honor, with respect to multiple standards, we contend -- I might point out another difficulty with the RCA system, and it is very pertinent here in respect to your Honor's statement about the Kefauver Committee. Mr. Cahill talked about broadcasting the proceedings of the Kefauver Committee in color. The fact is that it just could not happen because the Commission has

held in its finding that they have no field camera which can do it, and by a field camera I mean a camera that can be taken from the studio into a hearing room of the United States Senate and installed there.

The RCA system never showed a field camera and the reason they did not show a field camera is because of the complexity of the field camera with these three tubes. They have never been able to develop a camera which they could take out into the field and subject to the rough handling which a camera gets there.

On the other hand, in the demonstrations CBS showed a football game by taking a camera -- or a baseball game -- by taking a camera to an athletic field and broadcasting it in color.

That is another reason why the public would be hurt if they were permitted, if representations were made that this RCA color system is something good enough for the American public and they bought RCA receivers; so far as this present record goes, they could not get a baseball game, they could not get the Kefauver Committee. All they could get in such form as the Commission found was an unfaithful picture, not good color fidelity, all of the dot structure and all of the defects; they could only get it from the studio, and that is another reason why I contend that the Commission was certainly within the ambit of its discretion and jurisdiction and statutory authority in saying that "We will permit the field sequential system and not the dot sequential system."

Justice Black: May I ask a question? Suppose the Commission had before it three systems, all of which could give color to some extent. There is a difference in their quality. Do you think the Commission has authority merely by reason of a difference in the quality of the color picture to select one and give it a monopoly over the others?

Mr. Rosenman: I will say, sir --

Justice Black: I will get away from the word "monopoly". I did not mean to say that.

Mr. Rosenman: I would say, sir, if it has --

Justice Black: The right to use it exclusively.

Mr. Rosenman: When you say the right to use it exclusively, you understand that the right is not given to CBS to use it exclusively.

Justice Black: I understand that, but does it have the power to select from different quality machines or machinery, equipment, and say this one only can be used?

Mr. Rosenman: That is exactly what it has done, Your Honor, in black and white. There is one set of standards that anybody can broadcast in in black and white. That is 525 lines, 60 fields, 30 frames.

Justice Black: Now here is what I meant. Suppose somebody found, suppose two or three other people found you can get black and white without following those standards and provide others about which there might be a dispute as to

whether they were equal in quality. Could they continue to keep them out of this field?

Mr. Rosenman: I think they could, Your Honor, under their statutory --

Justice Black: Maybe they could.

Mr. Rosenman: -- under their statutory authority of prescribing the nature of the service to be rendered by each class of licensed station, to regulate the kind of apparatus to be used with respect to its external effects. They have done this ever since the Commission was started and its predecessor in 1926. They have always consistently and without deviation adopted the rule that for any one service there should be set of standards; and the reason is that to do anything else would be chaotic.

Let us assume, sir, that both of these color systems were on the air. RCA, the dot sequential; CBS, the field sequential.

You go down to Woodward and Lothrop to buy a receiver, and they will say to you, Justice Black, "Do you want a receiver that will take RCA broadcasts or one that will take CBS broadcasts?"

I am sure you will be aghast at that because you are used to going in and getting a black and white receiver which will take them all, take CBS, take RCA, take DuMont, which will take eight or nine of these different stations.

Now for the first time they are urging that this Commission deviate from this long consistent historical practice of providing for one set of standards for one service, as they do in radio, as they do in AM radio, as they do in FM radio, as they do in black and white television.

They are asking the Commission for the first time to deviate from that long practice of making sure that if anybody goes into a store to buy a radio, they will get every radio station, or goes in to buy a black and white television, they will get black and white television from any station.

Now they say if you go in to buy a color television, for the first time since 1926, you are going to have to go in and make up your mind whether you want to get a CBS color television or an RCA color television receiver.

Now the Condon Committee discussed this. This is the group of scientists that Mr. Cahill was talking about. They made it very clear -- they studied what happened in other countries -- they made it very clear. This is what they said:

"Any authorization of color television transmission on a multiple standard basis is a guarantee of confusion that may well impose a much greater delay in the development of the color television service."

I should add that everybody who testified before the Commission testified in favor of a single standard rather than multiple standards.

It never was before the Commission below. The only possible exception was the Chairman of the Board of the RCA, and he said something which I thought at first he intended to mean as facetiousness but which is now brought into this record in the Supreme Court.

He said, "I believe in single standards. That is the best way to promote research because you will get a healthy industry."

But then he said:

"If you are going to adopt CBS, the field sequential system, then I believe in multiple standards; you should also adopt RCA."

But the record is very clear -- and we have it in our briefs here -- he said:

"If you are going to adopt RCA, then for heaven's sake, don't adopt another system because then you will have multiple standards with all of the confusion which that results in."

Justice Reed: I was interested in that phase of the argument before. Did the Commission take up and consider the question of multiple standards?

Mr. Rosenman: They took it up to this extent, your Honor: They said -- they certainly said that it would be against public interest to adopt, permit the RCA standards to be transmitted.

Justice Reed: Well, I understand that, but that is because, as I understand it, they did not think the RCA could then furnish adequate broadcasting for the public use.

Mr. Rosenman: That is right.

Justice Reed: But now my inquiry is different. Did the Commission consider whether or not it would be in the public interest to have multiple standards of color broadcasting?

Mr. Rosenman: They did not, your Honor, and may I suggest at least three reasons why they did not.

The first one is that no one never proposed it. The testimony was unanimously against it, except this strange testimony I have just referred to.

In the second place, when proposed findings and conclusions were submitted to the Commission at the end of the hearings, no one suggested multiple standards. Our proposed findings were that CBS be adopted as the only system that worked. The RCA findings were that the RCA system be adopted.

No one suggested that they both be adopted, and how could

we expect this Commission which, in the first place, said that the RCA would not, could not, in the public interest be authorized -- how could we expect the Commission to make a specific finding discussing multiple standards when no one suggested it, either at the hearing or in the findings which followed it, when no one testified for it, where there was practically, with this one exception, universal testimony against it?

Justice Reed: I understand your argument now to be that should the RCA develop a broadcasting dot system that would be usable, then the Commission would have authority to immediately issue multiple standards.

Mr. Rosenman: I would not go that far, sir.. I say, first, the question does not arise.

Justice Reed: At least they would have authority to.

Mr. Rosenman: If they would -- and I am not prepared to say they would not have authority -- they would be doing something for the first time in their 25 years of existence, of having a situation where on one service -- on one service -- there were more than one standard of transmission.

Justice Reed: Why do you say one service?

Mr. Rosenman: Well, because color television is the one service.

Justice Reed: That is one service to itself?

Mr. Rosenman: Yes, sir.

Justice Reed: Even though you might have 525 on one and 405 on the other?

Mr. Rosenman: Well, there would still be color. You see the color picture you would be interested in, and if you want to get color it would lead to the confusion and chaos that is mentioned by the Condon Committee, if you had to make up your mind which station you are going to listen to, to get a color picture, if you had to make up your mind whether you would listen to Station 1, 2, or 3, and if you know they are broadcasting the line sequential system, you will get one receiver, and if you know they are broadcasting the dot sequential system, you will get another receiver, because there was no testimony that it was possible to get a universal receiver which would take both RCA and CBS.

Justice Reed: I have to make up my mind every night whether I tune in one commentator or another.

Mr. Rosenman: Yes, sir, but you have the power to turn on any one you want just by changing the knob, but if you had multiple standards for color and you wanted to get somebody that was broadcasting on CBS color, you would use this machine, but if you wanted to get someone who was broadcasting on RCA color, you would have to go over and use another machine. The same machine would not get both colors. It could not, because they transmit on different standards.

I might add one other thing to explain why there was no finding below, there was no discussion before the Commission with respect to multiple standards, which was, as I am informed by my associate counsel, that in the CBS proposal www.LoneDissent.org

conclusions which were submitted to the Commission, CBS explicitly recommended against multiple standards.

It had in its proposed findings and conclusions a definite recommendation against multiple standards.

When RCA replied to those proposed conclusions, they took no exception to that, which would seem to indicate that they agreed with that below.

It was only after the second report, when they realized that the field sequential system had been adopted and it was only when we got into the District Court in Chicago that for the first time, much to everybody's surprise, RCA advanced for the first time the argument that two systems should be allowed to broadcast on the same service.

If you allow two, you would necessarily allow three and four, so that there would be an unlimited number of people broadcasting in color; so that you would have to make up your mind, and unfortunately it would not be you, sir, who would make up your mind. It would be the set manufacturer, because the set manufacturer would decide whether he would make sets to take CBS color or RCA color or ABC color or DEF color, or any number of systems, and it certainly cannot be reasonably suggested that this Commission must, as soon as a satisfactory color system is presented -- must, of necessity, allow everybody to broadcast in a different color system, different color standard, so that nobody who had a color receiver can get them all, but must pick and choose as to which he is

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Justice Frankfurter: Judge Rosenman, since it sometimes happens that the odd man determines the decision here, I should like to tell you what troubles me about this case because we are going over until tomorrow.

I think it is fair to say that nobody on this Court believes more deeply than I do or has tried to be more consistent in deferring to the discretionary judgment of administrative agencies than I have -- I think in this very industry I did that to such an extent that there were even grievances in the industry about my deference to the Communications Commission, which you are now seeking to support -- but I think it is very important to determine in a field like this what the field of expertise is.

Let me be very specific: Judge Major refers to the Condon Committee report, which I have not read but shall read in view of the authority, in view of the membership of the Commission.

Now, Judge Major says that in that report filed on July 10, about two months after the Commission's proceedings closed, that report already controverted some of the findings of the Commission and placed a different estimate upon the materials that were before the Commission; and I assume, for all I know, may have had some new data.

Before this order was issued suggestions were made to the Commission for further consideration of data.

What I should like to have you deal with at some time before you conclude your argument, or the Solicitor General in the division of time, is just what my responsibility -- and I speak of myself because that is the only vote that I finally have to cast -- what my responsibility is in a field that necessarily is as revolutionary, as uncharted, as sudden, as shifting so quickly, in such an unexpected, almost quantum theory way as this field; and I do not think for myself I can foreclose it by saying these seven members of the Commission know better than I do.

What I want to know is what do they know better than I do. What are they charged with that that leaves their word to be the final word?

I would like to add one more thing: This raises very profound questions, namely, to what extent scientific development, technological development, of this extraordinary character can be foreclosed from judicial review by the say-so of people who, after all, are not themselves experts in this particular field, although they have been entrusted with primary responsibility, and as to which there is no expertise.

As Justice Black suggested, who would have made some of the forecasts of the things that have happened in the last 10 years compared to the progress made a year before, six months before, sometimes three months before the happening?

Mr. Rosenman. Should I start answering that now?

Justice Frankfurter. Suit yourself. I just want it before you. Those are very serious questions.

Justice Douglas. There is one question I have, and since the time is getting to the close, you may answer my question tomorrow. That is the scope of review.

This case was decided by the court below before the Universal Camera case was decided here --

Mr. Rosenman. Yes, sir.

Justice Douglas. -- and Judge Major's opinion -- it struck me he is looking for a little bit of evidence rather than for substantial evidence in the sense in which Universal Camera uses it; whether or not the Administrative Procedure Act is applicable to a three-judge court, whether or not we should do it if he did not do it, whether or not we should send it back for him to do it in case he did not do it.

Those are some of the things that bother me.

Mr. Rosenman. All right. That is covered in our brief. I will be very glad to take it up tomorrow. Shall we do that tomorrow?

The Chief Justice. Yes.

(Whereupon, at 4:30 o'clock p.m., the Court recessed; to reconvene at 12:00 o'clock noon, Tuesday, March 27, 1951.)

IN THE SUPREME COURT OF THE UNITED STATES

October Term, 1950

RADIO CORPORATION OF AMERICA, :
 NATIONAL BROADCASTING COMPANY, INC., :
 RCA-VICTOR DISTRIBUTING CORPORATION, :
 et al., :
 Appellants, :
 v. :
 UNITED STATES OF AMERICA, :
 FEDERAL COMMUNICATIONS COMMISSION, and :
 COLUMBIA BROADCASTING SYSTEM, INC., :
 Appellees :

No. 565

Washington, D. C.

Tuesday, March 27, 1951

The above-entitled cause came on for further oral argument at 12:02 p.m.

PRESENT:

The Chief Justice, Honorable Fred M. Vinson, and Associate Justices Black, Reed, Frankfurter, Douglas, Jackson, Burton, Clark, and Minton.

APPEARANCES:

(The same as heretofore noted.)

P R O C E E D I N G S

The Chief Justice: No. 565, Radio Corporation of America, National Broadcasting Company, and others, versus the United States of America and the Federal Communications Commission.

The Clerk: Counsel are present.

The Chief Justice: Judge Rosenman, yesterday there was a motion filed for an extension of the stay that had been granted by the District Court, and a stay pending the issuance of the mandate of this Court may be entered.

ARGUMENT ON BEHALF OF APPELLEE COLUMBIA BROADCASTING SYSTEM

By Mr. Rosenman -- Resumed

Mr. Rosenman: May I, Mr. Chief Justice, before proceeding to answer the two questions, take a second to correct a misstatement in my remarks of yesterday, which has been called to my attention.

I stated that after the Commission had laid down these criteria, they laid the two systems alongside those criteria, and my misstatement was with respect to the RCA system -- they found that with respect to the CBS system, they found in almost every important respect it complied with the criteria. That was not only a misstatement, it was an understatement.

What they found was that in every respect the CBS system, the line sequential system, met with these criteria.

Turning to the question that Mr. Justice Frankfurter directed to me at the close of the session yesterday, as I

understand the question it involves the relationship between a Justice of this Court and an administrative agency, where the administrative agency has made a flat statement or has taken action on the assumption that in a rapidly changing scientific milieu that a compatible system, or that a certain thing can never happen, and I should say, sir, in direct answer to that, that if, as a matter of fact, that is what the agency has held, that in a scientific development something will never happen, or if the agency took action on such an assumption, I should say that in such a situation, a Justice of this Court might find, under such circumstances, that that has been an abuse of discretion; that that has been arbitrary and capricious.

I should point out, however, that in this situation none of those things has happened. There was no such finding; there was no assumption as the basis of any action, and there was no necessity of any such finding under any circumstances.

What the Commission did here was not to state that a compatible system would never happen and could never work; they had before them two compatible systems, the dot sequential system of RCA, and the line sequential system of CTI.

They examined those systems; they saw them demonstrated; they heard testimony about them, and they made a judgment as to whether such systems were satisfactory or were not satisfactory, and they also made a judgment that if they were not satisfactory, as they so found, they made a judgment as to whether

there was any assurance of their becoming satisfactory within any reasonable foreseeable time.

Take, for example, the all important question of color fidelity, the question as to whether when the United States flag is telecast the image which you see on your receiver bears an accurate resemblance to the flag.

What they said after examining all the difficulties surrounding the transmission of faithful color by the dot sequential system, what they said was not that a compatible system could never have color fidelity, but they spoke very explicitly and with nicety, at page 159 of the record, they said, after analyzing the difficulties:

"There appears to be no reasonable prospect that these difficulties in the RCA system can be overcome because of misregistration, mixed highs, cross talk, criticalness of color control, implicit in a system where a time error of 1/11,000,000 of a second results in color contamination."

Now, they did the same thing with the other important performance characteristics; so that I urge, sir, that this is not a case where an administrative agency has made a flat prediction for the future based upon unknowns of the present.

In my opinion, what it did was to make an examination and analysis of known principles, and things which they saw with their own eyes in order to determine what the reasonable

prospects of that system were in the future. And that, I urge, is the typical kind of judgment which many administrative agencies make every day in passing upon facts presented to them to determine what reasonably is going to happen in the future; and as to those findings we urge that this Court should give the administrative agency and its conclusions particular weight.

I might, perhaps, in a homely analogy try to draw the difference between what the question of Mr. Justice Frankfurter and the doubts of Mr. Justice Black, expressed yesterday, were, and what, in my view, the Commission has done.

I would say, sirs, that all of you are equally expert with any sport critic in the world as to who is going to win the pennant in 1970 or 1980, but I think that with respect to who is going to win the pennant in 1951, sports writers and sports critics who go to every game and who watch the performance before them of the different teams, and who look at the past performances of those teams, are in a better position to predict the reasonable prospect of who is going to win the pennant or at least a reasonable prospect of who is not going to win the pennant in 1951.

The Chief Justice: Of course, you may be on weak ground in that analogy.

(Laughter)

Mr. Rosenman: Knowing Your Honor's past experience with baseball, and present experience with baseball, I should say,

sir, that even if Your Honor considered yourself as equally adept in prognosticating pennant winners or pennant losers in 1951, that the traditional relationship between the agency and this Court would lead Your Honor, perhaps, to defer to the judgment of the critic just as I think Your Honor should not defer to the judgment of the administrative agency, but to say that that is the peculiar function of the agency, and that Your Honor will not seek to interfere with the conclusion which the agency has reached.

The Chief Justice: Which critics? I am just fearful that if we get into that field, with the different viewpoints that would be expressed by the critics, that we might be even more confused.

Mr. Rosenman: Well, in this situation before the Commission there was testimony on both sides. The Commission looked at the testimony -- the Commission itself, the Commissioners themselves -- being not expert technicians themselves, and relied upon one set of critics rather than upon another set of critics; and in answer to Justice Frankfurter and to Mr. Justice Black, we think -- I think -- that in such a situation this Court has no responsibility to overturn the judgment of the Commission based upon that conflict of the evidence, but should allow such a determination to stand.

Justice Jackson: Your position is that we do not need to understand the case in order to decide it.

Mr. Rosenman: Not exactly, sir; any more than, I am sure, you understand the baseball game when you go to it.

Justice Jackson: I am hoping that could be established.

(Laughter)

Mr. Rosenman: I think that in a technical demonstration and a technical case such as this, that as long as the Commission has not said that never, never will a compatible system work, that the policy announced by the Commission and the judgment meet the traditional orthodox test of administrative agency finding, to which I urge this Court should give the usual normal respect.

Justice Frankfurter: I suggest this may be a situation where one of Justice Holmes' favorite observations applies when he said, "I don't know the facts; I merely understand their significance."

Mr. Rosenman: I was thinking of another statement of Justice Holmes, with which Your Honor has had some relationship, that in a technical thing like this, the Commission, or the administrative agency, should have its experts on tap rather than on top; and we think, sir, that in this case the administrative agency did have its experts on tap, and came to a conclusion which, on the evidence, this Court should not find arbitrary or capricious.

A part of Justice Frankfurter's question involved the Condon report, and may I state very briefly something about

that Condon report, because I think it is necessary to a complete answer to your question.

I think your question, sir, inferred and indicated that the report itself cast some doubt on the conclusions reached by the Commission because of some of the new developments which appeared in it after the hearing record had been closed.

That, sir, is not the fact. The fact is that the Condon Committee, which was appointed by Senator Johnson before these hearings started, and indeed before the Commission announced that it was going to have these hearings by formal notice, was appointed by Senator Johnson for the purpose of making an evaluation of the three systems, and reporting to Senator Johnson something about them, because at that time the Commission had refused to authorize any color standards.

It turned down the CBS application in 1947, and although there had been agitation for color in the three years or two and a half years following that, the Commission had done nothing about it; and Senator Johnson, in whose jurisdiction these matters are, so far as the legislative process is concerned, was anxious to find out what he could about color television because he thought that color television ought to be given to the American public.

So, he appointed -- he asked Mr. Condon to organize a committee of experts in order to evaluate these systems. And when Your Honors come to read the Condon report you will see

that by its very terms it states that that is its limited function; that it has no function to make any recommendations as to which system should be adopted, and that it has no function to give any weight to various social and economic problems, such as what the cost of the different receivers would be, how long it would take to develop a receiver which could take color, how long it would take to develop a transmitting system.

They specifically, by their own terms, precluded any consideration by them of those factors; and third, and most important, they stated in specific language, which is called to your attention in our brief, that in their consideration of these three systems they were only going by the demonstrations which they saw, and also by the arguments, by the theories made by the proponents of each system.

In other words, as they evaluate each system they say, "These conclusions are based upon the demonstration of this system and also by what its proponents tell us."

In no event did they examine the critical analysis of each system made by the proponents of other systems, so that so far as the Condon report is concerned, it does not have any analysis of these claims, but solely what the proponents of each particular system submitted with respect to its own system.

To meet your question, sir, about the fact that it presented developments which were shown or which were created after the close of the hearing, it specifically stated that it

considered only thing which had been developed up to May 1; so that so far as the Condon Committee was concerned, its record was closed at the time that the Commission's record was closed, with one minor exception, one demonstration of the Hazeltine system.

Justice Frankfurter: Did the petitioner make offer of further proof before the order was issued?

Mr. Rosenman: It did not, sir.

What it did was, on October 4, after it had become apparent to anyone with knowledge in the industry that the line sequential system was going to be approved -- I am sorry, that the field sequential system was going to be approved because bracket standards, which has not yet been explained fully to Your Honors -- I have not had the time -- but because bracket standards could not be adopted by the industry, in response to the invitation of the Commission, when it had become clear that bracket standards could not be adopted, so that, in fact, the field sequential system was going to be adopted, as the Commission in its first report said it would be, if bracket standards could not be adopted, then and then only, for the first time, on October 4, the appellants here, RCA, submitted a petition that was six days before the final conclusion, the second order -- presented a petition to the Commission, which I ask Your Honor to look at, a petition consisting of two pages, in the record, and it is on page 408 of the record; that

petition did not in its terms ask that the record be immediately reopened. It did not say:

"We have something to show you, Mr. Commission, which we would like you to get today."

If you will look at page 408 of the record you will see that what RCA is asking the Commission to do are two things -- this is October 4 -- it is asking them to wait two months, two more months, to wit, on December 5, and look at some improvements "which we claim we have made," and then it goes further in B, and it says, "After you have done that, then we ask you to wait six more months to June 30, 1951, and during those six months, we ask you to look at some more demonstrations of these three systems," and then, quite obviously, after those demonstrations were concluded, there is implicit in here some statement -- there is explicit in here something to the effect that hearings would have to be had even after June 30, 1951, in order to have testimony about these demonstrations.

So what the Commission was being petitioned here was not, "We want to show you something right now of what we have done, to show you how wrong you were," but it is asking to wait for another eight months, and they asked them to wait for another eight months, so that -- if you will look at the last paragraph, by June 30, "We will show that the laboratory apparatus which RCA has heretofore demonstrated has been brought to fruition in a commercial, fully compatible and all-electronic," and so forth.

In other words, what they said was, "If you will do all these things, then we promise you that by June 30 we will have a workable system."

Now, the fact is, as the record shows and as our brief points out, they had made this same promise back in 1949 when these hearings started. They said that, "We have now a system which will work," and after 1949 had gone by, and 1950, and just on the evidence of decision, they come to the Commission and say, "If you will give us eight months more, we promise that on June 30, 1951, we will have what we promised you in 1949 we already have."

Justice Frankfurter: What is the reference to that month's period between December 5, and January 5 referred to by the majority on page 409?

Mr. Rosenman: Page what?

Justice Frankfurter: Page 409. They suggested a month from December 5 to January 5, that period referred to by the majority. What is that? Get the record, please.

Mr. Rosenman: That period was the suggestion which was made by the Commission in its first report that if bracket standards are adopted so that the problem of compatibility will be contained -- in other words, if we can be assured now that bracket standards will be adopted so that every new set that goes out -- and there were 900,000 going out every month -- if we can be assured that as these 900,000 go out every month they do not

increase the incompatibility problem, if a gadget can be put in there so that we will know that when CBS' system, the field sequential system, is finally adopted that those receivers will receive black and white, if you can assure us of that, then we are willing to look at certain improvements between December 5 and January 5. That is what they said.

Justice Frankfurter: Well, in the opening petition, if that is what it is, on page 408, RCA petitions the Commission, A, "During the period December 5, 1950, to January 5, 1951, to review the improvements made in the performance of the RCA system."

Now, I follow you when you say they made a previous proffer that there had been improvements, but there certainly is a specific statement that they are ready to show the Commission the improvements made just for one month, is that not right?

Mr. Rosenman: That is right, yes.

Remember that December 5 is two months from the date of this petition. There are 900,000 receivers going out every month, which means that if the Commission waited to December 5, the incompatibility problem would have been increased by 1,800,000 receivers.

The Commission had to determine in its own discretion, is it going to wait for two months and then for six months more, and then for whatever is required in the hearings, while the 900,000 are going out every month? Was it reasonable for the

Commission to say:

"We will not wait for that unless we can do something to hold on to this bird in the hand that we have. We have a bird in hand now, a system which works, which produces a satisfactory picture. Are we going to let that bird go by the very weight of the receivers," which was the very language of the Commission -- "the very weight of the number of the receivers which get out into the public each month, 900,000? We will let the bird in the hand go," said the Commission, "if we look for the two birds in the bush, and unless we can find some way of holding on to that bird" -- and that one way was by bracket standards, which would have contained the incompatibility problem -- "unless we can do that, we will not wait any longer, because" -- and it enumerates its reasons in its denial of the motion, which is on page 410 of the record.

It goes into the fact that there has been ample opportunity to be heard, and that new improvements are occurring every week, and they find that the question of approving a color television system which will best serve the interests of the American people is one which has been before the Commission for almost ten years. There must come sometime when the administrative process comes to an end, and the Commission determine, in view of the history of this, and in view -- as we point out in our brief -- of many

broken promises by RCA, promises about a field camera, promises about a converter, promises about field testing its system -- all of which promises were broken -- and they are detailed, all detailed, in our brief -- so we urge that the Commission was absolutely right, not only did it not violate or abuse its discretion, but we think a contrary view might even have been an abuse of discretion, because of this long history of broken promises.

It said, "We will bring an end to these proceedings, and we will enter our order."

Justice Reed: What if they had presented some evidence or statement as to some new discovery, would the Commission have been justified in closing it anyway because it came too late, this discovery?

Mr. Rosenman: You mean if on December 5 they could have --

Justice Reed: Yes -- or no, whenever they filed this petition.

Justice Frankfurter: October 4.

Justice Reed: October 4.

Mr. Rosenman: If they had presented a new improvement which had shown --

Justice Reed: Which they said showed --

Mr. Rosenman: (Continuing) -- and the Commission had found after it was seen --

Justice Reed: No. As I understand it, the Commission had

before it this petition, and immediately closed the matter and said, "We will not listen any more."

Mr. Rosenman: I think, sir, the Commission was justified in that, in view of the circumstances --

Justice Reed: Yes.

Mr. Rosenman: (Continuing) -- in view of the circumstances of what had transpired before this petition, namely, a long series of similar representations by RCA which never materialized the fact that the industry had made it clear that the incompatibility problem could not be contained, and the fact that they now had a satisfactory system which, if they continued to take chances on whether a compatible system would work, that the incompatible system itself would have been impossible of adoption because, as they say, the time sometimes comes when eventually there are so many receivers out in the hands of the public that it is impossible to do anything about it.

Justice Reed: Yes, sir. But that was not quite what I wanted your comments on.

What if the RCA had proposed and had stated that they had made a significant discovery since the Commission closed, or significant progress. Would the Commission have been justified in closing the hearing and entering their order?

Mr. Rosenman: Perhaps not, if anything like that had been submitted to the Commission. There was no such thing.

Justice Reed: Well, now, in considering the motion or

petition, we also have to consider the report which they made, the progress report, do we not?

Mr. Rosenman: Yes, sir; and, as we point out in great detail in our brief as to both of those, the progress report and this petition, nothing is shown of any specific nature to the Commission to indicate that any of these inherent defects in the RCA system to which I have just referred, the cross talk and the 1/1,000,000 of a second, nothing to indicate that those fundamental difficulties had been met and overcome.

The Commission had held that those were fundamental defects in the system; and if Your Honor will look at the progress report and look at this petition, you will find nothing there of a nature representing that, "We have been able to overcome these inherent defects which you have found with respect to our system."

I think that the Commission was justified in refusing to open up this long hearing on some general claim of improvement because, as a matter of fact, as I pointed out yesterday, and read, the Commission did say that they would still hold the door open to anything which was shown to them as a real improvement, so that if the RCA were to say now, "We have met -- we have something to show you now which shows that we have overcome these critical defects," the Commission specifically said that "We will hold the door open to seeing that."

May I answer what --

Justice Frankfurter: That is, after making the order, laying down this order, after the order was out, with all the situation that that would thereby create.

Mr. Rosenman: When the order came out they said, "We will hold the door open."

If RCA then could say to the Commission, "We have something to show you to the effect that all of these defects which you have held are inherent in the system, have been obviated," if they had even said anything like that, we have a different problem.

Justice Black: Judge Rosenman, may I ask you, just in line with what you are saying, suppose on June 30, this year, this order had been approved, assume that it had been approved, and the Radio Corporation goes down there and shows the Commission reasonable grounds for believing that they had developed these things that they alleged they hoped to do by June 30. In your judgment, what effect would the order have? Would it bar them from having an opportunity to present those facts, and assuming that they had made the invention, would the public be denied the benefit of it?

Mr. Rosenman: I would say that the order does not have the effect of barring them, and I would say as to whether the public should be denied the use of two good systems -- which is not the situation here -- is a question which the Commission will have to determine for itself when that question arises.

They have not yet been faced with that issue of whether they have two different systems, both good, to which the American people are entitled.

Up to now they believe that they have only one system and, therefore, the question of policy has not yet been presented to them.

I do not want to seek to evade a determination of that question of policy. I think if RCA can show that a dot sequential system can overcome the inherent defects, then the Commission will be faced squarely with determining whether they want to have two different systems of color television being submitted to the public.

Might I say, in answer to Your Honor's question of yesterday, that that is not an illusory thing, and there are two specific instances within the last three years which show that that is not an illusory thing.

In the first place, the Commission has already taken a step which hurts 12 million receivers, as the appellants have pointed out, so that if the question were presented to them again as to whether they should take on another system rather than the field sequential system, what they are doing today is precedent of what they would have the courage to do in the future, namely, to do something which they think is for the benefit of the American people, in spite of the fact that it does something to 12 million receivers.

Justice Black: You are assuming something that I have not yet understood. You are assuming that if the Radio Corporation should do that which it says it hopes to do, that it would thereby necessarily displace their system, the other system, and the people would have to choose between the two as to reception.

Mr. Rosenman: That is absolutely correct; that is what would have to happen.

Justice Black: But suppose a man bought their equipment of the kind they say they hope to have. Could it not be used in receiving that which would be on with the Columbia system?

Mr. Rosenman: No, sir; it could not be used.

Justice Clark: Suppose their tri-color tube was adapted to the field sequential system; it could then be used, could it not?

Mr. Rosenman: It could still not be used, Your Honor, and I would like to take a minute to clear that up.

Justice Clark: I mean, the signals, though, would be available, would they not, the CBS signals?

Mr. Rosenman: All that the tube would do, so far as the CBS system is concerned, is to replace the disc which is now being used in the CBS system.

Justice Clark: Replace this windmill.

Mr. Rosenman: Yes, sir; that is all that the tube would do so far as the CBS system is concerned. But if, as Justice

Black said, the Commission were to adopt two standards, the field sequential and the dot sequential, and the tube worked and could be produced at a reasonable cost, you would have a tube in an RCA receiver, and you would have a tube in a CBS receiver, but if the field sequential system were being broadcast, as the Commission ordered, only those receivers which are equipped to receive the field sequential system would get any color signal.

The RCA system with its tube, the RCA receiver with its tube, would get an RCA color signal, but not a CBS color signal.

Justice Clark: My question was, of course, their present system is the dot sequential, as I understand it?

Mr. Rosenman: Yes, sir.

Justice Clark: Now, assume there is here an ever-changing industry; every minute, why, something is developed. Suppose their engineers were to develop a tri-color tube that was adaptable to the field sequential, not the dot sequential, the dot sequential system; would not then the CBS broadcast be obtainable over that tube?

Mr. Rosenman: No, sir.

Justice Clark: It would not.

Mr. Rosenman: No, sir. The tube, sir, has nothing to do with the system. The tube is a piece of apparatus on which the system would work, and the tube in the CBS system would be substituted for the disc.

The tube in the RCA system would be substituted for their old 3-tube receiver, but whether the tube is to be used in dot sequential or field sequential is immaterial, because the same tube can be used in either system. It is only a piece of apparatus which has nothing to do with the system.

The system is one which CBS does by fields, 144 times a second; RCA does it by dots, 11 million times a second.

Now those two systems can no more mix than oil and water. The tube, sir, is a piece of apparatus which it was unanimously testified to would fit either system, so that as soon as that tube is developed and works well, which has not yet happened, and can be produced so that the ordinary American can buy it, that tube can be put into the CBS apparatus. It is only a piece of apparatus, and it will receive the CBS system by fields, 144 times a second, and that will do away forever with the picture size limitation about which so much has been made.

Justice Clark: It will not receive the RCA --

Mr. Rosenman: It what?

Justice Clark: It will not receive the RCA signal.

Mr. Rosenman: It will not receive the RCA signal unless the RCA signal can be broadcast by the Commission, and unless it is in a piece of apparatus which is attuned to receive the RCA system, and not attuned to receive the CBS system.

Justice Jackson: Judge Rosenman, what is bothering me about this is what it is that this Court is going to decide. Is

it the contention here that we have to decide which of these two systems is technically superior? Surely, the Court, composed as this one is, in this kind of a hearing, is not expected to decide that, is it?

Mr. Rosenman: We urge, sir, that you are not expected to decide that.

Justice Jackson: Then, are we to decide which is the best investment for the American public without knowing which is the best technically?

Mr. Rosenman: No, sir. We urge you not to decide that.

Justice Jackson: We could not do that.

Then, how much is there left for us to decide here? I appreciate that the lawyers have addressed us as though we were intelligent about this thing, which most of our questions show we are not (laughter), and you have tried your best to make us understand the technical merits of these things. But obviously if we were going to decide that we ought to take weeks and have hearings with the experts, and go into it as a court would, a court of first instance.

First, I think it was in Justice Douglas' question, what is the scope of our review; what are we to talk about when we get into conference on this thing? What are we supposed to know? You -- both sides -- have assumed that we are to know all about it; it is flattering, but highly unrealistic, a highly unrealistic assumption, so far as I am concerned.

Mr. Rosenman: So far as I am concerned, sir, my answer is that this case should never have gotten into any court because the scope of review is so limited, we think, and whatever it is, it has been adequately done by the court below, so that we think that there is nothing --

Justice Jackson: That is a question of law which I thought was what was going to be argued here, the scope of review, and that question -- I do not see how on earth we are going to qualify ourselves to pass on these technical questions -- well, I would just speak for myself on that; I cannot.

Mr. Rosenman: And we urge that there is no necessity --

Justice Jackson: We could not even set one up if we bought a television set; we would not know how to set it up, let alone understand what it was doing.

Justice Frankfurter: Judge Rosenman, I do not suppose there is anybody in this room who knows less about radio sets and television than I do.

Justice Jackson: I dissent.

(Laughter)

Justice Frankfurter: Brother Jackson does not know the depth of my ignorance; but I think there are questions in here that, I venture to say, I do understand, and one of them I should like to revert to. It was raised by Justice Black's question to you, and your candid answer, your candid answer, I think, shows the reach of the problem involved.

I may have misapprehended your answer, but as I got it it was -- naturally enough you are not ready to say so, but you were ready to say that, of course, Justice Black's question calls for either candor or evasion -- you were ready to say that it may in the future be a matter for policy determination by the Commission, even if a new viable, available system were proposed, that it was to the public interest not to allow it, because of the damage done to existing sets, is that a correct appreciation of what you said?

Mr. Rosenman: I said it would have to determine that; yes, sir.

Justice Frankfurter: That would be a matter of policy?

Mr. Rosenman: Yes, sir.

Justice Frankfurter: Therefore, the reach of this question is -- of this case is -- that by this order a situation is created whereby the American commercial competitive system of broadcasting would be -- would assume a monopoly position like unto the British, but without any of the safeguards and without any of the motives limiting the British system, and that is why from my point of view, whether or not this was a too hurried decision, whether procedurally we could say that in balancing the interests no harm would on the balance have occurred if the Commission would have done what Commissioner Hennock suggested, seems to me a relevant judicial question.

Mr. Rosenman: May I direct myself to this question of monopoly, sir, that this is not a monopoly.

Justice Frankfurter: I am not saying it is now, but the Commission may make it so by determining when the issue is faced that to allow another system would involve such jettisoning, such displacing of existing sets, that they would think it is an undesirable thing to do.

Mr. Rosenman: Would not the proper thing be for that to happen before a decision is made as to whether there is an abuse of discretion in permitting a second set of standards?

Justice Frankfurter: But the time to wait for that -- you have already created a situation which prevents, from my point of view may prevent, a balanced judgment on it.

Mr. Rosenman: But if you do the alternative, sir, if you do not adopt this system, you have no color system for the people.

Justice Frankfurter: And so what?

Mr. Rosenman: Well, I think with respect to that the decision of the administrative agency that color is an important thing which should be given to the American people is a determination which should not be disturbed by this Court.

Now, so far --

The Chief Justice: Without further questioning, Judge Rosenman, your time has expired.

Mr. Rosenman: I have not answered Justice Douglas's question.

The Chief Justice: Answer it, and take the time from the Solicitor General.

Mr. Rosenman: Well, I suppose the Solicitor General will answer it then. I don't want to take any time from the Solicitor General.

ARGUMENT ON BEHALF OF APPELLEES

UNITED STATES AND FEDERAL COMMUNICATIONS COMMISSION

By Mr. Perlman.

Mr. Perlman: May it please the Court, this case involves the authority of the Federal Communications Commission. You have heard from the attorneys representing the companies, but we are here representing the United States, and representing the Federal Communications Commission, and our viewpoint may be a little bit different from the viewpoint that so far has been urged upon the Court, because we are not interested in the particular views of any of the companies whose interests may be involved.

I want the Court in the beginning, I ask the Court, to consider the nature of the problem which confronted the Federal Communications Commission when these hearings began.

Justice Douglas. There is no divergence between you and CBS, is there? You have the same brief.

Mr. Perlman. Yes, sir.

Justice Douglas: You are not suggesting any disagreement with Judge Rosenman?

Mr. Perlman: No, sir; I am not suggesting any disagreement because we are here urging that the action of the Federal Communications Commission be affirmed, or rather that nothing that it has decided be reversed or upset by any action of this Court.

But the problem that faces the Commission is a little bit different than the --

Justice Jackson: Should we not really start with the problem that faces us, and then see how much of the Commission's problem really faces us? The thing that bothers me, Mr. Solicitor General, is just what our function here is, particularly in view of the fact that the court below, instead of making a decision of these things, said, "Well, there is no use of our fussing with this because these people in Washington are going to hear this thing anyway" -- whether they have had a review in the court below, and what review they were entitled to, and what we should do under the circumstances. The question of law concerning the scope of review on a question of this kind seems to be the critical thing here.

Mr. Perlman: Now, your Honor, the scope of review is the question that we have considered, and we think considered minutely, in the brief that has been filed here.

Justice Douglas: The reason I asked the question:

yesterday was because your brief does not address itself, as I read it, to the question of whether or not under the decision in the Universal Camera Corporation case in an administrative procedure case, the appellants got the review in the District Court to which they would be entitled.

Mr. Perlman: Well, we think --

Justice Douglas: You argue here in your brief that there is substantial evidence, but I do not see that you argue that they got the review below. Maybe they did, but I have difficulty with that point.

Mr. Perlman: Your Honor, we make two alternative arguments in our brief. We say that the Administrative Procedure Act does not apply to this kind of a proceeding, and we say that, therefore, the rule that the court was interested in in the Universal Camera case and in the Pittsburgh Steamship case, the rule that the court followed in those cases has no particular application here, and I am going to come to the reasons why that is.

But we also argue that if that rule should be applied to this case, then the record in this case complies in the sense that there is substantial evidence to support every finding made by the Federal Communications Commission.

We think that it is really immaterial whether you follow the Universal Camera case or whether you agree with us that the rule laid down in that case is not applicable here.

Justice Jackson: Well, was that decided by the court below?

Mr. Perlman: I beg pardon?

Justice Jackson: Was that decided by the court below?

Mr. Perlman: Well, the court below, if your Honor please --

Justice Jackson: If there is a review of that question it should initiate certainly in the court below, should it not, under the statutory scheme of review of these --

Mr. Perlman: Yes, sir.

Justice Jackson: And the court below got to a point where it threw up its hands and said, "What is the use of our fussing with this because it has got to go to Washington anyway, and it might as well go on its way fast, so we will not decide it, and send it down there."

Mr. Perlman: Your Honor, there is no place in the opinion where the court said that in the way your Honor is saying it.

Justice Jackson: It is pretty close to that.

Mr. Perlman: No. There is a sentence in there, or maybe two sentences, that indicated that they were appalled by the amount of work that they had to do, because they were faced with all the documents that have been filed in this case, and they were faced with a transcript, a stenographic transcript, of over 10,000 pages, containing the testimony of some 53 witnesses, and they were faced with 265, I believe the number

is, exhibits that were filed in that proceeding.

In addition to that, they were faced with all these affidavits which RCA filed in the lower court in an abortive attempt to get the lower court to ignore, if it could, the record that was before it, and to listen to additional statements which the Commission had never heard; and all that mass of material was dumped on the court below.

Justice Jackson: But the court below says:

"Also in studying the case we have been unable to free our minds of the question why we should devote the time and energy which the importance of the case merits, realizing as we must that the controversy can only be terminated in a decision of the Supreme Court. This is so because any decision is appealable as a matter of right, and we are informed in no uncertain terms that either aggrieved party will appeal. In other words, this is little more than a practice session where the parties prepare and test their ammunition for the big battle ahead. Moreover, we must give recognition to the limited scope," and so forth.

In another place it says that the sooner it is on the way, the better. Now, the question is whether that review is the kind of review contemplated by the statutory scheme, and whether we should undertake to review all those affidavits, if the court below thought it was something to be passed on.

Mr. Perlman: Well, if your Honor please, you have read that, and that, I think, is the only place in the opinion where this kind of a viewpoint is expressed. As a matter of fact, though, if you read that whole opinion --

Justice Jackson: Sometimes a court thinks that once is enough to say something. (Laughter)

Mr. Perlman. But if you read that whole opinion, you can not help but agree that the lower court did what it said it was going to do when this case first came before it. It said that this is an important case. It said, "We are going to take all the time necessary to make the best decision of which we are capable." That is what the court below said, and although it was faced with that problem, and it complained about it, it did what it said it was going to do, and its opinion shows it because it is a carefully worded opinion that showed that not only had it read all the papers in the case, but it said, "We have studied this case."

Your Honor read that phrase when you were reading the excerpt that you did. The lower court did study the case, it said so; and in the hearing -- and we have referred to it in our brief -- the lower court said, "We are going to take all the time that is necessary to make the best decision of which we are capable," and I submit to this Court that that statement by the court below is entitled to just as much weight, if not more weight, than the complaint that they threw

out that this was such a large case, and they had a lot of work to do; and that is all the significance, I think, that can be attached to what your Honor read.

Now, coming to the legal question involved as to the function of the lower court and the function of this Court, because the Administrative Procedure Act has been referred to, and I have said that the ruling that this Court has made in the Universal Camera case and the Pittsburgh Steamship case is not really applicable here, I say that for this reason: that this is a rule-making procedure; that there is no provision in the Federal Communications Act which requires even that a hearing should be held. There is no such provision in the Federal Communications Act; and when the Federal Communications Commission undertakes to adopt rules for the future conduct of the industry over which it has been given authority, it is not necessary even for it to have a hearing, and under the provisions of the Administrative Procedure Act, if your Honors will look at Section 10(e) of that Act, you will see that there is an exception, there is an exception, as to the rule of substantial evidence, that refers to the instances where a commission is proceeding without an express direction by statute to hold a hearing.

Justice Frankfurter: The danger of that line of argument, Mr. Solicitor, is that a commission, this Commission, could turn every order affecting a single person, and intended so to

affect a single person, into an abstract rule, into a regulation stated generally, although everybody knows that it fits only one person and is intended to fit only one person.

Mr. Perlman: Well, your Honor --

Justice Frankfurter: I am not suggesting any impropriety, but I am suggesting that that mode of approach leads to a result that if you are doing it that way, to reach a regulation stated generally, although you might well call it an order authorizing CBS to do thus and so.

Mr. Perlman: That, of course, is not applicable here because we did have a hearing. But it is true, whether there is a danger in it or not, that the Congress of the United States has made the provision, not this Court, and it has provided that with respect to rule-making proceedings it has failed to direct that a hearing should be held, and there are provisions of the statutes with which your Honor is familiar, where the Congress has seen fit to direct hearings, and in this instance they did not.

Justice Frankfurter: Non constat because it does not explicitly require a hearing that a hearing should not be implied?

Mr. Perlman: A hearing is not to be implied, because the Court has said that. The Court has pointed out -- I think we have a note on one of the pages of our brief -- we have a note to the effect that this Court has provided, or there is a provision to the effect that where there is no hearing the

parties involved must be given an opportunity to file comments, and to present their views in writing to the Commission, although there is no provision for a hearing.

Justice Reed: Why do you say that 10(e) does not cover hearings, does not cover rule-making without hearings?

Mr. Perlman: Well, your Honor, I will read it to you.

Justice Reed: I have already read it.

Mr. Perlman: Yes, sir; but I say it because the particular provision that I had in mind was subparagraph 5:

"Unsupported by substantial evidence in any case subject to the requirements of Section 7 or 8 or otherwise reviewed on the record of an agency hearing provided by statute."

Here you have an agency hearing which is not provided by statute, and that is why I say that the rule of substantial evidence does not apply under the Administrative Procedure Act because here the Administrative Procedure Act applies to a hearing under that subsection 5, a hearing provided by statute; and there is no hearing provided by statute.

Justice Reed: What about the charges that the Commission was arbitrary and capricious, and there was an abuse of discretion?

Mr. Perlman: That is correct. To that extent the Administrative Procedure Act does apply, the last sentence of that section:

"In making the foregoing determinations the court shall review the whole record or such portions thereof as may be cited by any party, and due account shall be taken of the rule of prejudicial error."

That sentence certainly does apply to an allegation that the action of the Commission was arbitrary or was capricious, or was an abuse of its authority.

Now, even then, your Honor will notice, that the provision is for a review of the record or such portions of it as may be called to the attention of the court by interested parties; and here we say to your Honors that when you read the opinion of the lower court you can not help but find that the court did consider every contention that was advanced, and the portions of the record that were cited to the court by the interested party in this case, the appellants here.

Now, that is our answer to the question that is raised in their criticism of the court below, the attack made on the opinion of the court, and on the decision of the court.

We say that the court below did all that it was required to do under the Administrative Procedure Act, and under the Act the Federal Communications Act, that it did consider, and its opinion shows that it considered, the record, and the portions of the record that were submitted to it or that were urged upon it by the parties involved.

I would like to call your Honors' attention to the

discussion on page 113 of our brief, in which we deal with the very question that your Honor has asked.

Now, therefore, when the matter comes to this Court, the question which this Court must decide is whether there is anything in this record to convince this Court that the action of the Federal Communications Commission was arbitrary, was capricious, was in excess of the authority vested in it by the Federal Communications Act, or was an abuse of any authority vested in it by the Federal Communications Act. And when your Honors consider that question, whether you like it or not, the lower court did not seem to like it, whether you are experts or not, you must give some attention to the problem that confronted the Federal Communications Commission, and that is the problem that I want to discuss with the Court.

The Federal Communications Commission is the agency authorized by the Federal Communications Act to protect the public in the use of what is known as the radio spectrum.

Now, the importance of this particular case -- and a novice like myself in this field was astonished by it -- but the importance of this particular case may be gathered from one statement, and that is this: that when your Honors use your radio, you find that the dial on your radio goes from 550 to 1600 kilocycles -- 550 to 1600 kilocycles -- and when you deal with a television apparatus, every television station operating on one of the channels -- there are 12 channels that

exist today for ordinary use -- every channel contains six megacycles, so that when this Federal Communications Commission is called on to authorize the existence of a single television broadcasting station, that one station uses almost six times as much of the radio spectrum as all of the radio stations in the country combined -- one television station, six megacycles, six thousand kilocycles -- when your radio apparatus, with all the stations that you can get on it, only uses 1050 kilocycles.

Now, that gives an idea of the importance of the problem that faced this Commission. This problem is not a new one. It did not come up overnight. It has been considered off and on by the Commission since 1941.

There was a hiatus during the war when, I suppose, very little attention was paid to it, but the Commission has a staff, it has a staff of experts; and it has a staff of engineers; it has a laboratory. It is at work on this problem, in addition to other problems, connected with the use of the radio spectrum, and it considered -- and this record shows that it considered -- various systems in 1946.

Now, the Radio Corporation of America, the main appellant here, submitted a system in 1946. It was considered by the Commission. It was called the simultaneous system.

It differed from the field system; it is different from the line sequential system; it is different from the dot sequential

system.

They made extravagant claims about that system. That was going to work.

They submitted it to the Commission and asked the Commission to approve it, and it was studied, and the Commission found that it could not approve it, and it did not approve it.

The CBS submitted a system. It submitted its field sequential system, but it had not arrived at the point where it is today, with the result that the Commission rejected that system in 1947.

The main reason that it rejected it was that the use of the field sequential system, as submitted in 1947, required the use of 16 megacycles instead of six megacycles.

Now, one of the things that I think is interesting for me to emphasize to your Honors is that the present black and white transmissions, the present black and white system, is also six megacycles, and the Commission did reject these other systems that took up more of the radio spectrum than six megacycles, until the time came when it could consider systems that did not take up any more of the radio spectrum than six megacycles.

One of the three systems that were submitted and were considered in the hearings that are involved in this case, were systems that involved the use of no wider space in the radio spectrum than six megacycles.

Now, what the Commission did was to give everybody who wanted to submit a system, who had a system to submit, they gave them full and fair opportunity to come in.

These hearings lasted some eight months, and all of the testimony that has been described was taken.

There never had been -- I think it is fair to say there never has been -- a matter before the Federal Communications Commission that was given the earnest, the complete, the intensive study that the Federal Communications Commission gave this particular problem.

What was the result of it? In May, 1950, the hearings ended. The parties had apparently submitted everything that they desired to submit. All their witnesses had testified.

In May, 1950, the Commission then asked the parties -- there were three of them whose systems were considered -- to submit proposed findings.

RCA did it, CBS did it, CTI did it, the other systems, they did it.

The Commission then saw to it that these proposed findings and comments were interchanged, and that every party was given an opportunity to make a reply to any findings that were proposed by the proponents of other systems. All that was done; all that was considered by the Commission.

The Commission handed down its first report on September 1, 1950, and I want to emphasize to your Honors, because there has

been some confusion -- maybe unintentional confusion -- about that -- when the Commission handed down its report on September 1st -- its first report, September 1st, 1950 -- all seven members of the Commission, without dissent, found that the field sequential system proposed by CBS was satisfactory, that it meant the minimum criteria which the Commission found was necessary before it would consider the adoption of any system. All seven of the Commissioners agreed upon that. All seven of the Commissioners agreed that the dot system proposed by RCA was unsatisfactory; that it was not a complete system; that it lacked in many important and vital respects the things that were necessary to enable the Commission to consider it for adoption. It is unsatisfactory, all seven found.

Now, there were two dissents that I want to call to Your Honors' attention to that finding, two dissents, and you know what the basis of those dissents was?

Two of the Commissioners dissented on the ground that they should not wait another minute; that they should adopt the field sequential system then and there, and not wait; but the majority of the Commission decided that they would wait, they would wait for this reason: "They said what is going on here, what has been shown us, is that 900,000 of the present sets are being sold every month. The longer we wait, the more difficult is a transition period going to be from black and white to color.

"Now if the manufacturing industry will adopt what they called bracket standards" -- what the Commission called the bracket standards -- "if they will build them into existing machines, so that they will be free to make a choice in the future, then the public won't be hurt if we wait; and so if the industry will assure us that the future receivers will be built in the way we suggest, then we will wait and see whether any of these promises made by RCA can be realized, and whether we will then be in a position to make a comparison between the two systems that would meet the principal criteria instead of only one system."

Now, it is clear from this record that RCA has a commanding position in this industry, not only in the broadcasting field, but it is also in the manufacturing field. CBS is not.

RCA makes sets; it licenses other manufacturers. It controls in many respects everybody who manufactures or who is in the business of dealing with television, who pays a tribute directly or indirectly to RCA.

They have reached that commanding figure in the industry and, therefore, the Commission knew what it was doing when it proposed these bracket standards and proposed the delay.

Now, for whose benefit was that done? It was done for RCA. They were making all these claims. The only one to gain by a delay was RCA. The only one who could possibly lose was CBS; and yet at this late date, after the Commission went out of its way to show them that kind of consideration, they are here arguing to this Court that that was illegal, that that was illegal; that the Commission did an illegal thing by trying to require something of a manufacturing industry over which it had no control.

Well, there was nothing illegal for the Commission to try to get that information before it acted, and that is all that the Commission did.

Let me say a word about bracket standards, and maybe the Court may understand it, and just to show you what the Commission was trying to do.

The black and white system operates, as the Court has been told, 525 lines per field, and there are two fields in every frame; there are thirty pictures -- a frame is a picture -- per

second, so if you take the 525 lines and you multiply it by 30, you will find that every second there are 15,750 lines. In the present black and white system there are 15,750 lines per second.

Now, the field sequential system operates on 405 lines, and it has 24 pictures, and there are three colors, red, blue and green; and if you multiply the 405 by 24, by 3, you get 29,160 lines per second.

So, under one system there are 15,750 lines per second -- the electronic beam travels that many lines per second -- and in the field sequential system, there are 29,160.

So the Commission said to the manufacturers of sets, "If you will from now on manufacture your sets so that they will take, they will receive in operation from 15,000 lines per second, which is under the present black and white system, to 32,000 lines per second, which is higher than the field sequential system, if you will make sets to receive within that range, then we will wait."

So that was the essence of the order that was sent out on September 1, 1950, when the first report was made.

That report, under the terms of that report, the Commission made all of the findings. I think Your Honors must agree that they made all the findings that were necessary to indicate that they had thoroughly studied the subject; that they found in every applicable, in every proper respect, that the field

sequential system was satisfactory for immediate use by the American public.

The dot sequential system and the line sequential system were not. The proponents of the line sequential system have not thought it advisable even to appeal that decision, so that the argument here is between the two systems that were left.

They made those findings, and they indicate it in that report -- they said so -- "We will adopt the field sequential system now, and we will adopt it, unless the manufacturers will agree to adopt, what are known as brackets" -- the standard brackets that I have described -- "so that the public will not be hurt, no matter what we do in the future."

That was the kind of an order that was issued, so that the appellant here knew on September 1, 1950, that unless the manufacturing industry, in which it is interested itself, did the things or gave the assurances that the Commission asked, that the field sequential system was going to be adopted.

They were told that by the Commission on September 1, 1950.

The Commission asked the parties to submit comments on the bracket standards that they proposed, and they gave them, I think, some 28 days to submit those comments, and they were submitted, both by RCA, and they were submitted by CBS here.

The interesting thing about it is that in July, the RCA sent the Commission -- I think they sent them -- 20 copies of what they called a progress report. That report is a report

which they described as a document gotten up to be sent to the trade, and they told the Commission that "We propose to send such reports to the trade from time to time."

They did not ask that the case be reopened, the case which had ended in May; they did not ask that the case be reopened to consider that report. They did not ask that testimony be taken with reference to it. It was not submitted as an affidavit. It was sent out through the mails, as they sent it to the Commission, in just the same way, they sent it to the members of their trade, the progress report.

Now, when they filed comments -- when they were asked to file comments -- and they did that, in connection with the comments that they filed they incorporated in those comments another copy of their progress report, and a copy of the Condon report.

I would like to say just a word or two about those two reports. Judge Rosenman has --

Justice Reed: When they filed a motion to reopen, they called specific attention to that, did they not?

Mr. Perlman: Let me come to that. They sent those reports in connection with their comments. They never asked that testimony be taken concerning those reports, no, sir. They mailed them in.

Now, just think of this: The progress report, a document, an advertisement, a self-serving declaration which RCA says

about itself to the members of the trade association -- they mailed that in, and they say, "This is going to be the first of a series."

Then when they are asked to submit comments on the bracket proposal, after the first report, they are supposed to submit comments on the bracket proposal, and then they take advantage of that opportunity not to submit comments on the bracket proposals, but to attempt to re-argue with the Commission the things which were in the record, to make another argument on the whole case, without or with very little reference to the bracket proposal, which was all the Commission asked them to comment upon.

In that connection, in attempting to re-argue the matter, they included two documents. Now, just think of it. Here is the Radio Corporation of America, in their comments to the Federal Communications Commission, undertaking to send the Condon report.

Well, what is the Condon report? It is a document of the Senate of the United States. Well, what significance has a document coming out of the Government Printing Office, printed at the request of a Senator of the United States? What has that got to do with information properly belonging in the record before the Federal Communications Commission?

They have access to Senate documents; they are public officials; they do not need the Radio Corporation of America to send them Senate documents, and try to build a record on that.

Now, that is the essence of their argument here, that the Commission did not consider alleged new improvements. The emphasis that they lay is an attempt to convince this Court -- they lay it on an idea that the Federal Communications Commission did not pay enough attention to their own progress report, and to the Senate document, the Condon Committee's report.

Well, now, the progress report, both of those things -- let me say this: Both of those things were considered by the Federal Communications Commission. The Federal Communications Commission, in its second report says that it considered all the comments and considered all the documents attached to those comments; so that it is clear from the Federal Communications Commission's second report that they were considered, but they ignore them, and they say they were not considered.

I have tried to describe the progress report.

The Condon report -- Judge Rosenman dealt with that. I would like to add one word in addition to what he said with reference to that report, because it is important in view of the attention which RCA attempts to direct to it here, and that is, if Your Honors look at that report which is in the printed record, Your Honors will see that what has been described as the greatest committee of scientists that was ever got together to study the subject, that what they say throughout that report is in no respect and nowhere inconsistent with what the Federal Communications Commission has done.

There is no finding made in that report that is in any way inconsistent or is in derogation of what the Federal Communications Commission has decided to do.

Justice Black: Judge Major was mistaken in saying that this did conflict with the finding of the Commission?

Mr. Perlman: Well, I think he was.

Justice Black: I have not looked at it.

Mr. Perlman: Yes.

Justice Black: I have not looked at it.

Mr. Perlman: I think they did find, and to that extent it may conflict, but not when you analyze what they themselves said they were doing.

The important thing to remember in connection with what they found or what they set out as the RCA system and the CBS system and the CTI system is that in each instance they took what the proponents of each system said about it, and they set out their tables of what the merits of their system might be, and they set them out based on what the proponent of each system itself said about it.

They did not attempt to evaluate those systems in connection with any conflicting testimony, and they say they did that.

One of the things that they did say, if that report may be taken as conclusive of any matter or important on any matter, is this: They said that these systems are mutually exclusive, and they made the whole report based on three fundamental assumptions.

One of them was that they never would be what is called here multiple standards; in other words, if there was a field sequential system, you could not have a dot system or you could not have a line system; and if you took the dot system you could not have any other system.

They did the thing which apparently has given some of the members of this Court so much trouble. They said there that you can only have one system -- one system -- and that is the thing that the Federal Communications Commission did.

Yesterday there was some talk about multiple standards, and I would like to say this about them. The question was asked why did not the Commission adopt more than one system.

Well, one answer to it is this: There was only one satisfactory system. There was only one satisfactory system. The question of multiple standards is not in the case; it cannot be in this case, because the Commissioners found that there is only one system that meets the test, the minimum test, that the Commission has found to be necessary. There is only one system.

Justice Jackson: We have to decide whether there is only one system --

Mr. Perlman: No, sir.

Justice Jackson: (Continuing) -- or do we have to take Commission's findings, or if we have to take the Commission's findings on that, then that means that a great deal of the argument that has gone on here is immaterial.

If we have to decide it ourselves, then --

Mr. Perlman: Your Honor, you cannot decide it. You have to take the Commission's finding unless there would be something in the record, something to which the appellants could point to, to indicate that the Commission's action in finding that this system was the only satisfactory system was so arbitrary, so capricious, so great an abuse of its authority that it could not be allowed to stand; and that is what is clear they have not done; that is clear from the record, from all of the briefs in this case that they cannot do.

All they are asking you to do is to sit here as a Federal Communications Commission; that is their only hope -- that is to get somebody, some group somewhere to upset the considered action of the only agency set up by the Congress of the United States to make that determination.

Justice Jackson: Your position is that the case has no business in court at all?

Mr. Perlman: It has no business in court unless -- it has no business --

Justice Jackson: Unless things are true which are not true.

Mr. Perlman: That is right.

Justice Jackson: In other words, your position is that it has no business in court, period.

Mr. Perlman: Oh, yes, it has this business in court, if Your Honor please: It has this business in court, and I think

Judge Rifkind sort of let the cat out of the bag. They do not want color; they do not want color now. That is what they said.

Justice Frankfurter: It is not a question of what they want --

Mr. Perlman: That is right.

Justice Frankfurter: (Continuing) -- it is a question of what the Federal Communications Commission, in balancing all the interests, should decide.

Mr. Perlman: That is right, but it does not fit in with their plans or their hopes.

Now, I want to come to that because it is tremendously important. Your Honors have heard a lot about compatible systems.

"Our system," says RCA, "is compatible. The field sequential is not compatible."

Well, now, what do they mean by that? They mean this: that if you authorize the dot system they can transmit the dot system, and every receiver today will get it in black and white. That is compatible; and they can broadcast color to their heart's content, and nobody will get color, and they say that is compatible.

Justice Frankfurter: I thought the Commission was most eager to have a compatible system, if attainable.

Mr. Perlman: That is right, that is right; because, if Your Honor please, as explained fully by the Commission in its

first report, and as everybody knows, the period of transition would be somewhat easier if you could have a compatible system. But when they talk about the necessity for a compatible system, they are only saying, "We will broadcast color and everybody will get it in black and white."

Now, the field sequential system, on the other hand, will broadcast color. That system provided for color, and under that system the existing receivers can be adapted so as to get that color in black and white, or it can be converted so as to get color. That can be done, but here is the important point, here is the most important point to me in this case, and it is this: that under the system, the dot sequential system, not a single receiver, not a single receiver now in use, can ever get color. That is the important point in this case, and that is the one that they tried to conceal.

If there is a compatible system -- certainly the system that they are trying to foist upon the public at this moment is not -- let me tell you what is going to result.

They have been selling receivers at the rate of 900,000 a month. When these hearings began there were 7,000,000 of them in the hands of the public. Today they say there are 12,000,000 of them.

Now, you keep this case running, keep it running for a year, another year, two years, and they will have thirty or fifty million receivers, if they can, in the hands of the public, and

then if they could convince the Federal Communications Commission that to adopt their dot system, every one of those receivers would become obsolete over night, and the American public will have to go out and buy new receivers. They are in the business of selling receivers, and that is what this Court ought to understand about this case.

Judge Rifkind said, "We don't want color now." The Commission says, "We do want color now. We want to give it to the American public, and we want to give it under such terms and conditions as will make the transition easier and economical. We want to protect the public and not the Radio Corporation of America, which sells receivers."

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That is the gravamen of this whole case. I do not argue for the CBS. I never heard of these different kinds of systems until this case came up, but it is clear what the object is.

Now, look at the dates. I was asked a little while ago -- and I want to answer that question -- as to the request that RCA made that the record be kept open.

Look at the date. They were told on September 1, 1950, "We are going to adopt the field sequential system September 1, 1950; we are going to give you 28 days in which you can convince the industry or you can arrange to have these bracket standards adopted, so that the public will be protected."

So, at the end of September they knew, they had refused to make the bracket changes that the Commission had suggested, they knew that the Commission was about to hand down a decision finally adopting the field sequential system.

They knew that; and before it came down on October 4th, they said, "Please keep this matter open. We have got more improvements we want to talk about."

That is all they did. They did it when they knew that the final order was coming down.

Well, when is this thing going to end? In that request to keep the record open they suggested certain things to happen the following December to January 5, and then they suggested that the whole matter be kept open until June, 1951,

and then they want a new hearing to start.

Well now, Your Honors have dealt with that situation. Your Honors have dealt with it in the Pierce Auto Company case; and we have them in our brief -- there are several cases in which Your Honors have dealt with exactly that kind of situation, and Your Honors have said that that is a familiar device, Your Honors are familiar with it, this business of waiting until the end of a case and then suggesting that the record be kept open or coming in and asking that the record be reopened.

Your Honors have said that that is a familiar device of those who wanted delay and postponement, to prevent any final decision from being made.

Your Honors have said in no uncertain terms that the decision of the administrative body on requests for rehearings or reopenings will not be interfered with.

Justice Minton: Is there anything specific now pending before this Court, or was there before the District Court, or was there before the Commission, that would make satisfactory that which the Commission found to be unsatisfactory?

Mr. Perlman: There is nothing pending.

Justice Minton: In other words, RCA and nobody else has tendered anything along that line since these hearings closed?

Mr. Perlman: That is right.

Justice Minton: Nothing specific?

Mr. Perlman: Nothing specific; no, Your Honor. Out in Chicago when this case was pending before the District Court they filed a long affidavit made by their vice president, who never went on the stand. When these things were going on for eight months, never said a word, their own vice president; and then he comes in or attempts to come in to the District Court with an affidavit as to what he would have testified to had he testified.

There would be no end to this business, and the public has been hurt by this delay.

This proceeding is a proceeding for delay, and we ask Your Honors, we plead with Your Honors, to let the action of the Federal Communications Commission stand unless you would destroy its usefulness forever to the people of this country. If this kind of decision cannot yet now be made, after the care, the expense and the effort made by the Commission and its staff, there is no use having a commission. Let RCA and everybody else do what they want with the radio spectrum until the public --

Justice Frankfurter: Arises in its might.

Mr. Perlman: Yes, sir. We have got a commission, we have got a good commission; they have considered all of the facets of this problem; they had to consider the public whether

RCA liked it or not; they had done the very best that they could.

Nobody, no disinterested person, can question what has been done here.

I want to emphasize again, there are a couple of things that have been suggested that I mention to the Court: they make an attack on one of the Commission's employees named Chapin, an engineer.

He made an invention. Apparently it is useful in connection with the field sequential system. One of the proponents of the dot sequential system testified that that adapter would be useful in their system.

Well, they did not want it to stand that way. They had an affidavit from him to send it to the District Court, that it was not useful in connection with their system, so they attacked the findings as illegal. It is illegal. It is illegal because an employee, a good, faithful competent man, had made an invention, out of which he gets no profit. He assigned that invention to the Government of the United States. It is available to them; it is available to everybody. So the finding of the Commission is illegal.

There is another proceeding in here, the Pilot Radio Corporation. They say it is illegal because Senator Johnson, who is Chairman of the Senate Committee, Interstate and Foreign Commerce Committee, wrote some letters.

He is the one who created the Condon Committee, they want the Court to believe that something terrible has happened, and now that the Commission has not given enough consideration to the Condon Committee report, when the Senator who brought that report about favors the field sequential system, after he read this report, and is pleading with the Commission not to delay but to adopt it in the interest of the public. They say that is illegal.

Justice Black: Do you mean that a Senator attempted to get the Commission to act in a certain way? Is that in the hearing?

Mr. Perlman: No, no; there was some correspondence. It is in the record here; there is correspondence written by Senator Johnson. The Pilot Radio Corporation went out to Chicago and they issued subpoenas to have the correspondence brought out there, and it was brought out there.

Justice Frankfurter: You mean the Senator wrote letters?

Mr. Perlman: Yes, sir; the Senator wrote letters.

(Laughter)

The Chief Justice: Without any questions, your time has expired.

REBUTTAL ARGUMENT ON BEHALF OF APPELLANTS, RCA, ET AL,

By Mr. Cahill

Mr. Cahill: Mr. Chief Justice, may it please the Court,

I have a multitude of points that I must cover in the ten minutes I have left.

First, Mr. Justice Reed, addressing myself to the question you put to Judge Rosenman yesterday, I am sure the Judge fell into unintentional error when he told you that the only testimony on multiple standards in this record was that of General Sarnoff. I am sure that he did not have in mind the fact that the CBS vice president, Mr. Adrian Murphy testified that it was the duty of the Commission to adopt either one system or more systems.

Finally, I should like to call attention to the fact that RCA has submitted a proposed finding to the Commission, and I quote that finding. It is not in the record, Mr. Justice Reed, and I will have to submit it to you through the clerk, because we do not print the administrative hearing record, but I will quote the finding. It is very brief. This is the RCA finding:

"If the RCA system is adopted as one of two or more color systems, RCA manufacture plans will be the same as in the event the RCA system is adopted exclusively. Under these circumstances RCA will do its best to develop practical color receivers capable of operating on multiple standards, and RCA would manufacture and sell such receivers to the extent of public demand."

Now, turning, if I may, to Mr. Justice Clark's question as to whether it was possible to build a receiver that would receive both systems, the answer is, yes, such a receiver was shown by us in diagrammatic form, submitted as an exhibit to the Commission; and I am sure when counsel said that had not been done, again it was an unintentional oversight.

Now, turning to the greatest issue, I think, in this case ---

The Chief Justice: How far along has that gotten past the diagrammatic stage?

Mr. Cahill: It had not gotten beyond the diagrammatic stage, Mr. Justice. I want to point out how pessimistic CBS has been throughout, that you can transmute or translate from the diagram to the reality in quick time.

Let us just take the circumstances in which this decision was made, from the standpoint of stultifying what I think is the greatest plus we have as a Nation, that is, our priceless pool of inventive research.

CBS said at the outset that nothing could improve the RCA system. They testified that it was not even worth field testing.

Six months later they professed astonishment.

On this same record they admitted that, to their great surprise, the RCA system was 1000 percent improved, and that is the statement of their chief research engineer, Dr. Goldmark.

Let us take the tri-color tube itself, which is undoubtedly the greatest adventure in the whole color field, the tri-color tube.

Let us take how pessimistic CBS was in the hearing that any such invention could ever be developed.

Commissioner Hennock said to the CBS vice president, Mr. Murphy:

"How about this tri-color tube that I hear is in the developmental or drawing board stage?"

Mr. Murphy of the CBS said to Commissioner Hennock, and I quote:

"They will have a long wait for the tri-color tube."

Twenty-four days later to the very day we demonstrated the actual tri-color tube to this Commission. Now, that is how inventions were popping out in this hearing, and that is why the early part of this hearing is, as Judge Rifkind says, as obsolete as an archeological record; and it was in that circumstance, when inventions, to use or paraphrase the title of the popular song, "June is busting out all over" -- inventions were

busting out all over, that they slammed the gate and would not look at the improvements.

Now, Mr. Justice Minton, you asked the Solicitor General was there any definite improvement that was called to the Commission's attention after the hearings were called. I should like to differ with the Solicitor General. There was.

We called to the Commission's express attention that on the face of the tri-color tube had been possible to increase the picture dots from 351,000 to 600,000, thereby increasing the picture brightness three times what it was when these hearings closed.

Now that was a specific improvement that we asked them to look at, and if I may say, an accomplishment of genius, and without looking at it, they said they would not; that it was not worth looking at.

Now, Judge Rosenman made a great point yesterday that the tolerances in our system depend on millionths of seconds. Well, that is nothing new in the electronic art.

Why, the tolerances in the existing black and white service depend on 1/7,000,000 of a second.

Of course, in our system, where we have no moving parts, where our color is produced internally, from within the system, where it is all-electronic, we are in the field that radio and television properly belongs, and not in the alien field of the spinning disc and the flying saucer, that this mechanical system

would engraft upon an all-electronic art.

Now, the Solicitor General says here that there is no conflict between the Condon report and the FCC report.

Again I am sorry to find myself in deep disagreement with the Solicitor General. There is the utmost conflict between the two, and I would ask the Court to turn to page 374 of the record. Here this distinguished group of scientists appraised the two systems, and they made nineteen awards on various important points they thought were involved.

The conflict is so great that here this group of scientists, headed by the head of the National Bureau of Standards of the United States, and composed of distinguished scientists, none of whom has any connection whatsoever with any manufacturers or broadcasters, of the nineteen awards, they gave eleven to RCA as against eight to CBS; so there is diametric and fundamental conflict.

One further point on the Solicitor General's argument: He told the Court this morning, of course the Commission considered the Condon report. I should like to quote from the Government's brief in the District Court. They say in the Condon report:

"This report was not part of the record before the Commission. It is obviously improper to consider such a report."

So, there has been a complete shift now in the question of whether the Condon Committee report was considered.

As to whether we got a judicial review in the court below, I should like to say, first, that it is plainly apparent that the District Court yielded to the urgings of the appellees that this case be passed on up to this Court, and that, by and large, the important questions in the case were not decided.

Let us take the question of the findings themselves. What did the majority of the District Court say? I quote what they said:

"While the findings of the Commission are severely criticized it is not contended in the main that they are not supported by substantial evidence."

Now, I am sorry to have to say that if the District Court had looked at our briefs, we had points on the question of substantial evidence, and we briefed those points at the greatest length.

I think the court below did exactly what it said it was going to do. It was in doubt as to whether to send the case back or to send it up, and it decided to send it up, and the case is not here because the District Court thought the Commission was right, that is not so. They did not pass on the question of whether the Commission was right.

They decided to leave that question for this Court to decide, and that is the only reason that the case is here, rather than having been remanded to the Commission.

Now, on the scope of review again, the three cases on which

the District Court relied -- all cases decided prior to your decision in the Universal Camera case -- it strikes me as amazing to have the Solicitor General argue here that the rule-making proceeding of this kind, where the criteria come out tailor-made to fit one bidder, and one only, and that CBS, is not subject to review on the question of whether there was evidence to support it.

As Mr. Justice Frankfurter said, under the guise of rule-making you can come up with criteria or rules where, by omission and careful selection, you get a result that fits one and prohibits the other.

Now, I submit here -- and I would like to deal with one question of yours, Mr. Justice Frankfurter -- you asked me yesterday the context of the remark by Dr. Goldmark of CBS, that nobody would be hurt if you allowed the broadcasting of compatible color.

Well, I looked that up overnight, and the context is precisely what I thought it was on this vital question of competition and multiple standards. There we have the admission by CBS itself that nobody would be hurt if you allowed the broadcast of compatible color.

My time is up, Mr. Justice, thank you, sir.

(Whereupon, at 1:55 p.m., oral argument in the above-entitled matter was concluded.)