

VF-TV-GOLDSMITH

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# TELEVISION STATUS AND TRENDS

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## TELEVISION STATUS AND TRENDS

### Table of Contents

	Page
Introduction	1
Growth of Television Stations	1
Television Bands	2
Upper Band Development	2
Area of Coverage	2
The Different Types of Stations	2
Broadcasting Costs	3
Anticipated Growth of Networks	3
Use of Network Films	4
Kinescope Film Recording	5
Direct Photography	5
Road Show Companies	5
* * * * *	
The Advertiser's Time Costs Per Station	5
Network Costs	5
* * * * *	
Types of Receivers	6
Receiver Costs	6
* * * * *	
Income Distribution of Receivers	7
Current Circulation	7
* * * * *	
Advertisers using TV	7
Sales Impact of Television	7
* * * * *	
Other factors— Conclusion	7
* * * * *	
Appendix – Stratovision and Phonevision	8

## TELEVISION STATUS AND TRENDS

Dr. Alfred N. Goldsmith, Consultant on Radio and TV

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### INTRODUCTION

The aim of advertising is to get the maximum number of fulfilled buying impulses per advertising dollar. Let us call this new unit of advertising effectiveness "FBI's per \$". As might be imagined, it involves tracking down the prospective consumer and, after having brought him to bay, leading him to the merchandiser and observing his acceptance of the advertised product.

FBI's-per-\$ depend on these factors:

- potential audience coverage of the medium
- purchasing power of the audience coverage
- portion of purchasing power of the audience coverage potentially interested in the advertised product
- sponsor identification by the audience
- product identification by the audience
- psychological response to the arguments in favor of the product
- as suggested above, the need of each potential consumer for the product in question.
- the availability of the product in the market area of the potential consumer,
- and so on.

Clearly FBI's-per-\$ are a complex matter depending on many - and partly unmeasurable - factors. It will probably take decades for research workers to evolve satisfactory methods for determining each of these factors, their interrelationships, and their conjoint effects.

The data submitted are derived either from the experience and files of the writer, or have been secured by the collaboration of a number of his colleagues whose help is gratefully acknowledged. However, any analyses or conclusions here presented are solely the judgment of the writer, and do not necessarily agree with the opinions of the corporations, or societies, with which he may be industrially, or professionally, associated.

### GROWTH OF TELEVISION STATIONS

Of late, the total number of operating stations, the number of granted construction permits, and the number of station applications placed before the FCC have all increased rapidly. In FIGURE I there is shown the corresponding growth of operating stations from 1947 to 1951 (for January 1st of each year). It is instructive to note that, even in 1949, no other country on earth had more than three operating television stations. England, second nation in television, has about 100,000 television receivers against five times that number in the New York City area alone, or thirteen times that number in the United States. Here then, is an instance of the amazing stimulus which American free enterprise can give a new and important industry.

The stations in existence on January 1st of 1949 through 1951 will blanket an area in which are located the percentages of total United States families shown in FIGURE 2. And in FIGURE 3 is shown the cumulative production of television receivers by January 1st of each year from 1948 to 1954. This has all the elements for providing America with the greatest known advertising, entertainment, and cultural medium.

## TELEVISION BANDS

The present television broadcasts are carried out on a group of twelve channels, on frequencies in the neighborhood of 50 to 200 megacycles – the so-called “lower band” -referred to by engineers and the industry as “VHF”, (meaning “very high frequencies”). It has recently been proposed that additional channels, in the neighborhood of 500 to 900 megacycles, should also be opened for commercial television broadcasting. These ultra-high-frequency (UHF) channels may be referred to as the “higher band”. The FCC has under consideration the opening of the higher band to commercial television operations. A temporary “freeze” in the granting of television station licenses was initiated in the Fall of 1948 by the Commission, and has led to the temporary discontinuance of the issuance of construction permits for *new* stations on the lower band. Those already holding construction permits will receive station licenses as fast as their stations are completed, so that the total number of stations on the present lower band has almost doubled since the beginning of the “freeze” on September 30, 1948.

The 202 stations, to be in operation by 1951, (as shown in FIGURE 1), are all in the present “lower band”, wherein service is to be continued regardless of whatever additions may be made in the upper band.

The “freeze” may be lifted in the late spring or early summer of 1949, judging from present indications. It is likely that a number of additional channels in the higher band will be opened for development or experimentation at that time or later. And at that time the Commission will of course resume the processing of station applications now before it for commercial operation on the present lower band. It is in anticipation of this action that the total of 202 lower-band stations by 1951 was here presented.

## UPPER BAND DEVELOPMENT

It is likely that the Commission will authorize continued experimentation in the UHF or upper band with the purpose of the ultimate establishment of commercial service in the upper band, in addition to the continuance of the present lower-band operation. There are many engineering problems which must, however, be solved before dependable commercial upper-band service is possible so that in time smaller cities and towns, which at present have few or no television channels, will receive such facilities. The larger cities which at present have a limited number of lower-band allocations may be provided with both higher-band and lower-band channels, thus increasing their television broadcasting opportunities as well. One pertinent factor in this connection is the desirability of promptly providing network connections in as many locations as possible, so that the major programs syndicated over these networks may be at the disposal of the then operating stations and thus reach the maximum portion of the population of the United States.

## AREA OF COVERAGE

It appears that the major portion of the American population will enjoy television service at the end of the next five years. Further, the present economic standing of the television audience is higher than the average - although this statement must be qualified by adding the comment that television receivers are now found in the more humble American homes, and will continue to be so to an increasing extent. It is enlightening in this respect to observe the large number of television antennas installed in the less prosperous sections of cities having television service. Clearly, television is destined to be a major medium for mass advertising.

The net effective buying income of families within the areas provided with television service, as of January 1st for the three years beginning in 1949, is illustrated in FIGURE 4.

## THE DIFFERENT TYPES OF STATIONS

The term “television station” is a flexible one. The simplest type of station operation is that of a so-called “satellite” station. Such a station simply repeats the programs of another nearby “master” station, thus effectively extending the coverage of the latter station. That is, whatever programs are sent from the master station to a satellite station are automatically repeated without modification, and are thus broadcast to an additional portion of the population in the “fringe area” of the master station. Such satellite stations would normally be of low power.

The advantages of satellite stations are their relatively low initial cost and limited operating expenses, as well as the simplicity of their operations. Their disadvantages include the unavailability of any local origination of programs by them, and the consequent limited service which they can give to the particular interests and local businesses of their community.

The next larger type of station operation is that of a "repeater" station. This is a station which customarily repeats, without modification and automatically, the network programs which reach it. Such a repeater station is necessarily provided additionally with a film projector, thus enabling local and chain-break announcements, as well as the use of syndicated film programs. It may possibly also be provided with means for broadcasting at least the voice (if not the picture) of a local announcer.

Passing to a still larger type of station, a means for picking up remote events in the local community may also be provided. Such pickup facilities may be on 16-mm. film cameras, whereby there are produced motion pictures of local events, which may later be broadcast from the television station. Alternatively, television cameras may be used for remote pickup, the events being broadcast as they happen. The two methods may even be combined by means which need not be here described.

The film cameras have the advantage that events occurring in the daytime may be transmitted to the maximum audience at night, and also that such events may later be repeated, if desired, at other times. Further, the films may be judiciously cut and edited. The advantage of the television-pickup cameras is that they may alternatively be used in the local studios of the station for picking up actual live-talent programs (for example, during the evening hours). There is a certain degree of flexibility and economy in this dual use of television cameras for daytime remote pickups, and for nighttime live-talent or studio programs. Other flexible methods of operation using film cameras, television cameras, or both are also possible.

From this point on, television stations may have any added and desired degree of elaboration. The two camera chains, so-called, for remote pickup and relaying cost approximately \$60,000. Studio equipment, including camera chains, control room equipment, master control equipment, additional 16-mm. film projectors, 35-mm. film projectors, and the like, add substantially to the cost of the station. In fact, major television stations may have a cost in the range of \$150,000 to \$600,000, averaging about \$300,000. Still more important program-originating key stations, such as those which would normally be established by a national network, may have a first cost in excess of \$1,000,000.

## BROADCASTING COSTS

The owner of a television station must also be prepared, initially at least, to carry the operating costs of so impressive an enterprise. Excluding the cost of the actual programs (that is, writers, actors, directors, musicians, and the like), the operation of a station involves the maintenance of extensive facilities and of a substantial staff of skilled technicians and commercial workers. A major station may have an annual operating cost in the range of \$100,000 to \$500,000 with an approximate average of \$200,000. The trend of station operating costs is not expected to be downward.

## ANTICIPATED GROWTH OF NETWORKS

In any medium in which program and operating costs are substantial, it is important that the maximum possible audience shall be simultaneously reached by each program. Since the dependable coverage or service area of individual television stations is limited to distances of between 25 to 65 miles approximately, service to large portions of the population is most readily accomplished by some form of syndication. The networks of today may be described as being intermediate between regional and fully national networks. They cover the north-eastern and north-central portion of the United States effectively, but have not yet been extended to the south and west. Data on the stations presently affiliated with each of the major existing networks, namely, the National Broadcasting Company, the Columbia Broadcasting System, the American Broadcasting Company, and the DuMont Television Network are of interest.

As of March 15, 1949, (based on information kindly supplied by the four networks) NBC has five owned and operated stations, eighteen primary affiliates, and six secondary affiliates.

CBS has two owned or partially owned stations, twelve primary affiliates, and fifteen secondary affiliates. For ABC, the corresponding figures are three owned, four primary, and fourteen secondary affiliates. The DuMont Network including Paramount Stations, included three owned and operated stations, one primary affiliate, and twenty-two secondary affiliates.

Thus the total of owned and primary-affiliated stations is four for DuMont, seven for ABC, fourteen for CBS, and twenty-three for NBC. It is a natural assumption that television-network affiliations will eventually largely follow corresponding present radio affiliations. Meanwhile, many network alliances or working agreements have been made through the need for securing programs at times when connections are unavailable to the network of primary affiliation. This largely accounts for the multiplicity of network arrangements presently in force. However, the trend toward the resumption of normal network affiliations is believed to be as stated.

Although certain network links have been privately provided (for example, between New York, Washington, and Schenectady), network connections are substantially handled through the American Telephone & Telegraph Company. The present coaxial-cable and radio-relay links of that Company have been shown in FIGURE 5. The anticipated networks to be established within the next few years by the Telephone Company are shown in FIGURES 6 through 10. Such connections should be well-advanced by 1953, thus enabling coast-to-coast syndication of television programs at that time.

#### USE OF NETWORK FILMS

A second possible and important method of television syndication involves the use of sound motion-picture film. This may be of several different types including kinescope recording, direct photography of a studio program, or standard available or specially prepared motion-picture films. The program, recorded on film, is used by the outlet stations at predetermined times. Such film programs can thus be syndicated locally or nationally. They have a number of advantages. For example, film syndication enables existing networks to extend their services to affiliated, but as yet unconnected stations. Regional syndication can be flexibly accomplished. Certain programs of outstanding quality or of historical interest, if recorded on film, may be repeated at will. In addition, editing, selection of the preferred performance, and the avoidance of possible unforeseen program errors, with correspondingly improved program quality, can generally be attained by film syndication. On the other hand, high-quality film syndication adds to program production costs and may somewhat delay the availability and utilization of a program. Further, it naturally involves skill and experience in the handling of film if the best results are to be consistently secured. In this relation, it should be noted that network connections are required for programs of transcendental and urgent importance or of particularly timely interest. Given the availability of such interconnection, the inducement to use film for reaching the outlet stations becomes less than would otherwise be the case.

Where the highest pictorial quality, maximum flexibility in the selection of program material, and guaranteed correctness of performance is required, as in the case of major commercial announcements and their accompanying visual material, film has won rapidly increasing and deserved acceptance.

Taking all pertinent factors into consideration, it is clear that film programs will continue to play an important and basic part in local, and even in network operations, and for both program material and commercial announcements.

In this connection it may be mentioned that 35-mm. film may be used where the picture and sound must be of exceptional quality. However, 16-mm. film has proved adequate for most routine program-syndication operations at the present time. Its everyday quality under present conditions is generally marginal. The relative advantages of these various sizes of film would require a more lengthy analysis than can be given here.

For all practical purposes, 16-mm. film may be considered standard for today because of its lower cost, ready availability of 16-mm. station equipment, and freedom from regulatory restrictions such as apply to inflammable 35-mm. film installations. When 35-mm. film becomes available in safety stock, this situation may alter.

## KINESCOPE FILM RECORDING

The simple method of producing film transcriptions of television programs is to photograph the transmitted picture on a monitoring kinescope tube by means of a 16-mm. motion-picture camera of special design, recording the sound portion of the program on the same or a separate film. Any desired number of release prints can be then produced from the original negative or positive, and sent to the desired outlet stations. At present, the cost of kinescope film recording per hour is about \$360 (or less) for the original negative, and \$108 per hour for each release print. This cost is additional to program and station-time costs.

The various networks are using kinescope recordings of their programs to a considerable extent at present. The National Broadcasting Company records approximately three hours per day, on the average, and the Columbia Broadcasting System two hours. The other networks record to a variable extent.

## DIRECT PHOTOGRAPHY

Another method of producing a film version of a program is to photograph a dress rehearsal or similar performance using, however, conventional motion-picture methods. That is, each scene is separately photographed, and usually not in the order of presentation. The recorded film negative is cut, edited, and assembled. Essentially, this method is thus similar to the usual motion-picture technique.

Film programs, produced in this fashion, have a wide range of costs. Thus, a twenty-minute show may cost from \$3,000 to \$5,000 for the original negative; \$4,000 to \$6,000 for a thirty-minute show, and \$6,000 to \$10,000 and up for a one-hour program.

Commercials, or announcements, similarly photographed, but with even more elaborate techniques, including animations, will range from \$100 to \$5000 per minute of playing time, the last figure, of course, being very unusual.

## ROAD SHOW COMPANIES

Two other methods of television syndication have been proposed. One of these is the use of road-show companies. Here the actors, directors, and sets would be physically transported from city to city, and their "standard" or repertoire programs would be presented at the local station. This method has, as yet, not found any commercial acceptance. An entirely different syndication method, based on certain technical novelties, is "stratovision". (See appendix.)

\* \* \* \*

## THE ADVERTISER'S TIME COSTS PER STATION

The sponsor of television advertising purchases station time and defrays program costs. In the tabulation of FIGURE 11 are shown typical or average station-time costs at present, for periods from five minutes to one hour. These costs are subject to modification on a multiple-use basis, and also include agency commissions. They apply to live-talent evening performances, and may include a moderate amount of rehearsal time. In FIGURES 12 and 13 are shown the average gross time rates for film and studio programs. In general, film presentations over a station have a lower time cost than studio presentations. A usual present-day ratio of studio to film-transmission costs is approximately 7-to-6. It must be stressed that transmitter costs are equal in the two cases, and form the major item. Remote pickup costs, on the other hand, frequently exceed studio operational costs because elaborate equipment and extensive personnel must necessarily be moved to outside locations. Their cost is so variable that no dependable general figure can be given.

## NETWORK COSTS

Average (per station) gross time rates on the present networks, for one hour of evening time, are given in the tabulation of FIGURE 14. The corresponding gross hourly time rates for each of the entire networks are shown in FIGURE 15.

Television network-time costs as compared with sound radio, are based upon higher capital investments, increased operating costs in a ratio of about 4-to-1, larger production crews in about the same ratio, and intercity connection costs of about seven times those of sound radio.

As previously mentioned, programs fall into a number of major groups. Live-talent performances, including drama, variety, and the like, and presented in the station studios, form one major type. Remote pickups of interesting happenings, such as sports events, national conventions, and the like, are a second type of program of proven popularity. Films of various types are utilized. At present, these are either available feature films or shorts, or else entertainment or educational films expressly made for television. American-made feature films now available for television are largely "Westerns" of ancient vintage. A limited number of imported films of better quality have recently been released for television. However, the former type predominates because of its ready availability and lower cost. Accordingly many of the existing films released for television use do not reach the desired standards of showmanship and technical quality and do not do justice to that medium. Films made especially for television are increasing in number and in quality. And, as stated, the use of film for commercial announcements has increased even more rapidly. In at least one instance, films of dramatic performances, made especially for television, are syndicated over a network. Percentages of time devoted to studio, film, and remote programs are shown in FIGURE 16, as averaged for a group of stations in large and small cities. More recently, remotes have declined; studio program percentages have increased; and film program percentages have remained essentially constant as an apparently stable element in program construction.

The trend of preferences between these types of programs is not as yet well-defined, and will doubtless fluctuate, from time to time, as public tastes alter.

One special type of proposed film program is known as "phonevision", which is discussed in the appendix.

\* \* \* \*

## TYPES OF RECEIVERS

The television audience today uses various types of receivers which may broadly be described as follows. The simplest type of receiver is portable, produces a picture a few inches wide, and may be viewed by at least one to three people at a distance of two to five feet. Table models produce a picture ranging from eight to thirteen inches in width, normally viewed at, say four to nine feet by optimum audiences of two to six people or more. Console receivers, giving a direct-vision picture, have a similar range of picture sizes, except in the higher price brackets, where the pictures may range from thirteen to fifteen inches in width. Pictures are viewed at four to twelve feet, in general, and by at least three to nine people. Console receivers, with projected pictures, show images from sixteen to twenty inches in width. These pictures may be most conveniently viewed at distances of eight to twenty feet by five to twenty people or more. It will be understood that the listed viewing distances, and the audience sizes, are only roughly approximate, and may readily be exceeded.

## RECEIVER COSTS

The cost of receivers varies widely, depending in part upon cabinet size and workmanship, general performance, picture size, and other factors. Portable receivers center in the \$150 to \$200 range. Table models fall broadly in the \$250 to \$350 range. Direct-Vision console receivers (without radio-phonograph adjuncts) fall in the \$300 to \$600 range, in general. The projector type of console receivers usually cost from \$800 up.

The audience, everything else being equal, prefers the larger picture sizes, although it will accept with enthusiasm pictures of moderate dimensions whenever cost is a controlling factor. Pictures of good brightness and sharpness are also desired. As matters stand, there is a slight trend toward lower receiver costs, although it is unlikely that the drop in television receiver costs will be as drastic, or in anything like the same ratio, as was the case for the drop in costs of standard radio receivers during the period from 1920 to 1940. This results from the inherent circuit complexity and number of tubes in television receivers, as well as the fact that their construction already embodies the economies resulting from thirty years of mass radio production and "know-how".



## INCOME DISTRIBUTION OF RECEIVERS

It may be mentioned that, as previously indicated, television receivers, despite their appreciable cost, will definitely not be restricted in use to the "carriage trade". It is found that on the average, television receivers in New York are distributed among persons of four economic levels as follows: 10% among families of highest economic level; 35.6% among persons of the upper-middle strata; 40.8% among the moderate level, and 12.7% in the lower level. The total estimated number of television receivers for 1949 to 1954 has already been shown in FIGURE 3.

## CURRENT CIRCULATION

The present estimated audience in each of the ten leading "television cities" of the United States is given in FIGURE 17. In the following FIGURE 18 is charted the gross time cost per thousand sets per hour. Comparison with other media will naturally be of interest.

## ADVERTISERS USING TV

The response of advertisers to television is clearly illustrated in FIGURE 19 depicting the total number of advertisers using television from June, 1947, to December, 1948. (By March, 1949, this number had risen to beyond 1100.) The gross expenditures for television time had accordingly risen in January, 1949 to the values shown in FIGURE 20, respectively for network, local, and spot programs or announcements.

## SALES IMPACT OF TELEVISION

It is generally agreed that any medium which simultaneously employs the powerful agencies of sound, sight, and motion has maximum appeal and message-carrying capability. For these reasons, television advertising has shown an unusually high proportion of sponsor identification. Typical figures for percentages of sponsor identification by television, in large cities, are shown in FIGURE 21.

The approximate ratio of such identification to that obtainable by standard broadcasts is about two-to-one. It is to be expected that the sales impact of a television program would similarly show a high ratio to that of less favored and not so impressive media, of less diversified appeal.

## OTHER FACTORS

There are some interesting television matters which may justify further study or investigation. One of these is the relative mobility of the television audience as between competing stations or networks. Some have believed that the television audience tends to concentrate to an unusual extent on the most interesting program submitted to it at a given time, and even to the practical exclusion of attention to all other concurrent programs. This conclusion is doubtful. While the relative qualities and appeals of competing programs do seem to sway the television audience and control its viewing, there is, nevertheless, a certain established "natural ratio" into which the audience divides itself, as between the stations and networks available to it. This natural ratio is displayed in the case of events carried simultaneously on all stations in a given locality. It is, therefore, more likely that investigation will disclose that the division of a television audience between stations will be dictated jointly by the natural ratio already established and also by the popularity or appeal of the particular programs under consideration.

It would be beyond the scope of this brief summary to discuss such additional topics as color television, stereoscopic or three-dimensional television; stereophonic or three-dimensional sound in television, and theater television. The last of these is most advanced, but suffers from difficulties in the establishment of an acceptable program service. Nevertheless, it may well be that theater television will ultimately have interesting commercial aspects, and that it may become commercially successful after it has established mutually helpful relationships with television broadcasting.

It may be added that experts in advertising and promotion are fortunate in having the unique opportunity to display their energy, ingenuity, and resourcefulness in so interesting and potentially predominant a medium as television broadcasting.

## APPENDIX

### STRATOVISION

According to this system, airplanes are arranged to carry both radio-relaying equipment and television broadcasting equipment. The airplanes would be stationed across the United States over points 400 to 600 miles apart, and hover, so to speak, over their landing fields at a height of perhaps five miles. The syndicated programs would be sent up from the studio and transmitter of origin to an airplane and thence would be automatically passed across the country from each airplane to the next, the transcontinental syndication thus being instantaneous. The television broadcasting equipment on the planes would send out the syndicated program to all points within a circle of 200 to 300-mile radius around the airplane location. This transmission would be carried out on the normal television channels, although the radio-relay system on the planes would operate on suitable higher channels not open to general public reception.

Stratovision, as previously proposed, would require extremely high reliability of operation of the airplanes in all types of weather. Careful and continuous adjustment of the relaying equipment would be needed, particularly in relation to directional transmission and reception. A sufficient number of airplanes must be provided at each landing field to keep an operating plane and a stand-by plane in the air at all times, and also to provide extra planes which would fly into sections of the country where unfavorable weather conditions prevented the use of the local-station airplanes. Further, the use of any regular television channel by a stratovision plane would presumably interfere with and prevent its use within a large area surrounding its location, thus limiting the operation of local television stations on the ground. The propagation and reception of waves from airborne television transmitters would require further field testing to determine the nature and degree of reliability of the resulting service. Accordingly, while stratovision presents an interesting and ingenious proposed solution for television syndication, nevertheless, in its present status, it does not permit final conclusions to be drawn as to its ultimate commercial usefulness and its economic and operational feasibility.

In this connection, only a few days ago it was stated in the trade press that the President of the Westinghouse Electric Corporation, proposer of stratovision, had announced the suspension of this project for an indefinite period.

### PHONEVISION

By this method a major feature film, made for television and perhaps then released to the theaters, would also be transmitted on a television channel in such fashion that its reception on an ordinary receiver would be unpleasant or unintelligible. The owner of a television receiver might, however, subscribe to the phonevision service in which case he would receive over his telephone line, and without interference with his normal telephone service, a special signal which, when applied to his radio receiver, would automatically steady the received picture and thus again make it enjoyable. For this service, the subscriber would pay the phonevision company a specified amount per evening or per program, which it in turn, would share with the film producer.

So far as is known, no company is as yet engaged specifically in phonevision commercialization. The successful establishment of a "private" or "narrowcasting" television service of this type may involve a number of factors, including the following. The Federal Communications Commission would be required to set aside, in each locality, one or more of the much-sought television channels now devoted to free television service to the general public, and to convert such channels to a private service unavailable to the public except upon payments acceptable to the television station owner, or his associates or agents. This would constitute a sharp break from long-accepted American broadcasting traditions and practices. There would also be needed a steady flow of phonevision program material of quality, appeal, and variety clearly superior to that offered over free television channels - a difficult set of requirements in an era of attractive and steadily improving public-television program quality. An adequate portion of the television set owners would have to be prepared to pay time or performance charges to a total amount yielding a sufficient profit over program-production costs, station and transmitter operating charges, other incidental expenses, and general overhead. It is interesting to note that those who pay for a "private" television service such as phonevision will, however, continue also to absorb their portion of the costs of public television broadcasting through their purchases of the commodities and services advertised by television.

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## LIST OF FIGURES INCLUDED

- Figure 1. Operating Television Stations – Jan. 1, 1947, 1948, 1949, 1950 and 1951.
- Figure 2. Families Covered by Television – Jan. 1, 1949, 1950 and 1951.
- Figure 3. Cumulative Production of TV Receivers – Jan. 1, 1948 to 1954.
- Figure 4. Net Effective Buying Income Television Coverage Areas – Jan. 1, 1949, 1950 and 1951.
- Figure 5. Present Intercity Television Connections.
- Figure 6. Intercity Television Connections – October 1, 1949.
- Figure 7. Intercity Television Connections – January 1, 1950.
- Figure 8. Intercity Television Connections – July 1, 1950.
- Figure 9. Intercity Television Connections – January 1, 1951.
- Figure 10. Probable Future Plans for Television Intercity Connections.
- Figure 11. Average TV Evening Network Gross Time Rate Per Station -- 1949 for time periods of five minutes to one hour.
- Figure 12. Average TV Gross Time Rates – Film Programs – March 1, 1949.
- Figure 13. Average TV Gross Time Rates – Studio Programs – March 1, 1949.
- Figure 14. Average (per station) Network Gross Time Rate – 4 networks – March 1, 1949.
- Figure 15. Gross TV Hour Rates – 4 networks – March 1, 1949.
- Figure 16. Percentage of Time Devoted to Studio, Film and Remote TV Programs – 1949.
- Figure 17. TV Set Installations – Top Ten Cities – March 1, 1949.
- Figure 18. Gross Time Cost Per Thousand Sets – NBC Areas – July 1, 1948; January 1, 1949; July 1, 1949.
- Figure 19. Total Number of Advertisers Using TV – 1947 and 1948.
- Figure 20. Estimated Gross TV Time Expenditures – January, 1949.
- Figure 21. Top Ten Sponsor Identifications – Hooper, November, 1948.

FIG. 1

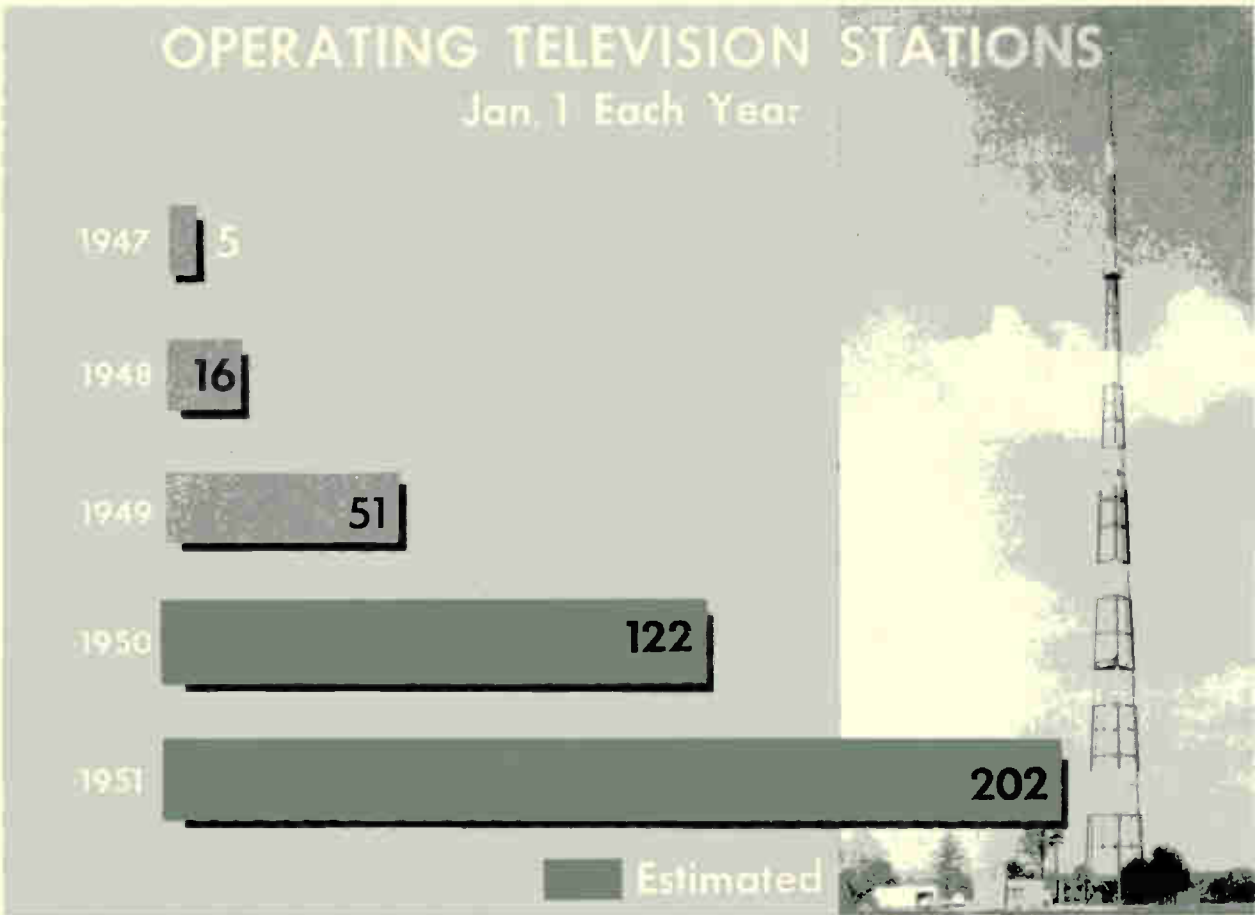


FIG. 2

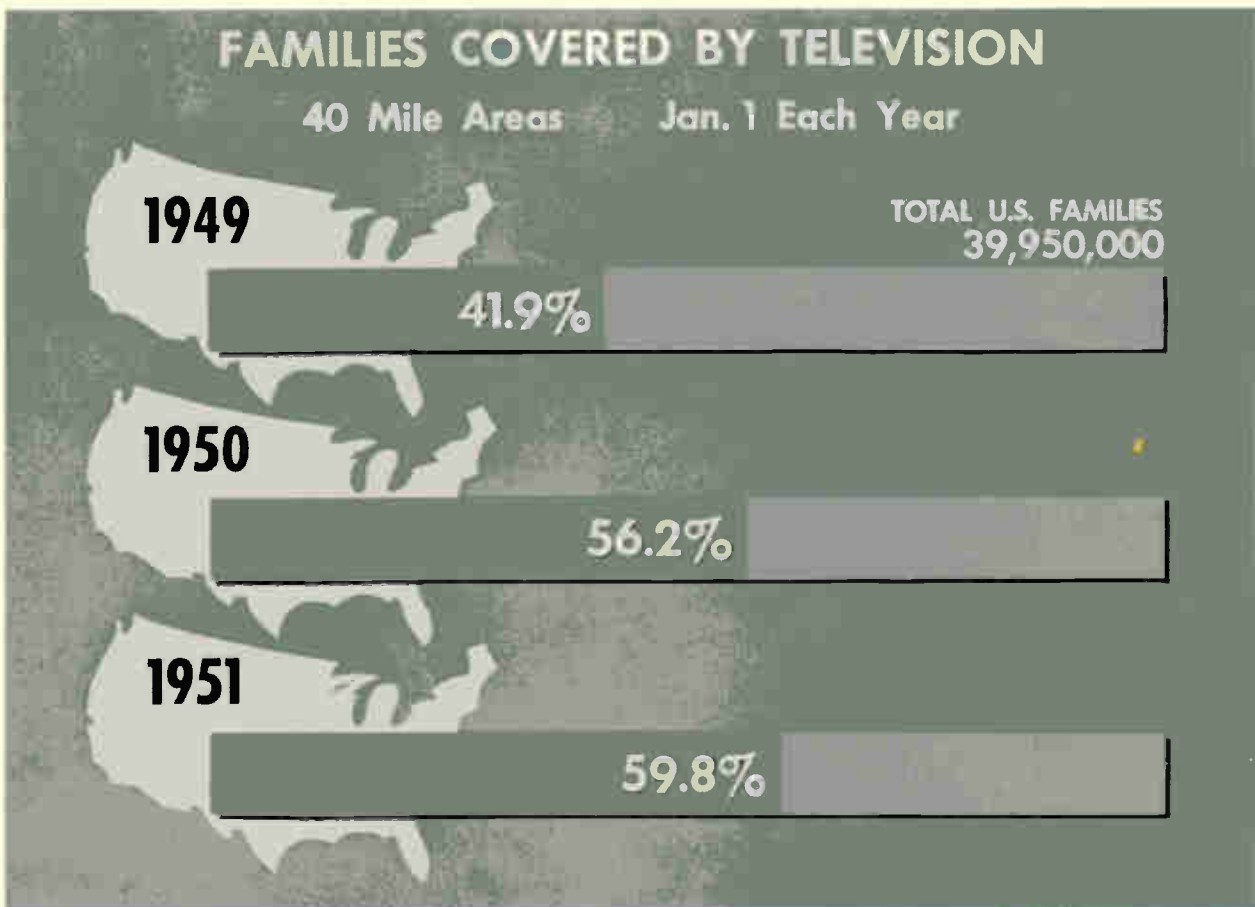


FIG. 3

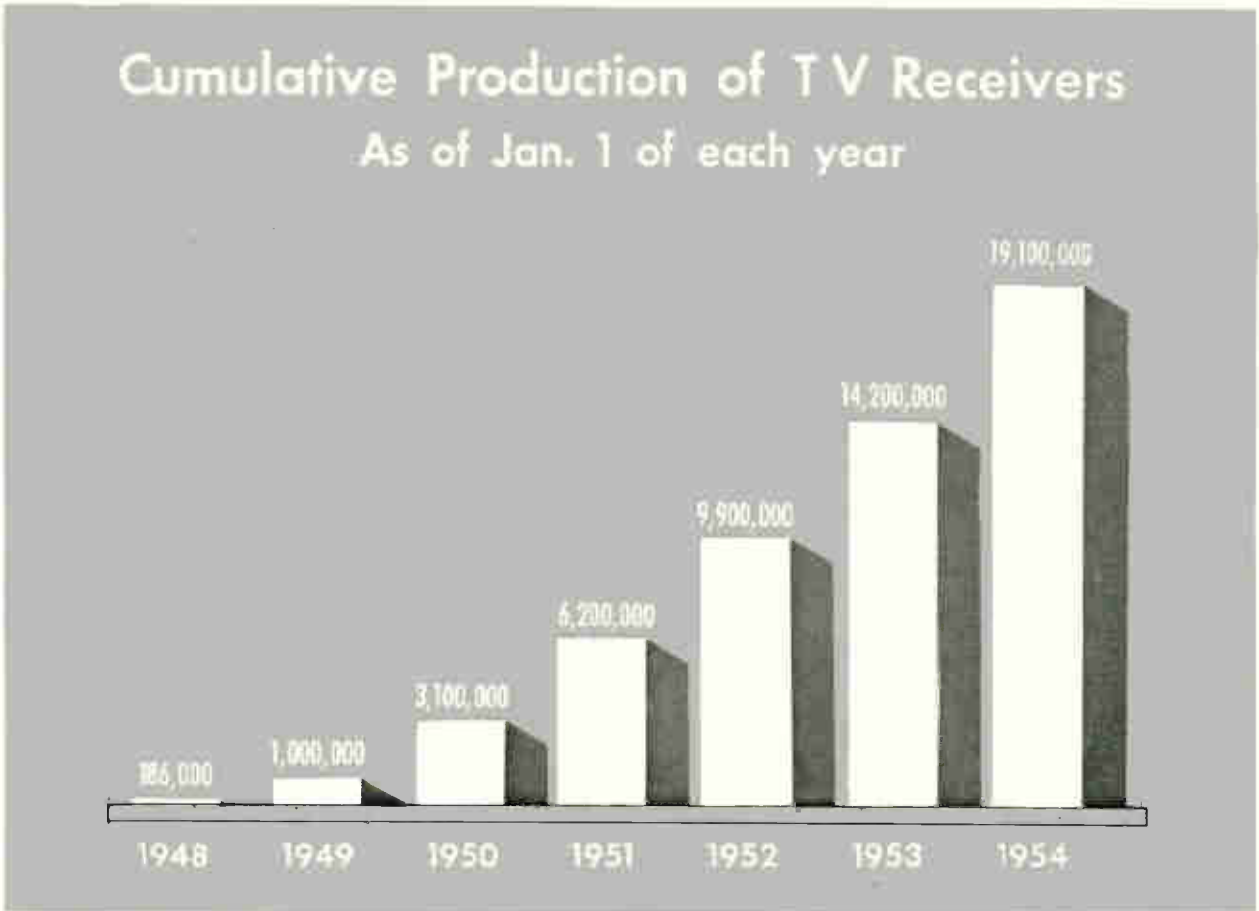
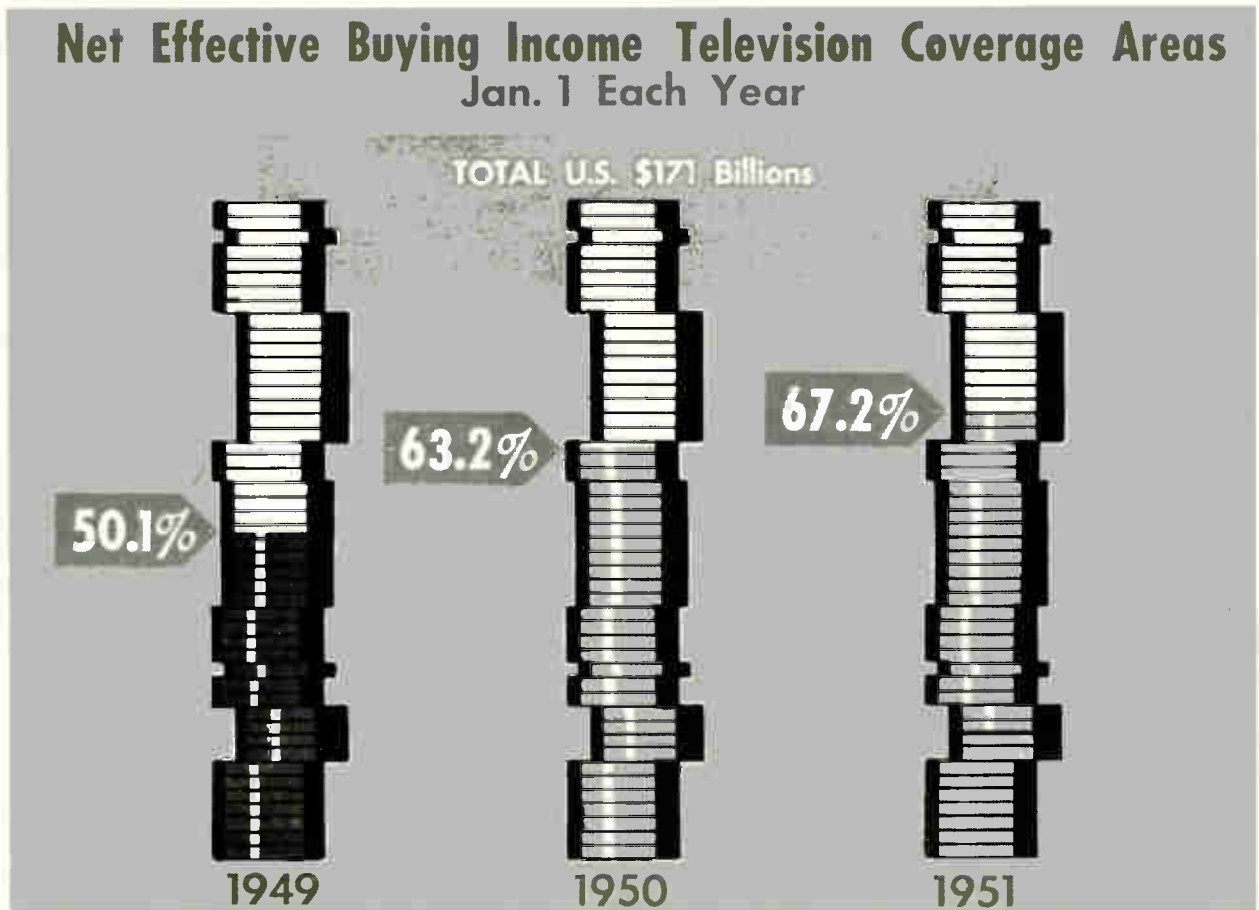


FIG. 4



# PRESENT INTERCITY TELEVISION CONNECTIONS

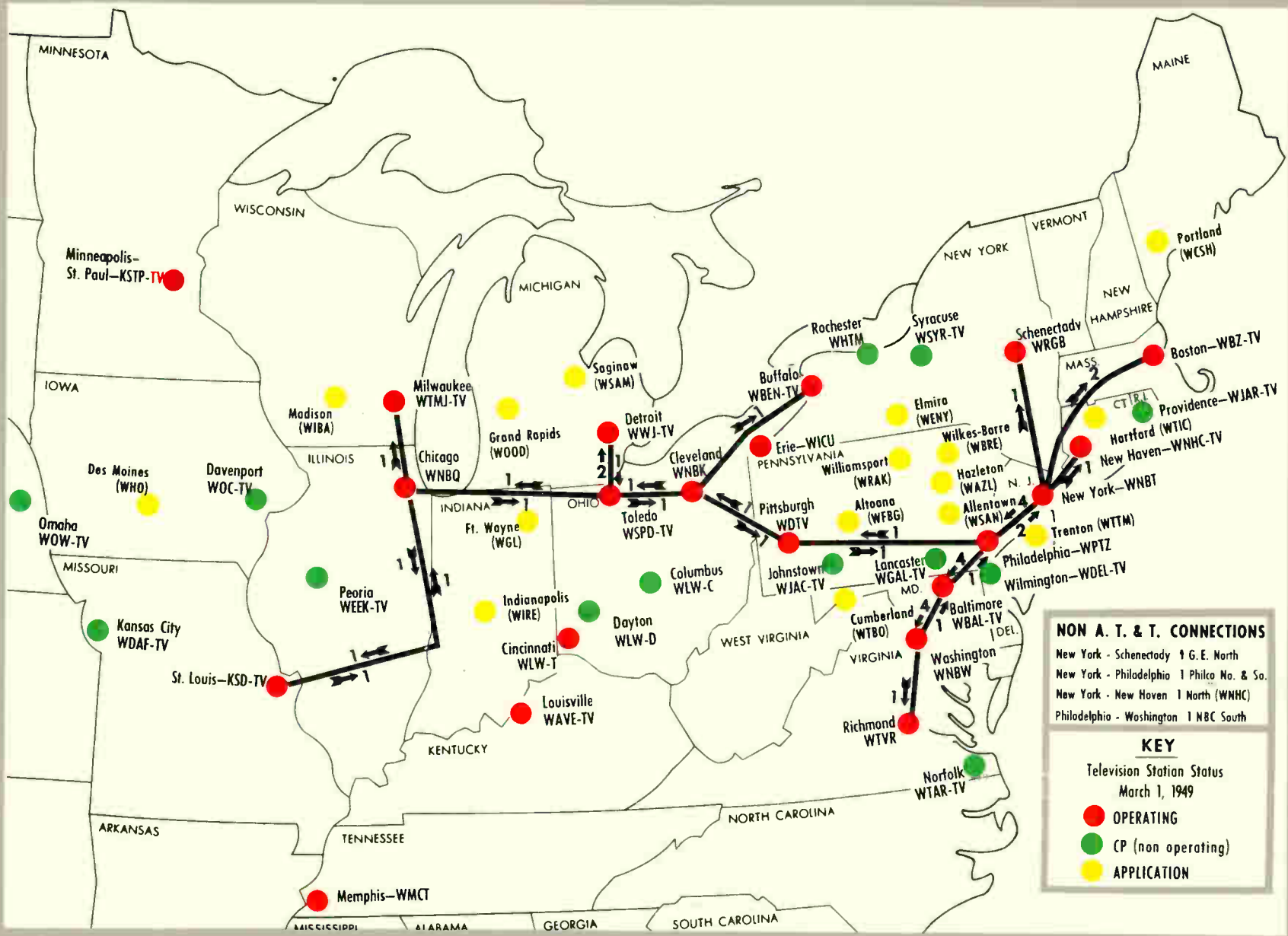


FIG. 5

# INTERCITY TELEVISION CONNECTIONS

## October 1, 1949

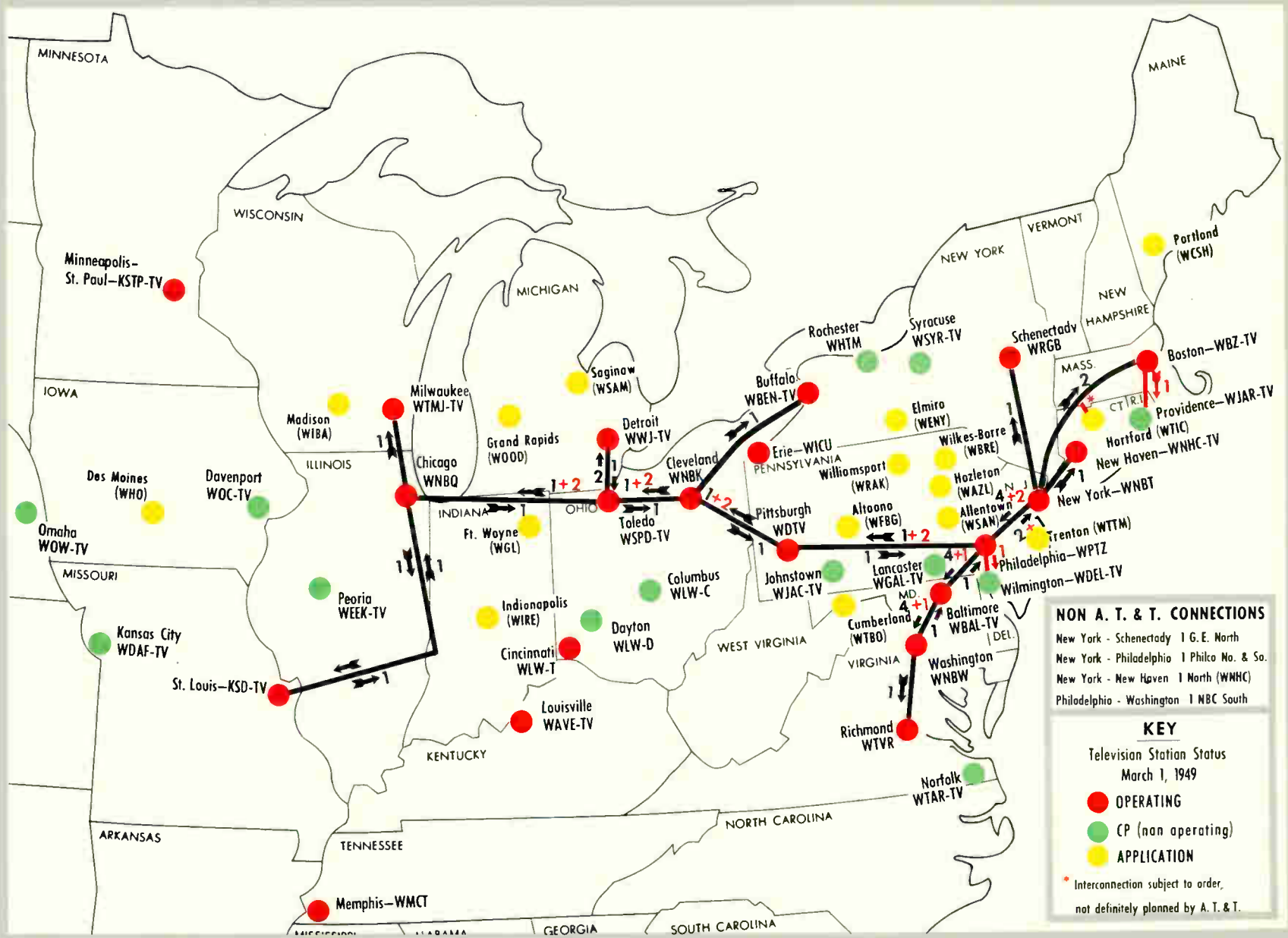


FIG. 6

# INTERCITY TELEVISION CONNECTIONS

## January 1, 1950

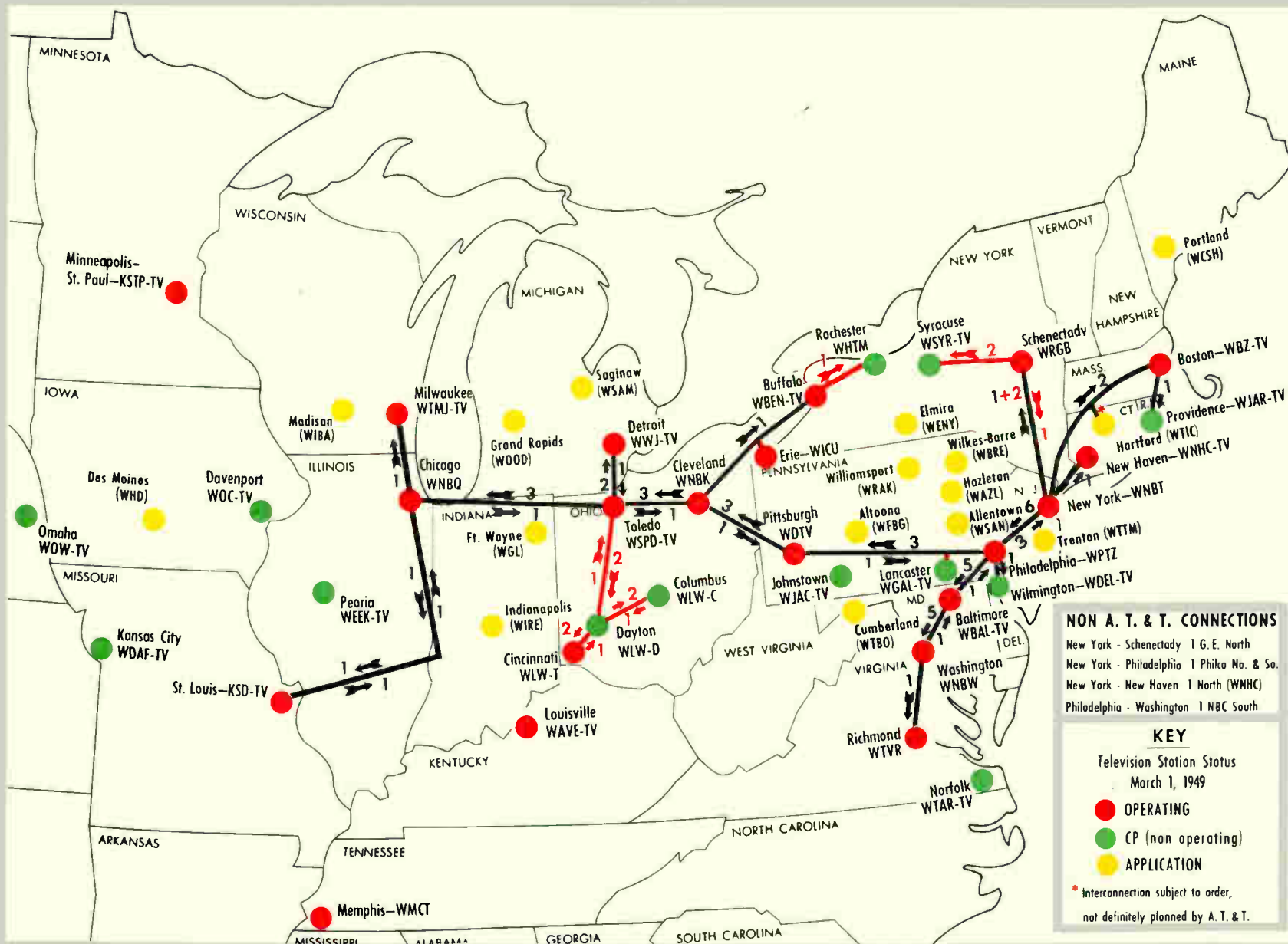


FIG. 7



# INTERCITY TELEVISION CONNECTIONS

## July 1, 1950

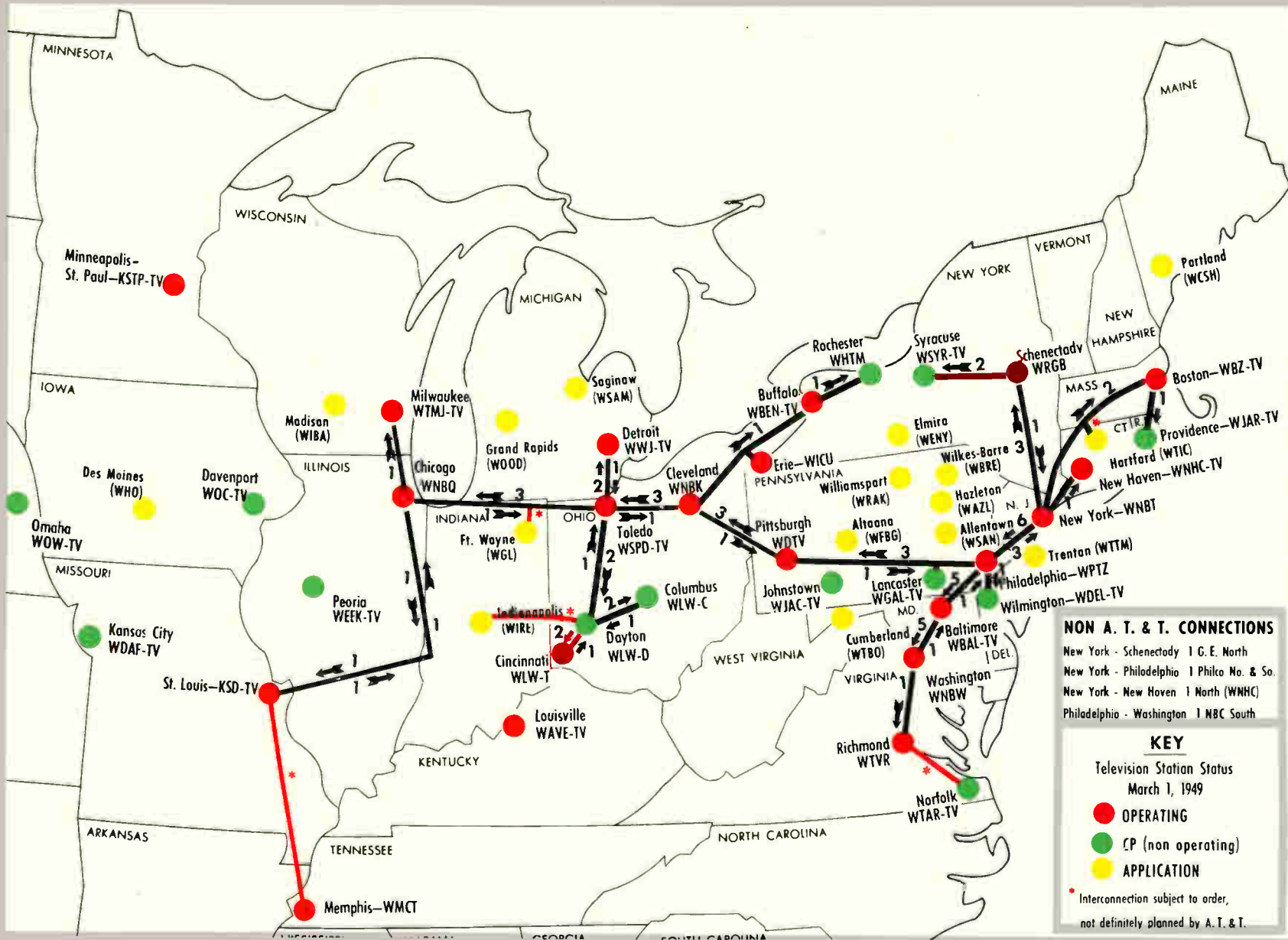


FIG. 8

# INTERCITY TELEVISION CONNECTIONS

January 1, 1951

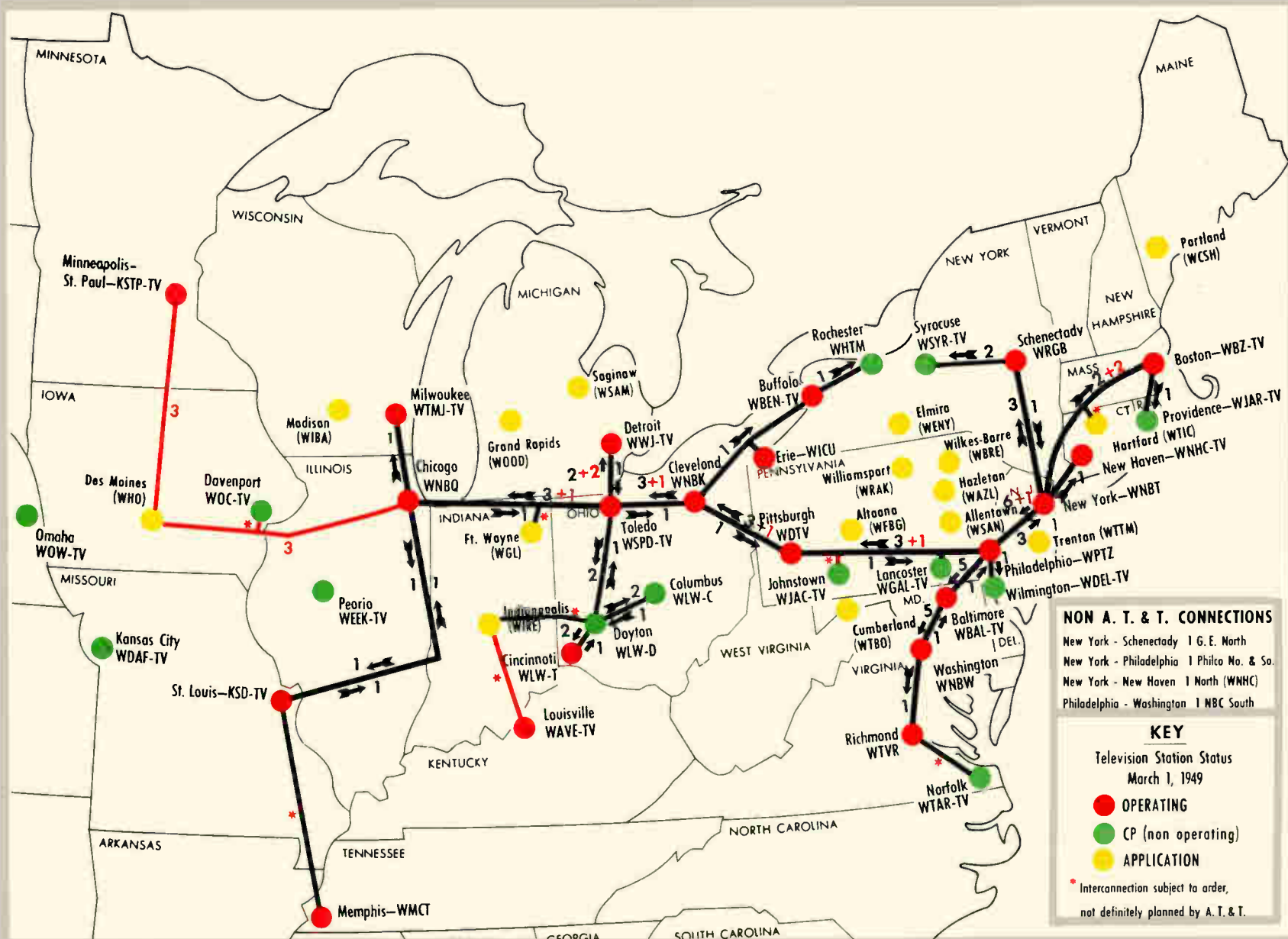


FIG. 9

# Probable Future Plans for Television Intercity Connections

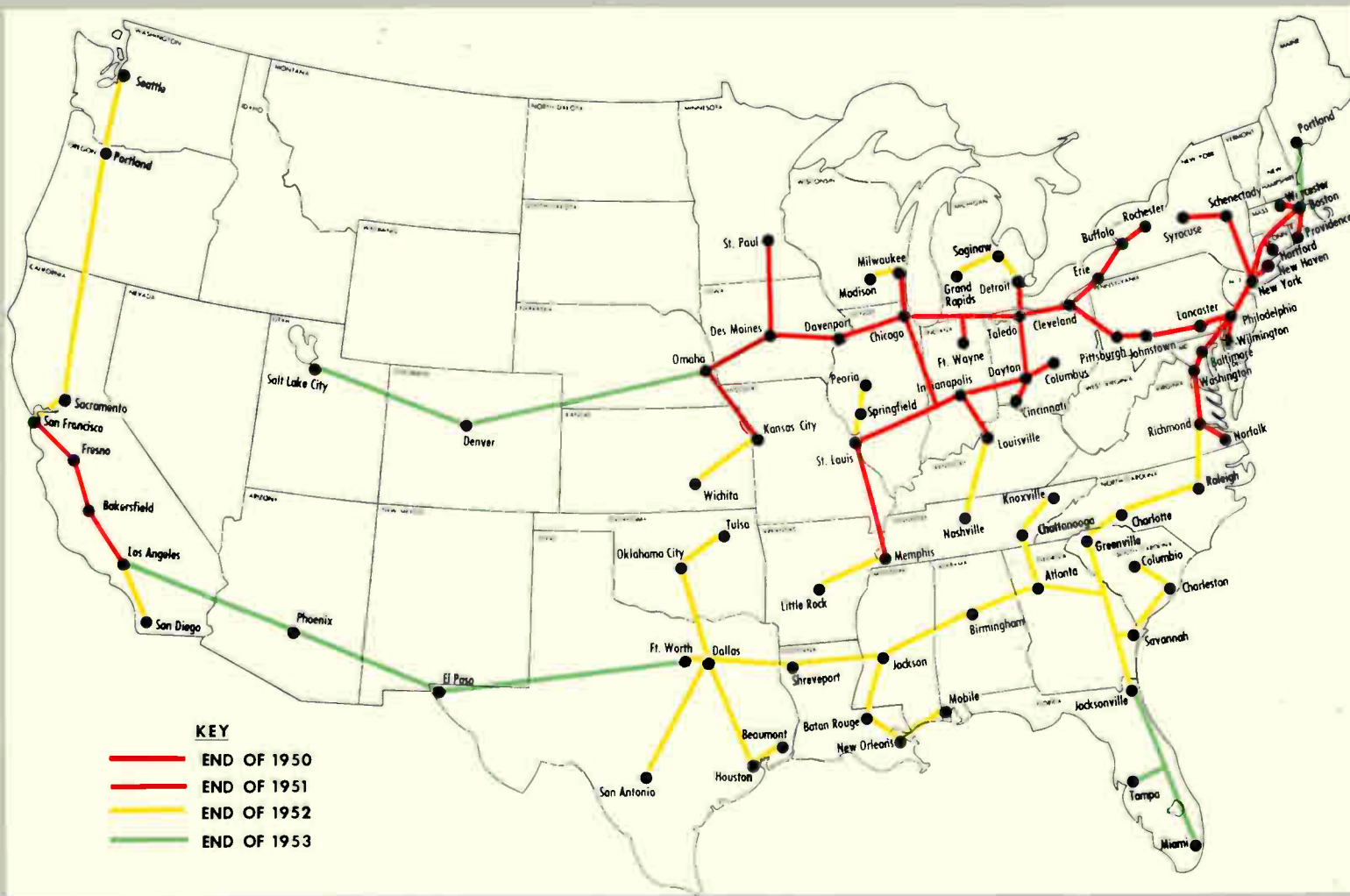


FIG. 10

FIG. 11

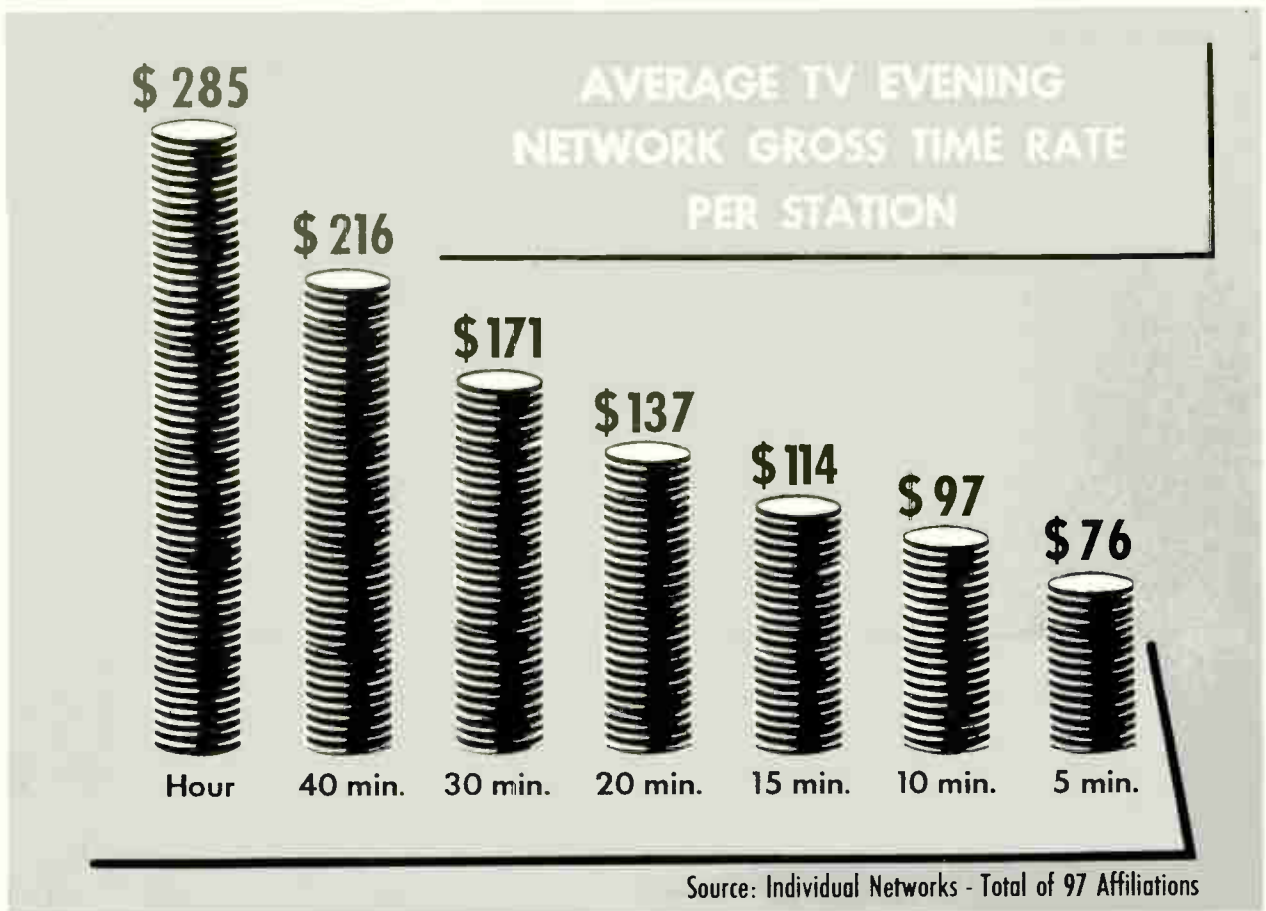


FIG. 12

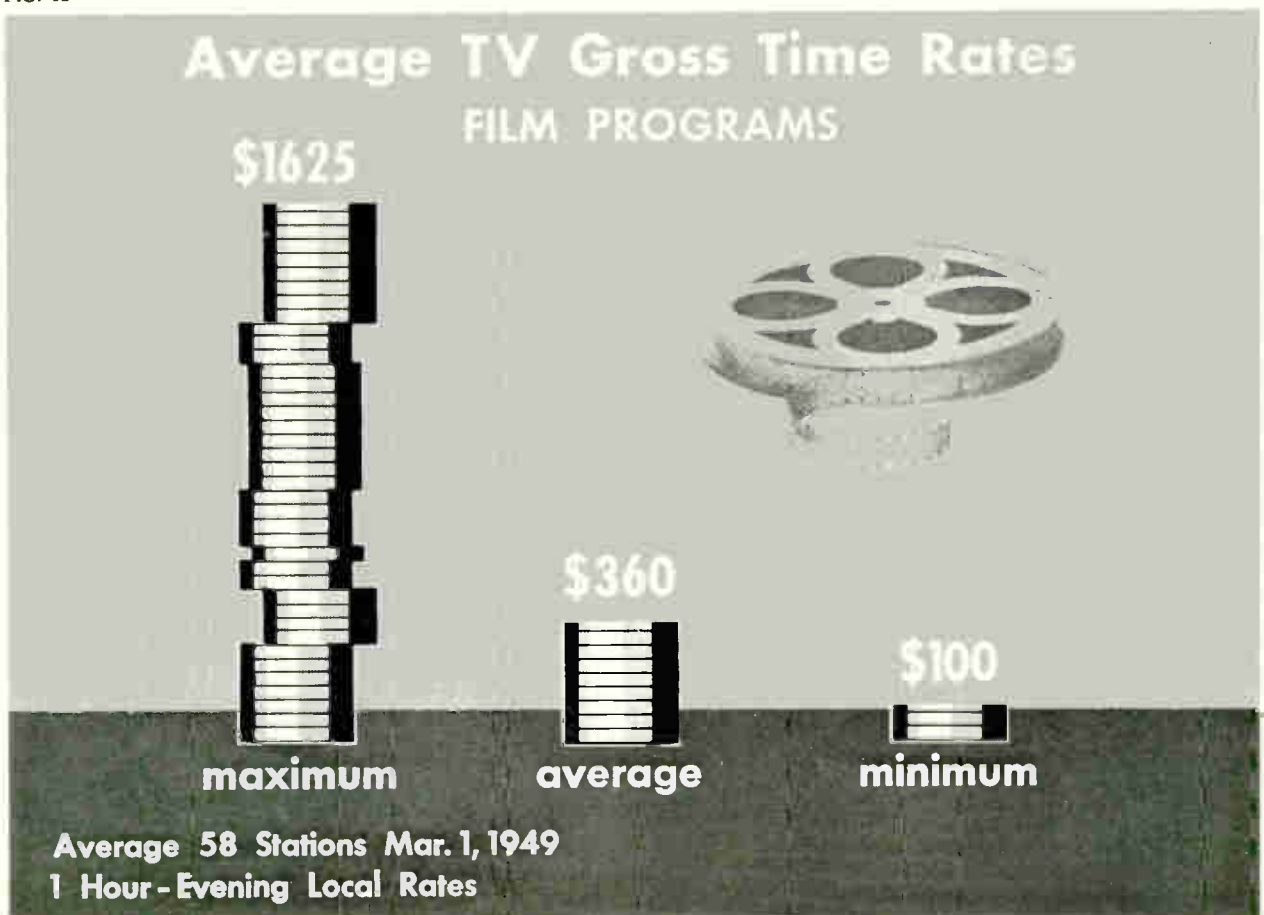


FIG. 13



FIG. 14

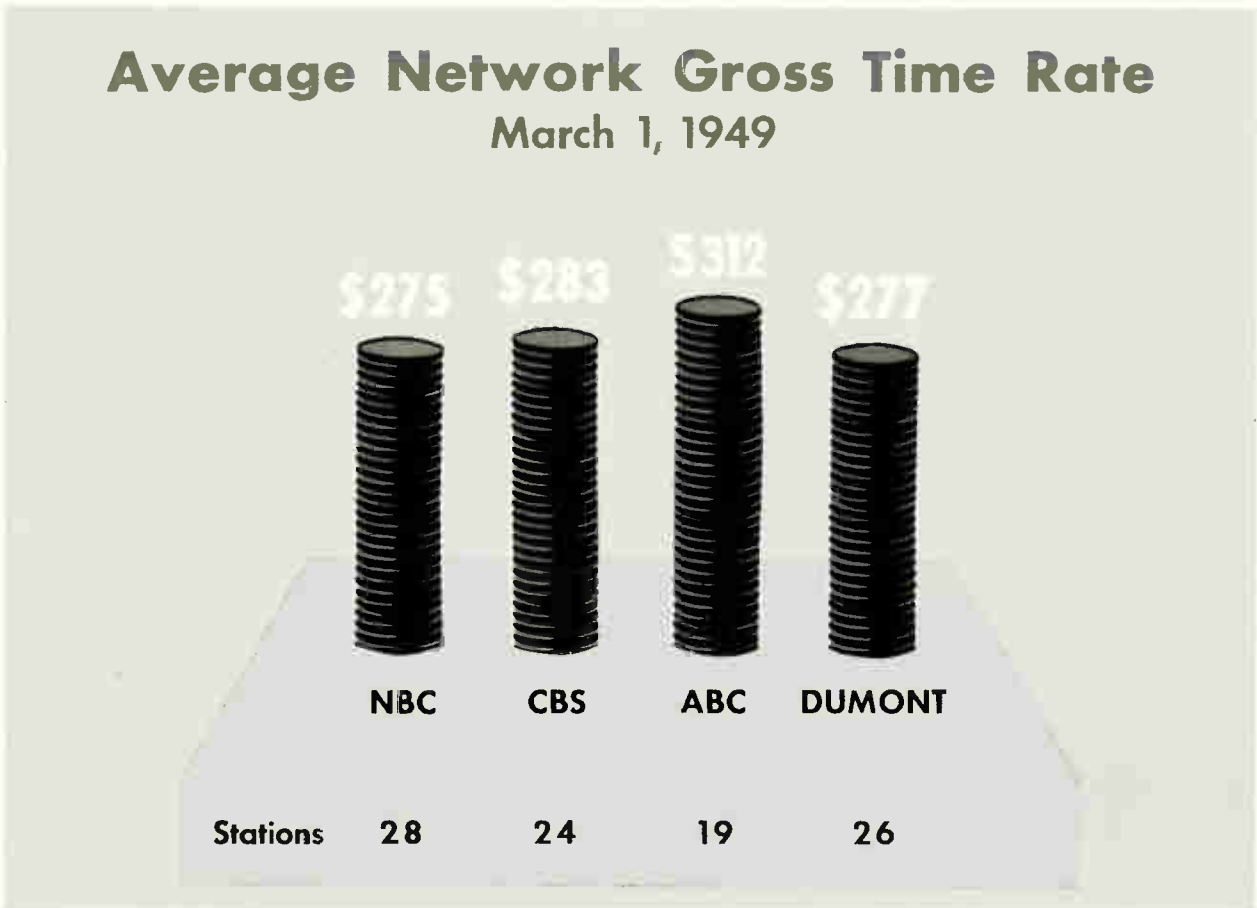


FIG. 15

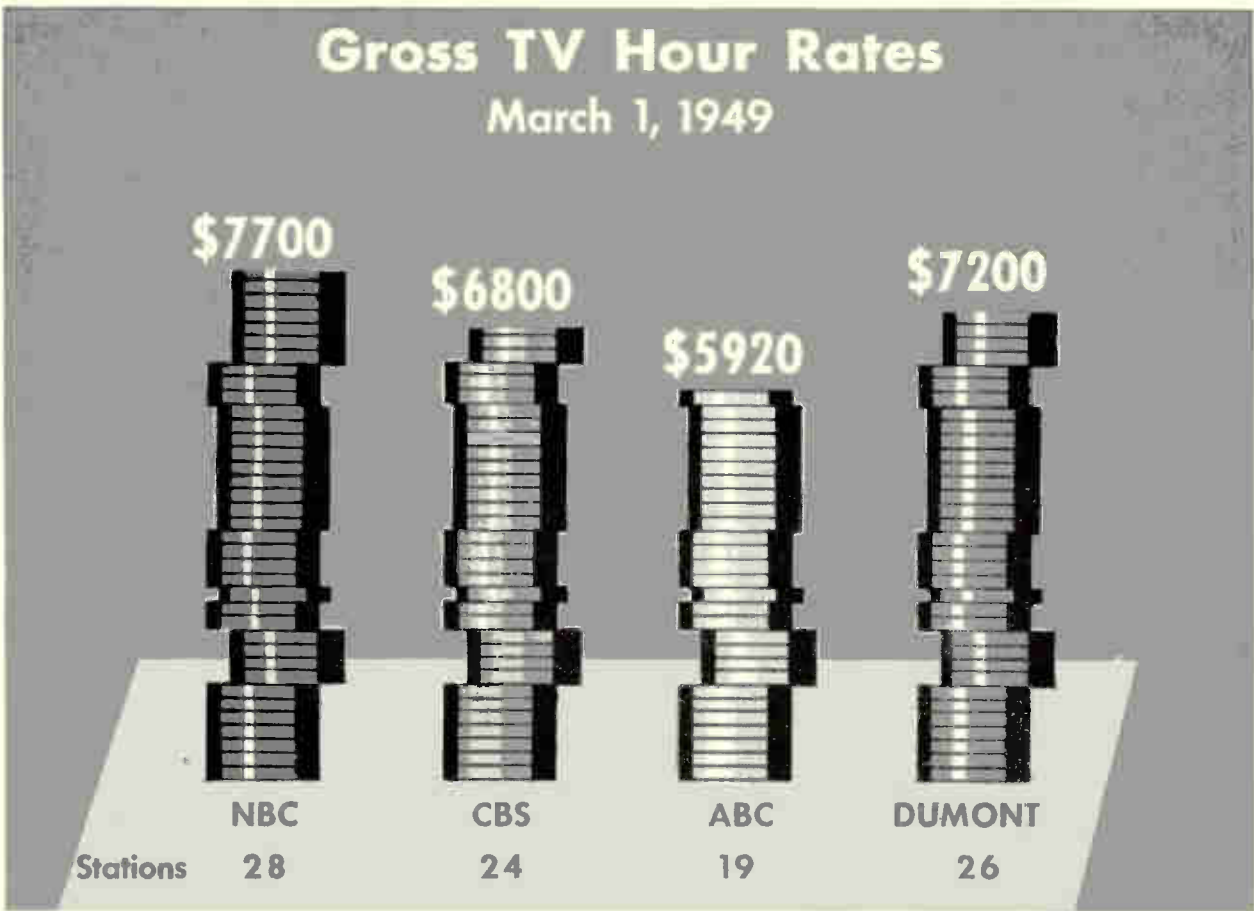
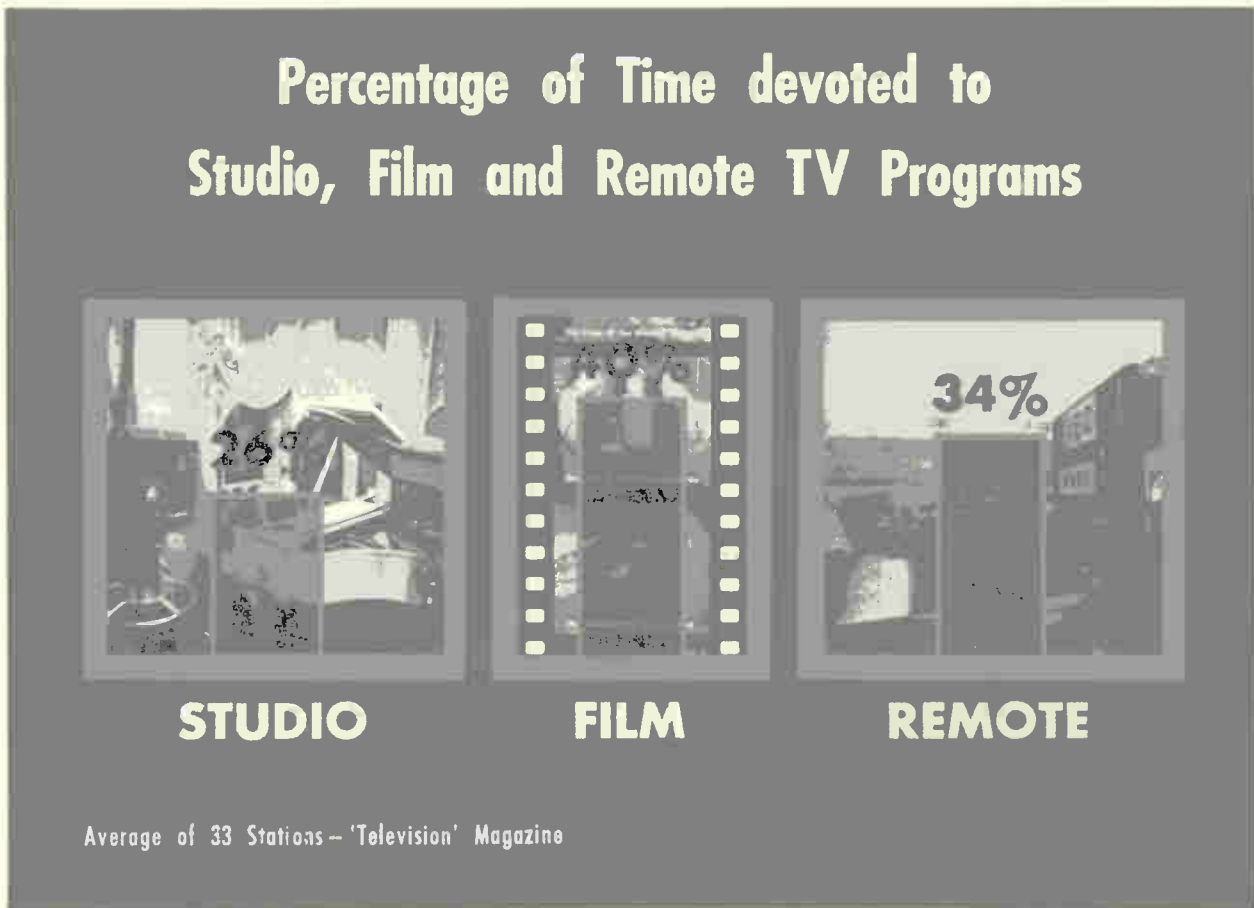


FIG. 16



# TV SET INSTALLATIONS - TOP TEN CITIES

March 1, 1949

New York



Philadelphia



Los Angeles



Chicago



Boston



Baltimore



Detroit



Washington



Cleveland



St. Louis



TOTAL  
INSTALLATIONS



FIG. 18



FIG. 19

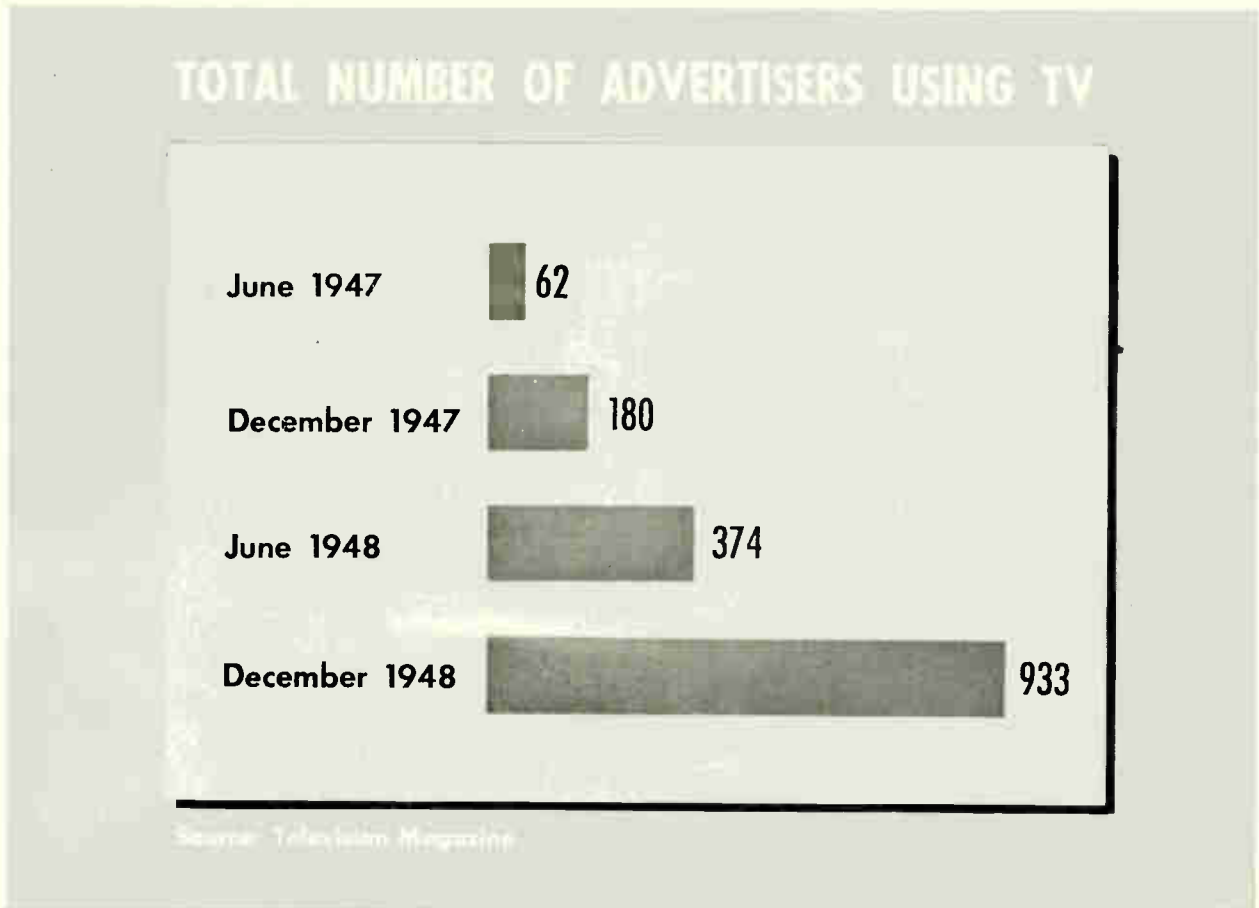




FIG. 20

# ESTIMATED GROSS TV TIME EXPENDITURES

## January 1949



Source: Pennington Report

FIG. 21

# Top Ten Sponsor Identifications

		STARTING DATE
Texaco Star Theatre - WNBT	96.0	June 8, 1948
Toast of the Town - WCBS-TV	91.9	June 20, 1948
Philco Television Playhouse - WNBT	87.7	Oct. 3, 1948
Kraft Television Theatre - WNBT	86.5	May 7, 1947
Amateur Hour - WABD	78.8	Dec. 1947
Bigelow Show - WNBT	72.1	Oct. 14, 1948
We, The People - WCBS-TV	70.6	June 1, 1948
Gulf Road Show - WNBT	61.2	Sept. 2, 1948
Stop Me . . . . . - WNBT	59.7	Mar. 26, 1948
Chevrolet on Broadway - WNBT	59.5	Sept. 27, 1948

Source: November Teleratings, C.E. Hooper

