In fact, when the initial FCC ruling was made, television was still in its infancy. The mere idea of television had begun to enter Americans’ thoughts in the 1930s, when radio personalities would remind listeners that a new visual medium was on the horizon. There even were experiments with television broadcasts, most notably in 1938 in New York, to a select few who had receivers. One of the most famous telecasts was at the 1939 New York World’s Fair, where President Franklin D. Roosevelt was heard and seen.

Limited programming was available in New York during this time until it all came to an abrupt end in 1941. The United States’ entry into World War II interrupted the progress made by some television stations that would have paved the way for an earlier arrival to a larger section of the nation.

Immediately after the war, however, television development was back in full swing as the returning soldiers began buying homes under the GI bill and starting families. The growing population was ready for the new apparatus that would add pictures to their listening pleasure.

Manufacturers were producing black-and-white televisions as quickly as possible to meet demand, and a few networks—CBS, NBC, the American Broadcasting Company, and DuMont—were working to grab their shares of the ever-increasing market of viewers.

The FCC’s Difficult Choice:
Two Very Different Systems

Even as the networks, principally CBS and NBC, fought for viewers in the early days of network television, they were laying the groundwork for color television.

Although long a household staple now, the concept of color television began making the rounds in the late 1940s. In September 1946, CBS had petitioned the FCC “for changes in Rules and Standards of Good Engineering Practice Concerning Television Broadcast Stations.” The

“The following program is brought to you in living color by CBS.”

Wait. That’s not right. But it could have been, as a result of a Federal Communications Commission (FCC) ruling back in 1950. The variation of the long-used advertising slogan by the National Broadcasting Company (NBC), first uttered in 1957, may have aired sooner had not a lawsuit postponed the color television process from being turned over to the Columbia Broadcasting System (CBS).
FCC officially adopted its “Report of the Commission” in March 1947. It explained that CBS wanted the FCC to “authorize the operation of commercial color television stations in the frequency band 480 to 920 megacycles” and to amend its standards.

At that time, the FCC said CBS did not meet its “fundamental standards.” The commission explained that besides the transmission of color, broadcasting systems needed to consider the picture’s brightness and contrast, and the number of lines, frame rate, and type of sound system, among other considerations. Furthermore, receivers must have these same standards as the transmitters to receive the programs.

CBS had created a “sequential system,” which proposed the addition of a mechanical color rotating disc and an adapter consisting of tubes, condensers, and resistors to attach to the receiver. The red, blue, and green colors in the optical device were supposed to spin around quickly enough in front of the viewing tube to appear as a full color picture.

Like CBS, the Radio Corporation of America (RCA), too, had been developing a color TV system, which the FCC had dismissed. RCA was working on a “so-called simultaneous system where each picture is scanned simultaneously in three colors—red, green and blue—and these transmissions are sent simultaneously on three different channels and are combined at the receiver to produce a color image.”

The FCC said this system was not advanced enough to be approved; RCA said the system was still in the laboratory stage but would be ready for commercial use in four or five years.

In their initial report from 1947, the FCC explained why the normal free market structure of having consumers decide for themselves and letting the best product win would not work in this situation. The explanation: there were not enough frequencies available within the 480 to 920 megacycle (megahertz) band for more than one color television system.

Trying to simplify the explanation, the commission compared the television transmitter and receiver to a lock and key; unless they both are designed to meet fundamental standards, the receiver will not be able to accept transmissions from the transmitter. According to the 1947 report, “A change in any one of the fundamental standards at the transmitter would immediately make all receivers built for the old standards obsolete.”

FCC Report Gives CBS’s System the Edge

The main competitors in the color television battle conducted extensive field tests of their proposed systems before the FCC in late 1949 and early 1950. CBS, RCA, and a third party, Color Television Inc. (CTI), demonstrated their systems to the commission in New York, Washington, D.C., and San Francisco.

After these tests, in September 1950, the commission delivered its first official report on color television issues since its 1947 study. The detailed narrative provided a history of the many proceedings on the subject and evaluations of the three systems. It found that CTI’s version had poor picture quality and “unduly complex” equipment, among other flaws. The report faulted RCA for not producing adequate color fidelity and having receiving equipment that was “exceedingly complex” and bulky.

Ultimately the FCC declared that CBS had the best technology at the time. The report said the color picture texture, fidelity, and contrast were the “most satisfactory.”

A newspaper article illustrates the new CBS television model of the late 1940s that could display color images using a rotating disc with color segments that spun quickly in front of the viewing tube.
Moreover, station equipment and receivers were deemed "simple to handle."

The commission's second report, issued just a month later, included revised criteria, primarily that any system be able to operate in "six-megacycle channel (the frequency space allotted to black and white television broadcasting stations)" and that "the pictures be received on existing television receivers simply by making relatively minor modifications in such existing receivers."

The FCC's selection of CBS seemed to give network the exclusive franchise in the field of color television. The second report reiterated that CBS was selected because its system produced the best color picture. Other points in favor of CBS's system were that its brightness did not cause objectionable flickers, and its geometric resolution, while not as sharp as that of the monochrome system, delivered better color. Moreover, the commission said that when the receivers were mass produced, the price would be in "economic reach of the great mass of purchasing public."

RCA, NBC Go on Attack Against the CBS System

Shortly after the FCC gave its blessing for the CBS method for color television to be the nationwide standard, Civil Action No. 50C1459 was filed with the U.S. District Court, Northern District of Illinois, Eastern Division, Chicago. Bringing suit against the United States of America and the FCC were plaintiffs NBC; its parent company, RCA; and RCA Victor Distributing Corporation, another subsidiary that sold television receivers.

A lengthy "Brief for the Government" filed with the case detailed the FCC's hearings and field tests of different systems from 1949 to 1950 and explained why the CBS version had been chosen. The CBS model was based on a mechanical color wheel with a spinning color disc converter and an adjustable handle with three positions: one for receiving black-and-white programs, one for receiving color programs in black-and-white, and one for receiving color programs in color.

CBS said it planned on remaining strictly a broadcasting entity and that it did not intend to enter the manufacturing side. It did, however, plan on airing color shows in the New York City region, and it began a "publicity barrage" for its new device. Although CBS said it would make its color patents available to others in the industry, the royalties involved were estimated to be $50 million, nearly $500 million in today's dollars.

Consumers could expect to pay $15 to $50 for an adapter to attach to television sets so they could pick up color telecasts, although the picture would be "coarse." For $60 to $150, one could purchase a converter to attach to the set that would bring the color picture in directly. Color receivers were going to be manufactured estimated to cost anywhere from $200 to $500.

Where money is involved, controversy is sure to follow. "We regard this decision as scientifically unsound and against the public interest," said David Sarnoff, who was RCA chairman at the time. "The hundreds of millions of dollars that present set owners would have to spend and that future set owners would have to pay to obtain a degraded picture . . . reduces the order to an absurdity." Perhaps pride had a hand in the objections, too. It must
have been an especially large blow to RCA, whose advertisements boasted, “The first in recorded music, the first in television.”

NBC, Others Challenge
Commission’s Nod to CBS

As Sarnoff intimated, one of the primary objections was that the quality of the CBS product was inferior to others in the development phase. In addition, engineers claimed that the CBS system was incompatible with current televisions, which would not be able to pick up color signals. An estimated 7 million to 9 million sets were in use in the United States in 1950, and those would not be able to receive those color signals without an adapter.


After conflicting motions were filed, the court issued a temporary restraining order against the FCC until sense could be made of the filings. The commission was therefore prevented from finalizing the nod to CBS that was to take effect in November 1950.

Pilot Radio Corporation’s intervening complaint stated that it was “one of the pioneers in the field of television,” and it “suffered substantial harm” because of the FCC order. The complaint said the government agency should not impose “arbitrary and capricious” rules on the public, which “is fearful that black and white sets will be obsolete in view of the Commission’s determination on color.” Furthermore, the FCC had “no power to regulate or control the manufacture of television receivers,” and it had approved a CBS system that was “not yet ready for commercialization and which was far from satisfactory.”

In its letter to the FCC dated September 27, 1950, also known as “Exhibit E,” Pilot Radio Corporation indicated that most manufacturing firms were at a disadvantage as the “nation has already been called upon to devote its maximum efforts to military preparation. Statutory authority for material controls and allocation has already been enacted and executive implementation partly put into effect. Retrenchment and conserved utilization of vital materials in the television industry would appear shortly inevitable.” The United States had entered the Korean conflict only three months earlier, and its extent and need for industrial mobilization was as yet unknown.

Pilot’s letter continued, “Under such circumstances, to require at this time a revamping of our industry and its facilities would be impracticable and heedlessly wasteful. Commercialization of a still unproven system, which may in a reasonable time be rendered archaic by already indicated improvements, seems neither wise nor lawful. We are, therefore, constrained to voice our definite opposition to your proposals.”

Local 1031, International Brotherhood of Electrical Workers, a union with more than 21,000 members, represented “persons employed by various manufacturers of radio and television receivers, parts and equipment … and allied products.” They stated that a “violent overturn in the industry, and a complete loss of public confidence in the purchase of any
FCC’s Action Creates Uncertainty in Industry

The Television Installation Service Association was a trade association based in Chicago. In its complaint, it estimated that the new system the FCC approved would cost owners of the approximately 600,000 TV sets in the Chicago area more than $1.5 million, or $14.5 million in today’s dollars.

But more than the cost to consumers, the installation representatives were especially concerned that they would be on the hook for all of the “owner’s service policies” that existing customers had on their sets. They feared the new ruling would require television installers to make free service calls to install the new color receiver devices.

Several television manufacturers, joined by labor unions, won a restraining order against the FCC after arguing that they and the public would be harmed by the agency’s blessing of the CBS color television system.

television receivers at all has been averted only by the vigorous counter-offensive of the original plaintiffs in this action.”

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To learn more about

- National Archives holdings in Chicago, go to www.archives.gov/chicago.

Statement of William Balderston, President of Philco Corporation

October 16, 1950

WILLIAM BALDERSTON, PRESIDENT OF PHILCO, RELEASED FOR PUBLICATION THIS STATEMENT SENT TO ALL PHILCO DISTRIBUTORS:

"COLOR TELEVISION HAS NOT ARRIVED. MUCH CONFUSION AND MISINFORMATION HAVE RESULTED FROM THE EXAGGERATED PUBLICITY SINCE THE RECENT FCC ACTION. COLOR SIGNALS WILL BE ON THE AIR ONLY DURING FRINGE HOURS ON A LIMITED BASIS AND WILL IN NO WAY INTERFERE WITH THE ESTABLISHED PROGRAM SERVICE FROM THE 170 TELEVISION STATIONS THROUGHOUT THE COUNTRY TODAY. BLACK AND WHITE IS AND WILL CONTINUE TO BE THE BASIC SYSTEM OF COMMERCIAL TELEVISION FOR YEARS TO COME.

"WHILE THE COMMISSION HAS AUTHORIZED TRANSMISSION OF A COLOR SYSTEM, ITS REPORT LEAVES THE DOOR WIDELY OPEN FOR FUTURE DEVELOPMENT. PHILCO BELIEVES THAT THE PRESENTLY PROPOSED SYSTEM WITH ITS AWKWARD MECHANICAL WHIRLING DISK AND SMALL SIZE PICTURES IS ENTIRELY UNACCEPTABLE TO THE PUBLIC AND THAT THE ONLY COLOR TELEVISION THE PUBLIC WILL BUY IN VOLUME IS THAT WHICH COMBINES OUR CURRENT ELECTRONIC DEVELOPMENTS IN BLACK AND WHITE. THAT KIND OF COLOR WITH ITS BIGGER PICTURES, FINEST QUALITY AND PERFORMANCE IS BEING PERFECTIONED IN THE LABORATORIES OF THE INDUSTRY TODAY. IT IS OUR FIRM CONVICTION THAT THIS IS WHAT WILL EVENTUALLY REACH THE MARKET FOR DEALERS TO SELL WITH FULL ASSURANCE OF SATISFACTION TO THEIR CUSTOMERS.

"AND WE BELIEVE FURTHER THAT SUCH A COLOR SYSTEM IS AT LEAST TWO YEARS AWAY.

Philco’s court statement argued for patience, that CBS’s “awkward” spinning device would not be accepted by the public, and that improvements promising bigger pictures and “finer quality and performance” were in development and two years away.
consumers' fears about how much they would have to spend on new television receivers. Raytheon Television ran an ad that featured the headline "What Are the Straight Facts About Color Television?" General Electric took out a full-page spread in the New York Times with the headline, "Nobody is going to obsolete [sic] over 100 million dollars worth of TV entertainment!"

Frank Stanton, the president of CBS, was one of many who filed affidavits in the case. Stanton dismissed the plaintiffs' objections, saying they would not suffer "irreparable injury caused by . . . the FCC's order adopting standards for the color system developed by CBS." He contended that the only injury the plaintiffs would suffer would be to "their pride and publicity" but that the public would be hurt should the order be suspended.

Commission Attacked On Standards Issue

The affidavit of C. B. Jolliffe, an executive vice president of RCA, countered that for the "first time in its history, the Commission has established standards over the protest of the scientists, engineers, and technicians of all most the entire radio and television industry."

The New York Times agreed with RCA in an October 18, 1950, editorial. "In the case of color television, we have a usurpation of authority that needs correction," the newspaper said. "The correction may now be made, for the Communications Act is now coming up in the federal courts for interpretation."

As it often happens when studying history, we discover everything old is new again. A few years ago, when the United States converted to digital television, there was a nationwide uproar, especially because many people would have to buy a converter or new television set. Although the digital conversion was mandated by Congress to begin in 2006, it was postponed several times before coming to fruition in 2009. Similarly, back in 1950, the protestations were overwhelming. A three-judge panel was established in October 1950 to decide how to proceed. It consisted of Judge J. Earl Major of the U.S. Court of Appeals for the Seventh Circuit and Judges Walter LaBuy and Phillip Sullivan from the U.S. District Court for the Northern District of Illinois, Eastern Division.

The judges allowed the temporary restraint and suspension of the FCC decision until April 1951, or until it was officially terminated by the Supreme Court, where the District Court sent the suit. In December 1950, the judges wrote, "in studying the case, we have been unable to free our minds of the question as to 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 finally terminated by a decision of the Supreme Court."

The Case Goes Up High —To the Supreme Court

The lower court judges observed that the various companies like RCA had been working quickly to resolve the issues associated with the new technology and questioned the FCC and its haste to make a decision:

There is ample basis for the conclusion that the scientists laboring in the laboratories of the industry may soon resolve the problem of compatibility. In view of the admittedly fluid state of the art, it is

Advertisements sprang up in newspapers across the country as companies tried to allay consumers' fears about how much they would have to spend on new television receivers.
It is estimated that the cost of conversion to the new standards set by the Commission will cost the public in excess of a billion dollars. If hope and speculation may lawfully be substituted for evidence as a foundation for an important part of its decision, it was an abuse of discretion not to have indulged this speculation and hope in the public interest. The Commission chose a speedy determination of an issue of great public interest in preference to the more patient consideration which the magnitude of the question warranted. To prohibit the broadcast of color in completely compatible systems, whether it is RCA or any other fully compatible system, is a bar to competition between compatible and incompatible color and is unreasonable and arbitrary.

All the “plaintiff-interveners” were, most likely, satisfied their pleas were heeded, including NBC and its impending, colorful trademarked peacock.

The FCC court case resulted in 53 witnesses, 265 exhibits, and a transcript of the hearings consisting of nearly 10,000 pages when it went to the Supreme Court as Radio Corp. of America v. United States.

The plaintiffs’ appeasement was short-lived. In May 1951, the high court ruled in favor of the FCC, saying the agency had acted properly in its analysis of the proposed color television systems.

However, it turns out most of the upset and protestations were for naught. It appears that the Pilot Radio Corporation was pre-scient—the Office of Defense Mobilization banned the manufacturing of color television sets in October 1951 as the Korean War continued and color television was not considered essential.

NBC had to wait until later in the 1950s to introduce its tagline of bringing programs to viewers “in living color.” The network’s advertising agency cleverly used the peacock, while CBS’s “Eye” logo, introduced in 1951 and still in use today, did not capitalize on its brief color advantage.

After the Korean conflict ended in July 1953, U.S. industrial production began to get back to normal. The FCC accepted a new color standard in December 1953, which allowed for quicker development of color televisions by the middle of the decade. The FCC-established group called the National Television System Committee (NTSC) created the standard that was used for decades. It appears the enormous controversy was much ado about nothing as television broadcasters began to follow the NTSC standard, and networks, like CBS and NBC, were able to tout their color programming as it became available nationwide.