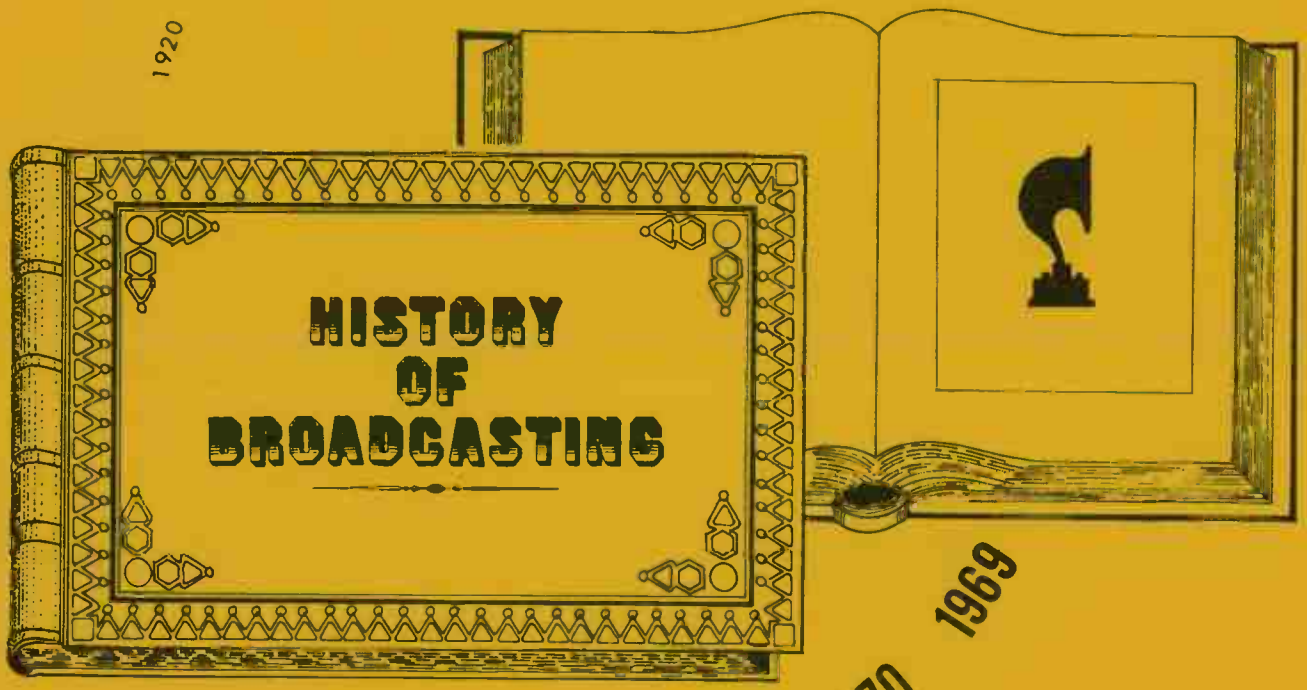
1920 1921 1922 1923 1924 1925



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BCA 323

HISTORY OF BROADCASTING IN AMERICA

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INTRODUCTION

Many of the class sessions in The History of American Broadcasting will be devoted to lectures using slides and audio tape. Since it is difficult to take notes in a darkened room, this series of summaries of these lectures has been prepared. By sheer coincidence the history falls into rather convenient seven year cycles and the lectures have been so designed.

Following the recap of each of these lectures there is given a list of Suggested Outside Reading. None of these books will be assigned excepting as outlined in the course Syllabus. The books listed apply primarily to the time period covered in each lecture. For the student seriously interested in the history of broadcasting, all are recommended. All major phases of broadcasting, excepting writing, producing and directing, are covered in these lists. Following this Introduction is a short list of particularly good general sources of historical data on broadcasting.

The first section of the text is a Glossary of Broadcasting Terms and Abbreviations. This is confined to those terms most commonly used in the management and administration areas of the industry. It is not intended to be memorized in toto, but rather to provide a convenient reference source. A list of the most used terms is included and this list can be the basis for examination questions.

The material for the slide and tape lectures has been drawn from a multitude of sources - The National Archives, the archives of CBS and NBC, various stations and persons in the industry. It is the objective of this course to convey something of the atmosphere and attitudes prevailing in the earlier years of broadcasting - years which few students have had the opportunity to experience.

Your suggestions and comments will be welcomed.

Charles Harriman Smith
Associate Professor
Broadcast Communication Arts

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SUGGESTED GENERAL OUTSIDE READING

Barnouw, Erik	"A Tower in Babel"	Radio to 1932
	"The Golden Web"	The Network Years-1934-1953
	"The Image Empire"	Broadcasting 1953-1970
	"Tube of Plenty"	Recap of above three plus TV to 1975
Campbell, Robert	"The Golden Years of Broadcasting"	50 years of Radio and TV at NBC
Kahn, Frank J.	"Documents of American Broadcasting"	
Lichty, Lawrence, and Malachi Topping	"American Broadcasting"	A sourcebook on the history of American broadcasting
Smythe, Ted C., and George A. Mastroianni	"Issues in Broadcasting"	

GLOSSARY OF BROADCASTING TERMS and
ABBREVIATIONS OF ORGANIZATIONS

This glossary is intended to familiarize students of broadcasting with the essential vocabulary of the administrative side of the broadcasting industry. No attempt has been made to include more than the irreducible minimum of terms applicable to engineering and production.

In the cases of organizations in the broadcasting industry, the full title, a brief description of function, and (where available) the date the group was founded, are shown. Several unions have evolved from older unions, and we deal here only with the current group. Also, many organizations of volunteer listening and viewing groups have merged, gone out of existence, or changed in some other significant fashion. Where possible, only current data are used. Dates in parentheses ( ) are the dates on which the various groups were founded.

Among the principal sources for terms to be included were: Marketing & Communications Media Dictionary, FCC 38th Annual Report, Broadcasting Yearbook--1977, Radio Alphabet, CBS, 1946, Television Factbook--1977, etc.

Many of the entries here will be useful to only a limited number of students who have an interest in some particular area of broadcasting operation. All of the terms should be familiar to anyone who looks to the management side of this industry.

Charles Harriman Smith
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GLOSSARY OF BROADCASTING TERMS

-A-

A	Grade most sought after in BCA courses.
AAAA	American Association of Advertising Agencies. Oldest of the "trade associations" for advertising agencies. (1917) Also: Associated Actors and Artistes of America.
ABA	American Bar Association. (1878)
ABC	American Broadcasting Company. Successor to The Blue Network in 1943. Also: Audit Bureau of Circulations, newspaper and magazine sponsored organization to validate circulation claims. (1914)
ACBB	American Council for Better Broadcasts. Organization of voluntary listening and viewing groups, designed to provide a measure of popular comment and criticism on current broadcasting. (1952)
ADI	Area of Dominant Influence. Those counties where the largest proportion of viewers/listeners report viewing/listening to the stations in the market city. Based on ARBITRON findings.
AFA	Advertising Federation of America. Similar to AAAA but membership drawn from among smaller agencies and characterized by considerable cooperation among the members. (1905)
AFM	American Federation of Musicians. Musicians union. (1896)
AFTRA	American Federation of Television and Radio Artists. Union of talent primarily, but in some instances technical personnel are also represented. (1937)
AGMA	American Guild of Musical Artists. Union of singers, choristers, choreographers, dancers, stage directors, stage managers, and instrumentalists. (1938)
AGVA	American Guild of Variety Artists. Union of performers principally in the vaudeville and night club fields. (1939)
AM	Amplitude Modulation. Transmission of information by varying the amplitude of the radio carrier wave. The earliest form of radio broadcasting.
AMST	Association of Maximum Service Telecasters. Trade organization of major market, maximum facility TV stations, principally "pre-freeze" stations. (1957)

-A- (continued)

ANA — Association of National Advertisers. Trade organization of manufacturers of nationally distributed and advertised products. (1910)

ANPA — American Newspaper Publishers Association. Trade organization of owners and publishers of newspapers, principally dailies. (1887)

AP — Associated Press. Nationwide and international news wire service available to newspapers and broadcasting stations. (1848)

APBE — Association for Professional Broadcasting Education. Organization of educators in the field of broadcasting. (1955) See BEA.

ARB — American Research Bureau. Major "rating" service in the individual TV market field, currently a division of Control Data Corporation. (1949) See ARBITRON.

ASCAP — American Society of Composers Authors and Publishers. Major organization for clearance of musical and dramatic copyrights. (1914)

AWRT — American Women in Radio and Television. Association of women employed by stations, networks, station reps, in media departments of advertising agencies, etc. (1951)

ACADEMY LEADER - Length of film with special markings (numbers ranging from 16 to 3, each 1 second apart) used for cueing up the attached film in the projector and for film picture alignment.

ACCOUNT EXECUTIVE - The individual in an advertising agency who administers the advertiser's account. The principal contact between advertising agency and client. Also, a salesperson at a broadcasting station.

ACROSS THE BOARD - A program or announcement scheduled at the same hour each day of the week (five or seven days). See also - STRIP.

ADJACENCIES — The programs (on the same station or network) immediately preceding and following a time period under consideration.

ADJUDICATORY PROCEEDING - An FCC hearing in a contested matter requiring a final decision to resolve the issue.

ADVERTISER — A company or individual who brings to the attention of the public the goods or services he can provide, via the various media.
National advertiser is one whose distribution and advertising are nationwide.
Regional advertiser is one whose distribution and advertising are limited to specific geographic areas.
Local advertiser is one whose business and advertising are limited to the market in which he is located.

-A- (continued)

ADVERTISING AGENCY - An independent business organization recognized by advertising media as qualified to give strategic counsel to advertisers, and to plan, prepare and place their advertising.

AFFILIATE A broadcasting station not owned by a network but carrying network programs under a contractual agreement with the network.

AFFIRMATIVE ACTION - The FCC requirement that broadcasting stations actively pursue a policy of minority hiring to bring about a balance in the station's personnel.

AGENCY COMMISSION - The fee paid to recognized advertising agencies by the advertising media bought. The standard fee is 15% of the net billing for space and time bought on behalf of clients.

AGENT A representative of performing artists and writers who negotiates performances for his clients. Customary fee is 10% of the gross paid the talent.

AIDED RECALL - See ROSTER STUDY.

ALLOCATION TABLE - The FCC's assignment of frequency, power, operating hours, etc., for all U.S. broadcasting stations.

AMORTIZATION - Retirement of a debt on an investment. Also, the schedule of retirement of equipment, akin to a depreciation schedule.

ANNOUNCEMENT A short advertising message. In broadcasting media, announcements vary in length from 8 to 60 seconds, 10 to 120 words. (In the 18th century, the name applied to all advertisements.)
See: CUT-IN, SPOT, STATION BREAK.

ARBITRON A major "rating" service in the individual market field. Reports on both radio and TV in most markets. Formerly known as American Research Bureau (ARB).

ASCERTAINMENT - Ascertainment of Community Needs. An FCC requirement that a broadcasting station actively seek to learn the needs of the community served by the station and to which the station can address its programming.

ASPECT RATIO Height and width of a television picture: three units high and four units wide.

AUDIENCE The persons or households reached by the broadcast media, and, increasingly applied to the print media.

AUDIENCE COMPOSITION - The number and kinds of people hearing or viewing a program via the broadcast media, usually classified by sex, age, income, family size, education, etc.

-A- (continued)

AUDIENCE FLOW - The statistical composition of the total audience to a specific program showing: the fractions of the whole (a) "inherited" from the station's preceding program, (b) transferred from another station, (c) tuned in for the first time. Basically, the sources of the program's audience at its start and the destination of that audience when the program ends.

AUDIENCE TURNOVER - The net number of different listeners or viewers of a given program in the course of a specific number of consecutive broadcasts; or, the rate at which a program accumulates listeners or viewers in the course of a series of broadcasts.

AUDIMETER The electro-mechanical device attached or adjacent to home TV receivers. Used in a sample of roughtly 1,200 TV homes to reflect the size of the audiences to network shows. All Audimeters are linked to a central computer via leased telephone lines. A service of the A.C. Nielsen Company, marketed as the Nielsen Television Index (NTI).

AVAILABLE AUDIENCE - The number of radio or TV homes in which one or more members of the family is found to be at home and awake during the specified time period.

AVAILABILITIES - Time periods available for spot advertising in radio and television. Commonly referred to as "avails" in the trade.

AVERAGE AUDIENCE - The percentage or number of radio or television homes tuned to a specific program during the average minute of its broadcast. Usually associated with the telephone coincidental type of survey.

-B-

B of A — Bureau of Advertising. The sales promotion arm of the ANPA. (1913)
Also: Bank of America.

BEA — Broadcast Education Association. An association of teachers of broadcasting skills, principally at the college level. Formerly APBE.

BMI — Broadcast Music Incorporated. Copyright licensing organization formed by the broadcast industry to compete with ASCAP for performing rights to music. (1939)

BPA — Broadcasters Promotion Association. Trade group of station, network and station representative promotion directors. (1956)

BRC — Broadcast Rating Council. Organization formed following the Harris Committee probe of the rating services to review and approve procedures of the broadcast rating services. (1963)

BAIT SWITCH — Advertising of a low-priced item only as a lure to sell a higher-priced item.

BARTER — The trading of station time for merchandise by exchanging identical invoices. As, trading out spots to the value of a station wagon needed for the news department. Also: An advertiser owned program offered a station in lieu of time charged and including some commercial time available to the station for local sale.

BILLBOARD — The short announcement at the beginning and/or the end of a participating program, listing the advertisers who sponsored that segment of the show.
Also: An outdoor advertising sign.

BLEED — Advertisement which extends beyond the usual border and to the trimmed edge of the page (magazine).
Also: The oozing of camera image into areas unwanted.

BLOCK — A set of consecutive time periods on the same day, or a strip of programming at the same time on several consecutive days.

BOND — A certificate acknowledging the indebtedness of a corporation for a specific amount (usually $1,000), on which a specified rate of interest will be paid, and the principal sum to be repaid on a specific date. Usually specific property of the corporation will be pledged to insure payment of the bonds.

-B- (continued)

BREAK — Announcement of the station call letters. Station Break Announcements are short commercials given between programs. See: ID

BROADCAST BAND - Term applied to the frequencies between 540 and 1,600 kHz. Can be used for any band of frequencies allocated for broadcasting.

BROADCAST EXPENSE - Total cost of operating a broadcasting station or network. (FCC)

BROADCAST INCOME - Broadcast Revenue less Broadcast Expense, before Federal Income Tax. (FCC)

BROADCAST REVENUES - Total Time Sales, less commissions paid, plus revenue from talent and rental of facilities. (FCC)

-C-

CARS — Community Antenna Relay Service. A microwave service owned by a CATV for the purpose of bringing in television signals for use over the system.

CATV — Community Antenna Television. System by which television signals are collected at a central point and distributed by subscribers by wire, for a fee. (1950?)

CBS, Inc. — Formerly the Columbia Broadcasting System. (1927)

CCBS — Clear Channel Broadcasting Service. Organization of radio stations assigned clear channels on the air. (1934)

CCTV — Closed Circuit Television. Television that is not broadcast to the general public, available only over sets connected by cable to the originating point. Widely used in schools, industry and for surveillance.

CNYT — Current New York Time.

CO — Company owned. Refers to broadcast stations owned by the networks. See O&O.

COMSAT — Manages current satellites which are owned by the International Telecommunications Satellite Consortium for reasons of international diplomacy. This management includes representation of AT&T, RCA, Western Union International (WUI) and International Telephone and Telegraph Company (ITT). Stock is publicly held.

CPB — Corporation for Public Broadcasting. Organization to provide and promote non-commercial broadcasting, funded by Federal money and grants from foundations as Ford, Carnegie, etc. (1967)

CST — Central Standard Time. One hour earlier than Eastern and two hours later than Pacific Standard Time.
CDST: Central Daylight Saving Time.

CAMERA CHAIN — Television camera and associated equipment, including power supply and a sync generator (serving all cameras).

CAMPAIGN — A series of related programs and/or announcements planned to achieve a given advertising objective. Also applies to ads in print media.

CANON 35 — A policy statement of the American Bar Association against permitting broadcasting equipment in courtrooms during trials or other judicial proceedings. Not a law, and remains at the option of the presiding judge in most states. (1937)

-C- (continued)

CARTRIDGES Magnetic tape housed in a plastic container. Can record stereo and as many as 8 tracks. Widely used in automated radio stations, manually operated stations, and available for playing at home and in automobiles. Tape is 1/4 inch wide and recording can be done at the speed of 3-3/4 or 7-1/2 inches per second.
Video Cartridges: One of several means of providing video content for home showing.

CASSETTES Audio tape in plastic containers capable of playing time of 1/4 to 1 hour per side. Tape is 1/8 inch wide and recording is at the rate of 1-7/8 inches per second. Also video cassettes.

CEASE AND DESIST - An order from a court or a commission to stop an action or activity and not indulge in it again.

CHANNEL A band of frequencies in the electromagnetic spectrum assigned to a given radio or TV station(s).
Clear Channel: in radio, one reserved for nighttime operation of a single high powered station;
Regional Channel: in radio, a channel shared by 5 to 15 stations so located geographically as to minimize interference with each other;
Local Channel: in radio, a channel occupied by 50 or more low powered stations separated, in some cases, by as little as 100 miles. In TV, the assignments of parts of the electromagnetic spectrum for station operation.
See: VHF, UHF.

CHROMA KEY An electronic matting process wherein two scenes are shown simultaneously, as, a newscaster appearing in front of an outdoor scene. Blue is most usually used for the matte since it is least often found in flesh tones.

CIRCULATION Generally assumed in broadcasting to be the number of families whose members listen to or watch a station or network of stations during some definite span of time (usually one or more times a week). In print media, generally the number of copies of the publication sold or distributed. In outdoor advertising the motorist, pedestrian or commuter traffic which passes a billboard location.

CLEAR TIME To arrange with a station to provide time, usually for a commercial program, frequently on a network.

CLUTTER Programming an excessive number of commercials or promotional announcements in succession.

COAXIAL CABLE A cable used for the transmission of television signals (among others) by means of a tube of conducting material surrounding, but insulated from, a central conductor.

-C- (continued)

COCHANNEL Use of the same channel by stations in different geographical areas. Not to be confused with "sharing."

COINCIDENTAL A method of measurement of the size of a program's audience by telephone calls to listeners and non-listeners, viewers and non-viewers, during the course of the program's actual time on the air. Occasionally done by personal interviewing. Yields Average Audience figures.

COMBINATION RATE - Special rates by newspapers for the use of both morning and evening editions (or Sunday). Magazines offer such rates for the use of special issues in addition to the regular issues. In broadcasting a combination rate is sometimes offered for the use of two or more stations of a single owner or of a voluntary group.

COMMERCIAL A program sponsored by one or more advertisers. The advertising message in a given program or announcement.

COMMERCIAL CREDIT - Specific mention of the sponsor or his product(s) on a program. Also specific acknowledgment to those to whom he may be indebted for elements in his program.

COMMON CARRIER - A firm, organization, or individual making wire or electronic communication services available for hire.

COMMON STOCK The securities of a corporation which usually carry voting rights but seldom are secured by any tangible property of the corporation. Holders share in the earnings of the corporation only after all prior obligations are paid.

COMPARATIVE HEARINGS - Hearings before the FCC for construction permits for broadcast stations in which the applicants' presentations are judged to determine which should be granted the right to operate the station.

COMPATIBLE COLOR - Color signals that can be received as black-and-white pictures on monochrome television sets. Generally used to mean that the color scheme has enough brightness contrast to reproduce on monochrome television with a good gray-scale contrast.

CONSENT DEGREE - An agreement to discontinue a challenged practice.

CONTOUR A line drawn on a map connecting points of equal signal strength (field strength contours) or points of equal elevation above sea level (elevation contours).

-C- (continued)

CO-OP — An arrangement by which a manufacturer of a nationally distributed item pays part of the advertising costs of a local merchant who mentions the product in his commercials. Also, ads placed jointly by two non-competing manufacturers to reach a common market.

COOPERATIVE PROGRAM - A network program sponsored in each station area by a local advertiser who usually pays for the time at local rates and shares the cost of the talent on a pro-rated basis.

COST PER THOUSAND (CPM) - The total cost for time and talent for a program, for time bought for a spot announcement, divided by the number of thousands of listeners/viewers reached.

COURTESY ANNOUNCEMENT - An Announcement crediting the advertiser(s) whose time is pre-empted by the broadcaster for use for a special program.

COVERS — In a book or magazine, the outside front and back covers and the inside front and back covers. Usually charged for at a premium rate.

COVERAGE — The area in which a station or network of stations can be heard or seen according to engineering standards.

CRAWL — Graphics (usually credit copy) that move slowly up the screen; usually mounted on a drum, which can also be called a "crawl."

CREDIT — Commercial passages in the playing script which mention the advertiser or his product(s), or acknowledge sources and ownership of program materials.

CUME — Verbal shorthand for "cumulative audience." The number of net (different) listeners or viewers of a program, a series of programs, a schedule of spot announcements.

CUT-IN — An unscheduled announcement of special interest inserted in a program under way. Also, the substitution of a special commercial announcement, different from the network commercial, in designated markets.

CUT-AWAY — Leaving a program during its course to accommodate a special announcement, usually a news bulletin.

Glossary of Broadcasting Terms

-D-

db — Decibel. A unit by which the loudness of sound is measured.

DB — Delayed Broadcast. Postponed airing of a program by means of an instantaneous recording made from the network line during the original broadcast.

DGA — Directors Guild of America. Union of directors, assistant directors, stage managers, and production assistants in the television and motion picture industries. (1935)
Also: Dramatists Guild of America. A union of composers, lyricists, and authors of any material used in live theatre.

DJ — Disc Jockey. The master of ceremonies of a program of transcribed music (records). He turns them over.

DAYTIME STATION - A broadcasting station licensed to operate only after sunrise and before sunset. Time which governs is local time and usually quoted by months of the year.

DEBENTURE — A security similar to a bond in that it acknowledges a specific debt, agrees to pay a definite rate of interest, and having an established maturity date, but not having any specific tangible property pledged for the payment of interest or principal.

DEMOGRAPHICS - Data to describe a population in terms of sex, age, occupation, race, etc.

DEPRECIATION - A lessening of value due to use or age.

DIALLINGS — The number of telephone interviews attempted during a coincidental survey of a broadcast audience.

DIARY METHOD — A technique of audience measurement in which the family or an individual keeps a diary-type record of stations and programs viewed or heard, and keeps the record while the listening or viewing is going on each day for one week. (1941)

DIRECTIONAL ANTENNA - An antenna designed to concentrate a station's signal in certain directions, reduce it in others.

DISCOUNT — A percentage reduction in the cost of broadcasting time which may be granted for such economies as total volume of time bought, size of network used, frequency of broadcasts, dollar volume, etc.

-D- (continued)

DOUBLE SPOTTING - Scheduling two commercials consecutively, usually during a station break.
See: Integrated Commercial, Clutter.

DOUBLE SPREAD - In print media, an ad occupying two facing pages.

DOUBLE SYSTEM SOUND - Pictures recorded on film, sound on tape and later combined on one film through printing.

DRIVE TIME The prime time for most radio stations today. Roughly 6-9am and 3-6pm when listeners in automobiles are most numerous.

DUPLICATED AUDIENCE - The audience common to two or more programs or announcements, usually of the same advertiser.

-E-

EEOC Equal Employment Opportunity Commission. Federal commission charged with enforcing the Equal Employment Opportunity law to prevent discrimination in hiring. (1972)

ENG Electronic News Gathering. Small portable video camera, video taping equipment and microwave capability to send the data to the station studio or transmitter for live transmission.

EST Eastern Standard Time. Usually the official time for the origination of network programs. One hour later than Central, two hours later than Mountain, and three hours later than Pacific Standard Time.
EDST: Eastern Daylight Saving Time.

ETV Educational television.

EDITORIAL A broadcast statement by an executive of a broadcasting station giving the management's point of view on a public issue.

ELECTRONIC EDITING - Inserting or assembling of portions on videotape through electronic means whereby the tape does not have to be physically cut.

ETHRITUS A hardening and inflammation of the eardrums due to continued listening to the loud speaker (in the home or at the station) when run at an excessively high level.

-E- (continued)

EVIDENTIARY HEARINGS - Proceedings before an FCC Hearing Examiner in which oral testimony is transcribed and documentary evidence received in accordance with established rules of law.

-F-

FAA — Federal Aviation Administration. A federal bureau frequently involved in matters of broadcast antenna construction as they affect the safety of aircraft. (1958)

FCC — Federal Communications Commission. Bureau charged with the regulation of all broadcast and common carrier systems (telephone and telegraph). (1934)

FDA — Food and Drug Administration. Agency charged with guarding the public in matters involving food and drug products. Collaborates with FCC in matters involving advertisers on the air. (1938)

FM — Frequency Modulation. Transmission of information by varying the frequency of the carrier wave. Operating in the VHF spectrum just above TV channel 6, FM broadcasts are characterized by high quality transmission of sound, nearly complete freedom from man-made and natural static, absence of long distance interference. FM is also used for the sound portion of TV and for most of the non-broadcast services.

FRC — Federal Radio Commission. First group exclusively charged with the regulation of radio and wireless broadcasting. (1927-1934)

FTC — Federal Trade Commission. Originally concerned with regulating industry in terms of monoply and restraint of trade. Currently very much concerned with issues involving truth in advertising. (1914)

-F- (continued)

FACING TEXT In magazines, positioning an ad to face a page of text or editorial matter. Frequently the advertiser is charged a premium for this position.

FACSIMILE BROADCASTING - A process of transmitting graphic material, such as pictures and printed material by radio or via wire connections as AP Photofax.

FAIRNESS DOCTRINE - A requirement by the FCC that whenever a broadcasting airs a view on a controversial subject the station must seek out spokespersons for alternative points of view and provide time for them to be heard. (1949)

FAMILY VIEWING HOUR - An agreement between broadcasters and the FCC to air only non-violent programs during the "family hour" - the earliest hour of prime time (8-9pm in most instances).

FEEDBACK (1) Video: wild streaks and flashes on the monitor screen caused by the accidental re-entry of a video signal into the switcher and subsequent overamplification. (2) Audio: piercing squeals from the loudspeaker, caused by the accidental re-entry of the loudspeaker sound into the microphone and subsequent overamplification. (3) Communication: reaction of the receiver of a communication back to the communication source.

FIELD STRENGTH - (Field Intensity). The strength of a radio signal at any given location. Usually expressed in millivolts per meter of antenna. Usually mapped in closed curve contours.

FIXED SERVICE - Short range television transmission on the 2500 mHz band; generally used for closed circuit television transmission.

FLACK A publicity writer. Publicity material.

FLAT RATE A charge for a unit of space or time not subject to any discounts.

FLIGHT A short, intensive campaign of spot announcements by an advertiser.

FLOOR MANAGER In charge in the studio during production; a vital link between the director and talent; cues talent and supervises all floor activities during telecast; also called stage manager or floor director.

FREEBIE See "PLUG."

FULL NET A program fed to all of the stations of a network.

FULL-TIME STATION - A broadcasting station licensed to operate 24 hours a day.

-G-

GLITCH An unwanted, random, extraneous noise on an audio tape or film sound track.
Also: noise disturbance in the video information.

"GO PUBLIC" Listing the stock of a company for sale to the general public on one of the major stock exchanges or over-the-counter.

GRADE "A" CONTOUR - A line drawn on a map connecting points of equal signal strength or clarity for a TV transmitter. Within this perimeter reception is expected to meet or exceed the standard. For example: within the grade "A" contour of a station, a minimum of 70% of the viewing locations, with an antenna 30 feet high, may expect satisfactory reception 90% of the time.

GRADE "B" CONTOUR - A perimeter similar to the grade "A" but plotted at a greater distance from the transmitter, with a corresponding decrease in signal strength. On the grade "B" contour, a minimum of 50% of the viewing locations, with an antenna 30 feet high, may expect satisfactory reception 90% of the time.

GRANDFATHER RIGHTS - From time to time the FCC changes its rules and makes certain new conditions applicable to stations thereafter licensed, but may permit stations already licensed to continue under the old conditions. The latter stations are said to have "Grandfather Rights."

GROUNDWAVE Radio signals traveling along and over the surface of the earth. The higher frequencies tend less to follow the earth's curvature and weaken rapidly beyond the line of sight.

Glossary of Broadcasting Terms

-I-

IATSE — International Alliance of Theatrical Stage Employees. Primarily a union of stage hands, but some technical personnel are included in some contracts. Motion Picture projectionists are also covered. (1893)

IBEW — International Brotherhood of Electrical Workers. Union principally of technical employees, but occasionally some talent jobs are included. (1891)

IBT — International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America. A branch of this union has jurisdiction over studio transportation drivers, chauffeurs and helpers for motion pictures, theatre, television, and concert transports. (1901)

ID — Station or sponsor identification, aural and/or visual.

INTELSAT — International Telecommunications Satellite Consortium. (1964)

IPA — International Phonetic Alphabet. A system for standardizing pronunciation of words in all languages by assigning written symbols to all of the speech sounds of the major languages of the world.

IRTS — International Radio and Television Society.

ITU — International Telecommunications Union. World-wide agency for the control of international allocation of space in the electromagnetic spectrum. (1932)

ITVA — Industrial Television Association. Trade group of businesses using non-broadcast video facilities to produce training material, presentations, house organs, etc.

IMAGE-ORTHICON - (I-O) Very sensitive camera pickup tube.

INCH — In newspapers, advertising space one column wide and one inch deep, corresponding to 14 lines of agate (5½ point) type. Usual unit in quoting rates for small town papers.

INDEPENDENT STATION - A radio or TV station having no affiliation contract with any network.

INHERITED AUDIENCE - The portion of a program's audience which heard or watched the preceding program on the same station.

INSTITUTIONAL - A program designed primarily to build good will and confidence in the sponsor, secondarily to build sales.

Glossary of Broadcasting Terms

-H-

HUT — Homes Using Television. The number or percent of TV homes where TV sets are found to be turned on at a particular time.

HARMONIC INTERFERENCE - Interference caused by a spurious wave which occurs on a frequency two, three, or four times the proper (fundamental) frequency of the signal. Example: close to the transmitter a radio station on 640 mHz may cause interference with a nearby station on 1280 mHz.

HEARINGS — Adjudicatory proceedings before a court or regulatory commission.

HELICAL SCAN RECORDER - A recorder which registers video information in a diagonal track on magnetic tape.

HIATUS — A break in the continuity of a year 'round schedule of advertising which does not jeopardize the advertiser's discount position. Usually in the summer, usually for eight weeks.

HIGH BAND RECORDING - A recording made through use of high frequencies to eliminate noise in the recorded information.

HOOK — A program device used to attract tangible response from the audience, e.g., an offer, a contest, a prize, etc.

HIGHWAY BULLETIN - A painted display situated along a well-traveled road and measuring 12½ feet high by 42 feet long.

HOOPERATING — A term used to express the finding of the C. E. Hooper audience measurement service for an individual program.

-I- (continued)

INTEGRATED COMMERCIAL - A commercial built into the structure of a program without pause or other separation from the program itself. Also the advertising of two related products of the same advertiser in a single commercial.

INTERFERENCE Anything which interferes with proper reception of a station's signal, e.g., static from near or distant storms, local electrical disturbances (elevator motors, power lines, household appliances, etc.), other stations' signals.

ISLAND POSITION - In print media, an ad with non-related reading matter adjacent on two or more sides.

-K-

K First letter in the call letters of nearly all U. S. broadcasting stations located west of the Mississippi River.

kHz Kilo Hertz. Unit of frequency equal to 1,000 cycles per second. Replaces earlier "kilocycle."

KILOCYCLE Unit of frequency equal to 1,000 cycles per second. Now obsolete.
See: kHz

KILOWATT Unit of power equal to 1,000 watts, or 1.34 horsepower.

KINESCOPE Television program filmed directly from a kinescope tube (small type of TV picture tube). Resulting 16mm film can be shown on any standard projector.

Glossary of Broadcasting Terms

-L-

LEADER — Blank tape or film preceding and following the program content. Academy Leader has "countdown" numbers from 16 to 3 (seconds) to indicate time before the next sequence appears. "Beeps" are used on audio tape.

LISTENING AREA - The area in which a station or network is listened to by a measured number of families.

LIBEL — Anything defamatory printed with malice which tends to injure or misrepresent. Applies to publications and to broadcasting.

LICENSE — Permission from the FCC to operate a broadcasting facility "in the public interest, convenience and necessity", on a specified frequency, with approved equipment for a period of three years (1977). License includes no property right to the licensee.

LICENSE CHALLENGE - Action brought by an individual group or corporation questioning the legality of the operation of a station by its present licensee.

LICENSE RENEWAL - Application of a licensee for renewal of his license for another three years. Requires documentation that the licensee has operated his station within the letter and spirit of the conditions of his present license.

LIVE — A program actually performed in sequence by people -- in contrast to a recording of a previous performance, not necessarily in sequence.

LIVE CAMPAIGN - A series of programs or announcements by living performers, as contrasted to recordings.

LOG — At a broadcast station, a detailed record of the programs broadcast; at a broadcast transmitter, a record of the meter readings and other measurements required by the FCC to be taken at regular intervals. In two-way radio communication, a record of the stations with which a station has been in contact; amateur as well as commercial radio operators are required by law to keep a log.

LOGO — Trade symbol. Examples: the MGM lion, the CBS eye, the Mutual of Omaha Indian head.

-M-

MBS — Mutual Broadcasting System. Radio network in which affiliated stations are the "stockholders" of the network. (1934)

mHz — Mega Hertz. Unit of frequency equal to 1,000,000 cycles per second. Replaces earlier term "megacycle."

MPA — Magazine Publishers Association.

MST — Mountain Standard Time. Two hours earlier than Eastern, one hour earlier than Central and one hour later than Pacific Standard Time.
MDST: Mountain Daylight Saving Time.

MAGNETIC TRACK - Magnetic sound track on film; a small audio track running alongside the film frames, opposite the sprocket holes.
See: Optical Track.

MAKE GOOD — An offer to an advertiser of comparable facilities as a substitute for a program or announcement cancelled because of an emergency, or missed because of employee error.

MAT — Material pressed to form a mold for castings to be used in printing. Widely used by network and station promotion departments for ads and stories to be run in local markets.

MAYFLOWER DECISION - The pronouncement by the FCC in 1941 forbidding stations to editorialize. Rescinded in 1949 by the "Fairness Doctrine."

MEDIAN — The middle item in a ranked numerical listing (of program ratings, for instance) in which half the items are larger and half the items smaller than the median.

MEGACYCLE — Unit of frequency equal to 1,000,000 cycles per second. Now obsolete.
See: mHz

-M- (continued)

MICROWAVE POINT-TO-POINT STATION - A fixed position station which receives a signal (radio, TV, telephone, etc.) and beams it to the next microwave station on frequencies above 952 mHz. A signal relay system.

MILLINE RATE - A measure of value in buying newspaper space. It is the cost of one line of advertising multiplied by 1,000,000 and divided by the circulation of the newspaper.

MULTIPLEX OPERATION - Simultaneous transmission of two or more signals on a single frequency.

-N-

NAB — National Association of Broadcasters. Broadcasting trade organization. (1923)

NABB — National Association for Better Broadcasting.

NABET — National Association of Broadcast Employees and Technicians. Formerly "Engineers." Membership is principally technical, though some talent is represented in some station contracts. (1933)

NAEB — National Association of Educational Broadcasters. (1925)

-N- (continued)

NAFB — National Association of Farm Broadcasters. Originally RFD (Radio Farm Directors). Association of station and network farm directors. ( )

NAFMB — National Association of FM Broadcasters. (1958)

NATAS — National Academy of Television Arts and Science. Originators of the Emmy Awards. (1948)

NBC — The National Broadcasting Company. A subsidiary of Radio Corporation of America. (1926)

NCBA — Northern California Broadcasters Association.

NCCB — National Citizens Committee for Broadcasting.

NCTA — National Community Television Association. Trade group of cable TV owners and operators. (1950)

NET — National Educational Television. A national program service for non-commercial and educational stations. (1953)

NSI — Nielsen Station Index. Reports on TV audience size in individual markets. (1954)

NTI — Nielsen Television Index. National network "rating" service of the A. C. Nielsen Company. (1948)

NETWORK — Multiple broadcasting stations linked by wire, coaxial cable or microwave.
Coast-to-Coast Network: A group of stations covering all or the greater part of the U. S.
Regional Network: A limited group of stations linked to cover a particular section of the country.
Split Network: Selected stations of a network linked to meet a specific distribution or advertising problem.

NOTICE OF PROPOSED RULE MAKING - A document released by the FCC advising the public of a proposed rule change and inviting comments for and against the proposal to assist the Commission in making a sound decision.

-O-

O & O — A station owned and operated by a network. Sometimes referred to as a "CO" for "company owned" station.

OPEIU — Office and Professional Employees International Union. (1945)

OTO — One time only. Identification term used in sales orders and station logs.

OFF-NETWORK RUN - Releasing a network program at the conclusion of its run to individual stations on a syndicated basis.

OPEN END — Material for broadcasting suitable for sponsors in different areas, with provision for incorporation of local advertising.

OPTICAL TRACK - Optical sound track; variations of black and white photographed on the film and converted into electrical impulses; there are two kinds of optical track: variable density and variable width.
See: Magnetic Track.

OPTION TIME — Time periods in which, by contract, a network was given prior right to feed programs to affiliates.

-P-

PBL — Public Broadcasting Laboratory. Experimental programming for non-commercial stations funded by the Ford Foundation. (1967)

PBS — Public Broadcasting Service. Distribution system and funding agent for non-commercial broadcasts. (1969)

PI — Per Inquiry. Direct selling over the air in which the station retains part of the purchase price from each order, in lieu of payment for the station time at card rates.

POP — Point of Purchase. Advertising done where the merchandise is physically offered for sale, as display racks, posters, etc. Also, unwanted sound resulting from poor microphone technique.

PSA — Public Service Announcement. Unpaid announcements run by a station to promote a subject of general public interest.

PST — Pacific Standard Time. Three hours earlier than Eastern, two hours earlier than Central and one hour earlier than Mountain Standard Time.
PDST: Pacific Daylight Saving Time.

PACKAGE — A program, series of programs or group of films bought by a station or advertiser as a unit (usually for a lump sum), which includes all components, all ready to broadcast.

PARTICIPATING PROGRAM - A program in which more than one advertiser buys time.

PART-TIME STATION - One which is licensed to broadcast only during certain hours of the day. Now quite rare.

PAY CABLE — Exclusive program service, principally first run movies, sports events, available to subscribers of some cable systems for an additional fee.

PAY TV — A system whereby subscribers to the service are provided programs not available over the air for a per program (or complete service) charge.
See: STV

PAYOLA — Fee or gifts to a disc jockey by a record distributor in return for extensive promotion on the air. Illegal.

PER PROGRAM BASIS - Loose agreement between a station and a network providing for occasional programs of the network to be carried. Not an affiliation contract.

PETITION TO DENY - A petition to the FCC by community groups or an individual to refuse to renew a station's license because of alleged infractions of the FCC policies.

PIGGYBACK ANNOUNCEMENTS - Two commercials for two different, unrelated products of the same advertiser encompassed within a single announcement.
See: Integrated Commercial.

-P- (continued)

PILOT — First film in a projected syndicated series, intended for showing to prospective buyers.

PITCHMAN — High pressure announcer who delivers commercial copy like a sideshow barker.

PLUG — The mention of the name of a program or a product not sponsoring the program. Also, loosely, the commercial. See: Freebie.

POSTER PANEL — An outdoor advertising board 12 feet high by 25 feet long.

PREEMPTION — Recapture by the broadcaster of an advertiser's time to accommodate a program of great timeliness or urgency. Also, to recapture the time for an advertiser prepared to pay a higher rate.

PREFERRED STOCK - Security of a corporation which usually has no voting power but is secured by the pledging of some part of the physical assets of the company. Preferred stock has a priority over common stock on the earnings of the corporation, and usually has a stated rate of guaranteed interest.

PRIME TIME — The hours of peak audiences for which the highest rates are charged. By a recent FCC ruling, Prime Time relative to evening network programming is now 8:00 to 11:00 P.M., EST and PST, 7:00-10:00 P.M., CST and MST.

PROGRAM EXCLUSIVITY - In CATV rules (FCC) applies to the obligation of a CATV system to carry network programs on only the local stations, blacking out the programs on remote stations the system may carry.

PROMO — Spot announcement plugging a program, station or service.

PUBLIC FILE — Station documents as, license application, program logs, network contracts, etc., available at the station for examination by the public.

PULSE — Rating service used largely by small market radio stations. Uses the ROSTER RECALL method. (1939)

-Q-

QST — A teletype message sent to a group of stations, usually by a network. Derived from the radio amateur term "query station time."

QUADROPHONIC - Broadcasting/recording utilizing four channels of audio information. Heard through four speakers arranged to accomplish more spatial fidelity to sound.

-R-

RAB — Radio Advertising Bureau. Sales promotion organization for radio stations. (1951)

RCA — The Radio Corporation of America, parent company of NBC, also owns Victor (records). (1919)

RFE — Radio Free Europe. Facilities to beam programs of information about the U.S. to countries behind the Iron Curtain. Supported in part by popular subscription in this country. Recently revealed to be heavily financed by the CIA. (1956)

RTDG — Radio and Television Directors Guild. (1959)

ROP — Run of Paper. Publisher's choice in placing the ad in any location in the publication.

ROS — Run of Schedule. Station determines the position of spot announcements bought at a very favorable rate.

RSP — Rear Screen Projection. A method for projecting pictures from the rear on a translucent screen to provide background for a scene (movies and TV).

-R- (continued)

RTNDA — Radio and Television News Directors Association. (1936)

RATES — The costs for time set by a station. Rates are quoted for long (hour) and short (8 seconds) periods of time, and differ, for the same amount of time, at various times of the day or night.
Gross Rate: The rate before any discounts.
Net Rate: The post-discount rate.
Package Rate: Rate discounted for the purchase of combinations of programs or spots.

RATING — The percentage of a statistical sample of families or persons interviewed who report hearing or watching a specific program or station.

RECALL — In broadcasting research, a method of measurement which yields the number of persons who remember hearing or viewing a program after the broadcast. The Pulse is the principal user of this technique. (1939)

REPEAT — Subsequent presentation of a program for those stations not carrying the original broadcast. Usually a device to offset the time differentials among the several Time Zones.

RESIDUALS — Payment to talent for broadcasts of a program subsequent to the original airing. Authors, writers and some others involved in the production may also participate in residuals.

RETIREMENT — Payment on a corporate debt for capital property.

RETURNS — The amount of mail received as the result of a premium offer or other inducement to write to a program. Also, in research, the number or proportion of the attempted sample actually cooperating.

REUTERS — British news agency, comparable to AP, subscribed to by many stations and the networks. (1848)

ROLL — In TV a series of graphics moving up the screen, usually giving credits for the preceding production.

ROSTER STUDY — An audience survey method in which the respondent's memory is aided in recalling the programs heard or viewed at some earlier time. A list of programs on the air at the time being surveyed is shown to the respondent. The Pulse is the principal user of this technique.

-S-

SAG — Screen Actors Guild. Union of actors in motion pictures, filmed TV productions, industrial films, and governmental films; also voices and dubbing. (1933)

SEG — Screen Extras Guild. (1945)

SMPTE — Society of Motion Picture and Television Engineers. (1916)

SOF — Sound on Film. Sound track is part of film--usually picture and sound are shot simultaneously.

SRA — Station Representatives Association. Trade group of radio and TV station representatives. (1948)

SRDS — Standard Rate and Data Service. Publishes rate cards of all radio and TV stations, networks, newspapers, magazines, business publications, transit advertising, etc.

STV — Subscription Television. A system in which the viewer pays for special programs made available for home viewing. Also known as Pay-TV.

SATELLITE COMMUNICATIONS - Service either between earth stations by using active or passive satellites for the exchange of the fixed or mobile service, or between an earth station and stations on active satellites for the exchange of communications of the mobile service for retransmission to or from stations in the mobile service.

SECTION 315 — A part of the Communications Act of 1934 which requires a station giving or selling time to a candidate for political office to make time similarly available to all other qualified candidates for that office. Also known as the "equal time" requirement.

SERVICE FEATURES - The use of the station's facilities to offer the public regular human-routine services such as news, weather reports, time signals, etc.

SETS-IN-USE — The percent or number of all families whose radios or TV sets are turned on at a specific time.

SHARE-OF-AUDIENCE - The percent of listeners or viewers tuned to a given program or station, based on the total sets-in-use.

Glossary of Broadcasting Terms

-S- (continued)

SHARED ID — Title card with commercial copy in addition to the station identification call letters.

SHORT RATE — A term used to indicate that the advertiser's original order for a certain amount of time or space was defaulted by his failure to use it and is now charged a Short Rate (higher) for default.

SIGNAL STRENGTH - The measured strength of a broadcast signal at a given distance from the transmitter. In radio, expressed as millivolts per meter (mv/m), in TV as Grade A and B contours.

SKYWAVE — That portion of the broadcast signal that travels upward and is reflected back to earth by the ionosphere, permitting long distance reception of frequencies below approximately 30 mHz/s. Higher frequencies usually penetrate the ionosphere and are lost in space.

SLANDER — A spoken defamatory statement maliciously intended to injure or misrepresent. Broadcasting is considered publication hence libel laws apply.

SPONSOR — The advertiser who underwrites all financial obligations of a radio or TV production.

SPOT BROADCASTING-Selective purchase of time and/or programs on stations, in markets of the advertiser's choosing. Differs from network for national advertisers in that the advertiser has his choice of just the markets he wants, and may buy the station of his choice, regardless of network affiliation.

SPOTS — The time locations selected for spot broadcasting. Also, the short commercials themselves.

STATION BREAK - The interval between programs, usually at the hour, 1/4, 1/2, and 3/4, used for station identification. Also, the announcement broadcast during such an interval.

STATION REPRESENTATIVE - An organization or individual employed on a fee or percentage basis to sell a station's time to national advertisers, usually via their advertising agencies in the major markets.

-S- (continued)

STRIKE APPLICATION - Action brought before the FCC by an individual or group to take over an existing broadcasting property.

STRIP To program episodes of a show at the same hour on successive days of the week.

SWITCH PITCH A presentation to an advertising agency designed to bring a current schedule of advertising on a competing station over to the station making the presentation.

SYNC GENERATOR - Power source for all cameras and video projectors to insure identical power to insure accurate synchronization of scanning lines.

SYNDICATED Productions that are created by non-broadcasting companies for sale as advertising vehicles to networks, stations, advertisers or agencies.

-T-

TAB Traffic Audit Bureau. Trade organization to develop sales material for Outdoor and Transit advertising (car cards). (1934)

TIO Television Information Office. The public relations arm of the NAB for television. (1959)

-T- (continued)

TvB — Television Bureau of Advertising. The sales promotion organization of the TV industry. (1954)

TVR — Television recording or videotape.

TWX — Teletypewriter exchange service. Widely used method of communication between stations, reps, networks agencies, etc.

TELECINE — Television film and slide projection equipment, or room where the equipment is located.

TELEPROMPTER — A device which reveals the script of a production to the actor(s) via a moving tape. See: Crawl.

TIME BUYER — The employee of an advertising agency responsible for the ultimate details of buying radio and TV time.

TOTAL AUDIENCE - The percentage or number of homes tuned to a specific program at some time during the broadcast.

TRAFFIC — Scheduling of programs and commercials and routing the information to the persons directly concerned. Function at stations, reps, networks and agencies.

TRAFFICKING — The practice of building or buying stations with the intent of quick resale, rather than operation of the property.

TRANSIT ADVERTISING - The use of public transit systems for displaying various types of cards and posters featuring advertising of various products and services.

TRANSLATORS — Low power devices receiving a signal on one frequency and transmitting it on another without significantly altering its original characteristics. Used to bring FM and TV programs to areas where direct reception is unsatisfactory.

TRIPLE SPOTTING - Scheduling three commercials consecutively during a station break. Considered a bad advertising practice by many agencies, advertisers and stations.

-U-

UHF — Ultra High Frequency. Band of frequencies extending from 300 to 3,000 mHz/s. Television stations assigned TV channels 14 - 83 operate on frequencies between 470 and 890 mHz/s, and are known as UHF TV stations. First provided for by the FCC in 1952.

UPI — United Press International. News wire service available to broadcasting stations and newspapers. Originally United Press but merged with International News service. (1907)

-V-

VHF — Very High Frequency. Band of frequencies from 30 to 300 mHz/s. Television stations assigned channels 2 - 6 (54-88 mHz/s) are designated low band VHF stations, while those on channels 7-13 (174-216 mHz/s) are known as high band VHF stations.

VOA — Voice of America. Branch of the U. S. Information Agency, charged with the production of broadcast material for overseas audiences, principally behind the Iron Curtain. (1941)

VTR — Video Tape Recording. Recording picture and sound material on magnetized plastic tape, both color and B&W, for later playback.

VIDICON — Special camera tube that is less sensitive but more durable than the I-O tube; frequently used in closed-circuit operation and in television film cameras.

-V- (continued)

VIEWING AREA The area within which a TV station or network is viewed by a measured number of families. Do not confuse with Coverage Area.

-W-

W First letter in the call letters of nearly all U. S. broadcasting stations located east of the Mississippi River.

WATS Wide Area Telephone Service. System by which the telephone user is allowed unrestricted numbers of calls in specific areas for one overall rate.
Inbound WATS: System under which calls to a specific number are charged at one overall rate.

WGA Writers Guild of America. Union of writers for television, radio, and motion pictures. (1954)
Also: WGAE - Writers Guild of America, East;
WGAW - Writers Guild of America, West.

WHITE AREA Area outside the service areas of all broadcast stations of a given class, AM, FM, or TV.

MOST COMMONLY USED BROADCASTING TERMS AND ABBREVIATIONS

ABC
ADI
AM
AP
ARB
ASCAP
Adjacencies
Advertising Agency
Affiliate
Affirmative Action
Agency Commission
Announcement
Arbitron
Ascertainment
Audience
Audience Flow
Audimeter
Available Audience
Availabilities

BMI
Billboard
Broadcast Expense
Broadcast Income
Broadcast Revenues

CATV
CBS, Inc.
COMSAT
CPM
Campaign
Canon 35
Cartridges
Cassettes
Channel
Chroma Key
Circulation
Clutter
Coincidental
Commercial
Contour
Cost-per-thousand
Coverage
Cume

DB
db
Daytime Station
Diary Method
Drive Time

ENG
Editorial

FCC
FDA
FM
FTC
Fairness Doctrine
Field Strength
Flight

Grade "A" Contour
Grade "B" Contour
Grandfather Rights

HUT

IATSE
IBEW
ID
Independent Station
Inherited Audience
Integrated Commercial

kHz

Libel
License
License Challenge
Listening Area
Log
Logo

MBS
mHz
Make Good
Mayflower Decision
Median

NAB
NABET
NBC
NCTA
NSI
NTI
Network

O & O
OTO
Off-network Run

PBS
POP
PSA
Package
Pay-TV
Payola
Pilot
Prime Time
Preemption
Public File

RAB
RCA
ROS
Rates
Rating
Residuals

SAG
SRDS
STV
Section 315
Sets-in-use
Share of Audience
Signal Strength
Sky Wave
Slander
Spot Broadcasting
Spots
Station Break
Station Representative
Switch Pitch
Syndication

TIO
TvB
Teleprompter
Time Buyer
Total Audience
Traffic

UHF
UPI

VHF
Viewing Area

SENSES MAKE COMMUNICATION

The first lecture in this semester is concerned with some rather basic aspects of communication - specifically the ways in which we send out and receive intelligible signals, in terms of the senses by which we perceive them. By way of structure, we will deal with the senses in order of the relative importance of each as a means of perceiving the signals - sight, hearing, touch, and smell. Communication via the sense of taste has so far eluded me. Beyond this, in terms of each sense, we will consider whether the signals were permanent (as statuary) or transient (smoke signals), personal (conversation), or public (tapestry).

Signals received via sight can be as elementary as facial expressions (smile, frown), gestures (clenched fist, beckoning), or as sophisticated as the use of specific colors to convey particular impressions (red for anger, blue for cold, etc.). Today in radio we use an elaborate system of hand signals to indicate "slow down," "begin," "speed up," "cut," etc. Such an elemental phenomenon as fire has been used to signal. In early times we find lighthouses, as at Alexandria, guiding ship captains by a column of smoke by day, fire at night. Today lighthouses are rapidly becoming extinct, displaced by electronic means for warning of dangers along the shore line.

Smoke signals have been used the world over. The American Indian breaking up a column of smoke into dots and dashes had a very simple, practical signalling device (for clear, windless days!), while

in England (1588) the sighting of the Spanish Armada was to be signalled to the countryside by lighting hundreds of bonfires along the coast. An ancient custom of the Vatican involves the use of colored smoke to signal to the populace awaiting the results of balloting by the College of Cardinals on a new Pope - black smoke from the building chimney if the ballot was inconclusive, white smoke if a new Pontiff was elected. In recent times, we have had the example of a young father announcing the arrival of new son by a skywriting friend flying over the neighborhood and spelling out - "It's a BOY."

The correct time of day has been communicated by many means other than clocks. In order to establish the precise moment of noon, a novel procedure was developed at the Naval Observatory at Greenwich, England. Atop the dome of the observatory a mast was built, piercing a large ball. Shortly before noon the ball would be hoisted to the top of the mast, and at the precise moment of noon it would be cut loose to drop down the mast. Ship captains in the Thames would set their chronometers by this device - did so from the late 17th century. Today we use radio to inform about the correct time, as we shall see later.

Flags of various sorts, and used in a multitude of ways, have served message signalling functions. A simple white flag has come to mean surrender; a red flag danger, revolution or blasting; a yellow flag quarantine; etc. Used on railroad locomotives, they signify such things as "special train," "second section following," etc. Flags with very simple geometric designs are used for signalling, accomplished by the position or the motion of the flags. An elaborate series of flags of many colors and with many designs constitute an international code used at sea. Finally, weather forecasts are given by flying certain types and combinations of simple flags. And all of these uses fail to touch

the emotional communication set in motion by displaying the national emblem of one's own country, its allies or its enemies.

Visual signals are widely used on railroads. The semaphore position with the blade horizontal clearly says "stop," vertical indicates "clear" and the diagonal position spells "caution." The custom of associating red, green, and yellow to these conditions originated with railroad practice. More recently, lighted signals have used a single color - yellow - with lights in geometric patterns to indicate track aspect - three horizontal "stop," three vertical "clear," and three diagonal "caution."

Public direction signs in Europe have become very stylized and standardized. A lighted cigarette with a heavy diagonal line through it means "no smoking," and few would fail to understand a sign with a plate, knife, fork, and spoon on it as indicating an eating place. Highway signs are simple - a stylized wrench to indicate a repair shop, a stubby block cross to identify a hospital. The many languages spoken over such a small area as Europe require that signs tell their messages without the use of words.

Most of the devices we have dealt with to this point have been concerned with very broad, general messages, shown to all who can see them. The realm of detailed message communication can begin with the smoke signals of the American Indian and progress through the international signal flag code to other military developments. It was Napoleon who undertook to build a series of small towers in line-of-sight chains across the continent of Europe. Atop the towers were crude semaphores which could be manipulated to transmit the alphabet, numerals and coded phrases. In this country, during the Civil War, wide use was made of towers quickly built of rough logs from which signal men wigwagged

messages over considerable distances. The sun was early used for message transmission. The legions of Alexander the Great used their shields to direct the sun's rays to a receiver location and communicated by a code probably similar to the Morse Code. In the Boer War, the British made great use of a sophisticated adaptation of this principle with the heliograph. This device permitted aiming the sun's rays quite accurately, limiting the area over which the signal could be seen. A shutter in front of the mirror could be opened and closed to break the rays into dots and dashes of the Morse Code. For nighttime signalling among vessels close together, the U. S. Navy uses a modified heliograph which gets its light from a searchlight rather than the sun.

Probably the most personal of the formal methods of visual communication (other than the love letter) is the sign language used by the deaf and dumb. Two systems are extant, one requiring the use of both hands, the other using only one hand. Originally developed by the Abbe Sicard (1831), the two hand alphabet is the more widely used today.

Man sought early to communicate something about his environment to future generations. Primitive paintings of animals and humans are found on the walls of caves in southern France and northern Africa - paintings dating back thousands of years. Man became increasingly sophisticated in this type of delineation and soon was working in three dimensions, in bas-reliefs and sculpture. Such carvings adorned the buildings of the early Egyptians and the Greeks, and served to celebrate the lives and deeds of dieties and of men important to the society.

As structures became more complex, man sought to build into them increasingly subtle meanings. The vaulting arch of the doorway to a cathedral drew the eye to the heavens. In similar fashion, the graceful upward sweep of the lines of the interior of the cathedral

encouraged a feeling of exaltation.

A detailed pictorial presentation of the times of the 11th century is found in still another medium. The Bayeux Tapestry, a single woven panel 214' long, accomplished in a textile a record more usually found graven in stone. But still more perishable media were at hand, or to be discovered, with which to record man's thoughts and actions.

Writing as a skill began somewhere around 3000 B.C. Among the earliest forms are the hieroglyphics scratched in clay tablets. The earliest biblical writings extant were found in a cave by the Dead Sea (1947), leather scrolls which have come to be known, appropriately enough, as the Dead Sea Scrolls (200-100 B.C.). Simpler alphabets and improved writing materials accelerated the spread of the written word. By medieval times, writing was nearly the exclusive property of the clerical class, and monks spent lifetimes in lettering and illustrating a single volume. Books were chained to reading desks in the libraries of the time - desks which required the reader to stand while reading.

Came Gutenberg -- ! In the middle of the 15th century, he succeeded in producing the first book not lettered by hand, but printed from movable type. Freed of reliance on the clergy alone, book publishing flourished and a new premium was placed on the literacy of the population.

With the ability to put thoughts on paper readily, it became increasingly important to develop ways in which to deliver the written and the printed word faster and over greater distances. The carrier pigeon was an early (and continuing) answer on a small scale - vulnerable to hawk and falcon much as the stage coach was vulnerable to the highwayman. In this country the Pony Express played an important and colorful role for little more than a decade, in the mid-nineteenth century.

The telegraph spelled the early end of this romantic service when transcontinental telegraph service was inaugurated in 1862.

Less rapid than the telegraph, but well geared to handle information in bulk, were the railroads. Railway Post Office cars were developed which picked up and delivered mail to the smallest towns along the routes without ever stopping the train. And soon the airplane began its important role as the carrier of the mail at high speeds. From the beginnings in the open cockpit Curtiss "jennies," the air mail advanced to a 48-hour coast-to-coast schedule using planes in the daylight hours, trains at night (1929).

To speed the delivery of news to at least some part of the public, newspapers utilized billboards on the front of their buildings, boards on which were posted the most recent telegraphed news bulletins received. This served only that small part of the population which was physically near to the newspaper office. In the early 1930s, the New York Times installed an electric sign around its building on which bulletins were spelled out in lighted bulbs and the words moved left to right around the building. This device is now quite widely used elsewhere for advertising displays.

Photography presents still another method of signalling via sight. The work of Dagguere in 1839 gave us the first useful photographs. The art developed very rapidly, and by the time of the Civil War, photographic news coverage was a going concern. (The camera did not entirely replace the "staff artist" of the major news media, like Winslow Homer, for example.)

Soon pictures that moved were feasible. By 1911 we had D. W. Griffith's "Intolerance" on the screen, an epic using sets 300 ft. high, 1,500 extras, and a 1.9 million dollar budget. In journalism,

probably an all time low in taste was established by the New York Graphic with its faked "composographs" of current scandals.

A final, and very basic, visual signal is represented in the case of the crew of an airplane downed in the Canadian forests. In a clearing near the wreckage, they tramped out the letters "S.O.S." in the snow for a signal clearly visible to the searching rescue planes.

Turning to the sense of hearing and communication via sound --

Probably the earliest communications by sound were the grunts, growls and squeals of primitive man which came to indicate various feelings and emotions. As intelligible speech evolved, there were efforts made to project the human voice over greater distances. An early device here was a form of megaphone developed by Alexander the Great during his far-ranging military campaigns in Asia Minor. The device survives to this day, principally in the hands of high school and college cheer leaders (not to mention the vogue the megaphone enjoyed during the heyday of Rudy Vallee). The human voice was employed in a "pass-it-on" fashion by the Chinese on the Great Wall, shouting messages from one garrison tower to the next, making a traverse of the whole 1500 miles of the wall possible in a few hours.

Audible communication without the aid of mechanical devices continues to this day in the street calls of the vendors in Charleston, South Carolina (as in "Porgy and Bess"). And the sotto voce calls of the peddlers of "hot" watches on Market Street, and of theatre ticket "scalpers" on Geary Street are still with us. At the other end of the scale is the self-powered "bull horn."

More obviously coded communication was found early in the drums so widely used in Africa. These signals can be widely heard but

are intelligible only to those in the tribe(s) acquainted with the code. The use of a simple sound in a simple code is well demonstrated in the international wilderness distress signal made by firing three shots, rifle or revolver. Gunpowder played an early and a continuing role as a non-violent part of the ceremony of saluting important personages (21 guns for a head of state, Vice President Mondale rates only 19), the traditional rifle volleys at a military funeral, the "tolling" shots of artillery at the funeral of an important military person.

Other military sounds must begin with the rather elaborate catalog of bugle calls. ("Reveille" is much maligned - it is "first call" for reveille that routs you out in the morning!) Military bands with the martial beat to accompany and induce the heavy tread of feet, are more common but less moving than another form of military music - bagpipes. History has never been too clear on what proportion of the Scots who marched to death in the face of withering fire should be ascribed to the inspiration of the pipes - how much to a desire to escape from them!

As the knowledge of electricity accumulated and its speed was established to equal that of light, the attempts to find a way to use electricity for communication increased. Probably the greatest single advance in harnessing electricity to the service of communication by sound was the invention of the telegraph by Samuel F. B. Morse. This disappointed portrait painter pretty much stumbled on the idea of a purposefully interrupted electric current operating device which would sound dots and dashes. His first practical demonstration (Washington - Baltimore, May 1844) paved the way for tremendous improvement and expansion of the telegraph during the Civil War. Military lines criss-crossed the North and became the basis for a commercial network of telegraph

lines when the war ended. Air-to-ground communication had its start here with a telegraph key taken aloft in a Signal Corps balloon.

Submarine cables were next in line for development, beginning with spanning the Atlantic Ocean. In 1858 a cable linking the U. S. and England functioned only long enough for an exchange of pleasantries by President Buchanan and Queen Victoria before breaking. 1865 saw the first practical transatlantic cable in operation, quickly followed by cables spanning the Red Sea, Indian Ocean and the Pacific.

Next goal - transmit the human voice at the speed of light. Alexander Graham Bell, a worker in the field of aiding the deaf, had sought to finance his work by experiments in multi-channel telegraph circuits. Again, almost by accident, Bell came upon a feasible way to conduct the complex of varying vibrations the human voice represents over wires, via an electric current. 1876 is the date of Bell's first patent, and 38 years later (1914) the telephone was a coast-to-coast medium of communication in the U. S.

Now it remained only to get rid of the wire connections between telephone stations to achieve a nearly "ideal" communication system. To this problem a moderately wealthy young Italian, Gugliemo Marconi, addressed himself. Building on the experiments of Hertz with electrical waves, Marconi succeeded (1894) in transmitting a Morse Code signal the breadth of his father's estate by "wireless." Correctly reading the financial and promotional prospects offered by his own country and by England, he left for London where he soon had backing for his ideas - ideas which fitted well into the communications problems of the farflung British Empire.

Transoceanic communication was the pressing British problem, so Marconi designed tests of the feasibility of a transatlantic service.

In 1901 he accomplished the first intelligible wireless message from England to Newfoundland. The following year saw the first west-east message transmission. England quickly entered into negotiations with Marconi for a globe-circling system of stations to link up her empire.

History repeated itself in the drive to adapt the new wireless medium to voice transmission, just as the telephone was demanded as an extension of the telegraph. Among the unsung heroes of this race was a poor Kentucky farmer - Nathan Stubblefield. In 1892 (before Marconi had demonstrated code transmission), Stubblefield demonstrated voice transmission to a group of reputable newspaper reporters. More important was the work of Reginald Fessenden and Lee DeForest, both of whom had given impressive demonstrations of voice transmission in 1906. President Woodrow Wilson was a participant in two important radio telephone developments. In 1914 he carried on a conversation from the lawn of the War Department building with the pilot of an Army airplane flying overhead. At the end of World War I he sailed for Europe to participate in the Peace Conference. His ship was equipped by the Navy with their most advanced gear, and he was in radio telephone contact with the U. S. all the time he was at sea. But radio telephone was soon to emerge as a broadcast, rather than as a private message medium.

Looking to other sounds at sea which have unique abilities to communicate information, we have the ship's bell, sounded in a simple code of strokes to indicate the time, by half hours, within four hour watches. Early fog horns sounded much like today's, but they were hand-powered on sailing ships. Today, the air horns of large vessels can be heard for miles, and some are quite individual, as the whooping sound made by the horn of a U. S. Navy destroyer.

On land we have other whistles which are readily identifiable.

The factory whistle mounted on a plant or mine head is a familiar sound in many small industrial and mining towns. The whistle of a steam locomotive has a nostalgic sound for many - a feat not likely to be accomplished by the rather prosaic sound of the air horn on a diesel locomotive. Then there are the sirens - police, ambulance, fire engine, air raid - to be heard most anywhere in the country (allright, the air raid siren is on the Late, Late, Late Show!)

Finally, a collection of bells - telephone, burglar alarm, alarm clock (yech!), and the joyful sound of church bells out of doors, marking a cheerful occasion. (Whatever happened to the school bell?)

Now for a glance at the uses of the tactile sense in communication -

Signals communicated by the sense of touch, unaccompanied by sound or sight, are quite limited in number. We have the nearly universal custom of the handshake, widely believed to have originated as a gesture indicating no weapon in the proffered right hand, hence, friendship. A variation on this theme is the secret "lodge grip," an arrangement of the fingers that tell the other party that you are united in brotherly bonds - to the death!

The gesture of consolation in the arm across the shoulder of the troubled one, patting the hand or the head of the distraught one, are further examples of communication by the sense of touch.

In a more formal fashion, messages have been conveyed by means of a stick with notches in a prearranged code. This simple device enabled the sender and the receiver to deal in secret if the bearer of the stick was not privy to the code. Further, the stick provided a permanent record of the message, as long as the stick was kept.

More elaborate, meaningful, and widely used is the system of

writing and reading developed for the unsighted. Invented in 1829 by Louis Braille, the system involves a code of raised dots on the page - no more than three rows deep and two rows wide, to account for the letters of the alphabet, numerals, etc.

Can't resist the temptation to mention one final bit of communication by the sense of touch - the gesture of affection among Eskimos accomplished by rubbing noses together!

Finally, to communicate via smell -

Here we had best stick to messages intended to be received by the olfactory organ. The smell of garlic or of cooking about a person may give us a clue to some feature of him or his life style. But let's stick to smells "by design."

Among animals we think almost immediately of the skunk who expresses his displeasure or fear at our presence by emitting a very readily identifiable odor. Humans tend to give off odors under conditions of stress which enable many animals to detect fear in a human almost immediately.

In our society we place much emphasis on how we smell. Millions are spent by cosmetics manufacturers to induce milady to use their brands of perfumes, scents, colognes, etc. Coty says, in advertising one of its fragrances, "If you want him to be more of a man, you must be more of a woman." Le Bain bath oil, in an ad featuring a girl in a bathtub, announces "In France there is more to like than French cooking." On the male side, we have Hai Karate after shave lotion ascribed to it the power to induce women to wreak violence on the man who uses it, who must defend himself from them by karate. To come full circle, there are the ads for deodorants that encourage you to have no smell at all!

A valuable, serious communication via smell was made recently

by PG&E. Enclosed with the monthly bill to every customer was a card with a blue triangle in the upper righthand corner. Text on the card pointed out that the gas used for cooking and heating was odorless in its original state. The company, as a safety measure, has added a readily identifiable odor to the gas to enable customers to recognize a leak immediately. To learn what the odor was like, one had only to scratch the blue triangle with a fingernail and hold the card close to the nose.

A final note on the way the nose can be misled. Available to automobile dealers is a liquid to be sprayed on the interiors of low-mileage used cars to bring back that almost undefinable "new car" smell!

But for that matter, any of our senses can be fooled. We can mislead our sense of taste with chemicals that can very easily masquerade as "natural fruit flavors," or approximate the savor of an open fire barbecue. A photograph that appears to be a flat surface with a few random "holes" in it can be changed to a flat surface with some random "bumps" in it, merely by turning the picture upside down. Nothing more at issue here than our tradition of seeing light usually originating in the upper lefthand corner. The sound of a flaming match doused in water, recorded on tape at a very fast speed, played back very slowly, sounds like eggs frying in a hot pan. And we have developed synthetic fabrics which our touch can scarcely distinguish from silk, or wool, leather, etc.

So, we have seen something of the ways in which signals are the raw materials of communication, and the ways in which they are perceived by each of our senses. (All right, I can't make a case for the sense of taste!) These signals may be perceived by more than one sense, as, striking a match - light, sound, heat. In some instances the signal is entirely transitory, as the spoken word, but can be permanent, as the same words are recorded on tape or film. The message can be highly personal,

intended for a single receiver by the sender, as in a whisper, or it may be intended for many receivers, as the same words are shouted to a crowd, or spoken in the intimacy of a coast-to-coast network, plus a satellite relay!

This then is our very preliminary survey of communication to be augmented next by a closer look at the ways in which man has applied his technical skills to enlarging the horizons of each means of communication with his fellow man.

A PRIMER ON BROADCASTING TECHNOLOGY

In an earlier lecture, we looked briefly into the ways in which the signals of communication are perceived by the human senses. At that time we saw something of the ways by which man has sought to shorten the time needed for communication, up to and including harnessing electrical energy to speed the message. Today we will look a bit deeper into the problems faced in developing this rapid communication, and pay respects to the many men who accomplished this progress.

In maritime circles, a wireless operator was commonly called "Sparks," and for obvious reasons. Were we to seek out the earliest record of man-made sparks, we would have to go back to about 600 B.C. when Thales, a Greek scholar, first perceived a spark as the result of rubbing a piece of amber with a bit of wool cloth. This simple static electric discharge was early thought to be a liquid of rather mysterious properties.

This phenomenon was the subject of consuming interest to experimenters down through the centuries. Benjamin Franklin hit something of a jackpot here with his kite experiment in which he attracted lightning to a key hanging on the kite cord. (Not all who sought to duplicate his feat took the trouble to be sure that they were not standing in water, and several were electrocuted.)

The pages of the history of the 18th and 19th centuries are sprinkled with the names of scholars and scientists whose work in the field of electricity introduced their names to the language of electricity to this day. Count Galvani, experimenting with electric currents while

dissecting frogs, observed an effect of a current on the frog's nervous system. (From his works, today we have "galvanometers.") Among others - Ohm, Ampere, Watts, Wheatstone, and, of course, Morse (as in the code of the same name) made contributions to the knowledge of electricity. Morse represented the first successful harnessing of electricity to communication. As we know, his principle of communicating by means of an interrupted electric circuit and current led to the development of the telegraph on land and the submarine cables beneath all the principal seas and oceans by the late 19th century. And in the final quarter of the century, the human voice was being transmitted over wires, courtesy of Alexander Graham Bell. The ultimate, wireless, was to appear just before the turn of the century, credited to Gugliemo Marconi.

Underlying all of the work leading to the first effective wireless was the work of Heinrich Hertz. He confirmed the existence of electricity in the form of waves, and that the waves performed in the same fashion as the more readily observed waves in liquids, solids, and gases. Hertz was the true scientist of his age who cared not at all for what his discovery might do -- suffice it that the discovery was made and man's knowledge thereby increased. He could now identify electrical waves, measure their length, frequency, and amplitude. He established that wave length, crest-to-crest, diminishes as the frequency (number of waves per second, or cycles) increases. Hertz was the inspiration to Marconi to begin his experiments with wireless at a very early age. By 1894, Marconi had sent a wireless signal across his father's estate.

The state of the art was such that by 1901 a simple wireless message had been sent across the Atlantic, and by 1907 the New York Times was relying on wireless for the transmission of news in preference to the

submarine cable. These early transmissions were accomplished with spark transmitters - a means of creating and regulating low power, man-made lightning, which was heard in the primitive receivers as man-made static. Tuning the transmitters and receivers closely to any given frequency was nearly impossible, and the wave length used on shipboard was usually established by the distance between the masts of the vessel.

The trail leading to the development of means to amplify the tiny currents used in telegraph and telephone circuits really starts with one who made few direct contributions to electronic communication - Thomas A. Edison. In developing the incandescent lamp, he discovered quite by accident that blackening one side of the inside of the bulb, or including a metal plate between the filament and the glass of the tube could change the direction of the flow of the electric current. This provided valuable bases for the work of Sir William Fleming in providing a vacuum tube capable of several simultaneous functions - the key to increasing the range of telephone service as a starter. His work was enlarged upon by Dr. Lee DeForest with his invention of the multi-purpose audion tube.

We can scarcely leave the field of early experimenters in wireless without a word about the Russian entry in the invention sweepstakes. In 1896 a patent was issued to Prof. A. S. Popov of the Russian Navy Torpedo School at Kronstadt. This patent appears to cover a device closely resembling a primitive receiver rather than a transmitter, and was patented in England six months prior to Marconi's first patent. It is on the rather slim evidence of the Popov patent that the Soviet Union made such a to-do about a Russian having invented wireless (1945).

The next important development in radio transmission came with the Continuous Wave (CW) system, wherein a carrier wave on a predetermined

frequency (inaudible) is put on the air to perform much like a conveyor belt. On this carrier wave is superimposed the pattern of the waves of the audible material to be transmitted. The most common system of broadcasting, Amplitude Modulation (AM), consists of varying the amplitude, or the height of the waves when they are mounted on the carrier. A second system, in increasing use today, is Frequency Modulation (FM). Here the pattern of the audible material varies in pitch or frequency before being superimposed on the carrier wave. In diagram form the AM signal is a vertical zigzag line varying in height and depth from one tone or sound to the next. The FM signal does not change in height but extends and contracts in an accordion fashion.

There are several characteristics of radio waves with which we should be familiar. In AM broadcasting, two stations with identical power but at opposite ends of the dial will cover very different areas. At 550 kHz, the wave length is 545.1 meters. At 1500 kHz, the wave length is only 159.9 meters. So, the power necessary to generate one cycle of the wave at 550 kHz will carry the signal nearly one-third of a mile, while the same power at 1500 kHz will carry the signal only about one-eighth of a mile.

This disadvantage to stations at the high end of the dial is offset in part by the phenomenon of skywave. Above the earth at altitudes from 25 to 50 miles, we find the ionosphere, a band of ions which rises and falls according to the presence of the sun. When the sun is above the horizon, the ionosphere is pressed down near to the earth and radio waves tend to follow the curvature of the earth. At night the ionosphere is at a higher altitude and reflects the radio waves back to the earth. Here they are reflected back to the ionosphere, back to earth, etc., until the force of the wave is dissipated. The result of this is to extend the listening

area of stations at night, particularly those at the high end of the dial.

Another element important to the coverage of a radio station is the conductivity of the soil where the transmitter is located. Soil conductivity is measured in "mhos," units of conduction (and the opposite of "ohms" which are units of resistance). The greater the soil conductivity, the greater the service area of the station. The salinity of the soil is a major factor in its conductivity. Consequently, where possible, stations will build their transmitters on tidal land, or on salt beds, as with KSL in Salt Lake City. The FCC publishes a map of the U. S. showing the various levels of soil conductivity.

FM broadcasting differs from the older AM in several important respects. FM is located much higher in the electromagnetic spectrum; hence, for the same power, an FM station will cover a much smaller area. A big plus for FM is in the fact that it is virtually static-free, giving it an important measure of reliability for such non-broadcast uses as police and fire department systems, military, etc. To the average listener, considerable advantages are found in the very greatly extended frequency response and the possibility of stereo broadcasting. Whereas, AM as practiced, cannot bring to your ears more than 10,000 cycles, FM can bring you sound limited only by your receiving equipment and your own ears. Stereo broadcasts and other multiple uses of the channel assigned to an FM station now include moving into stations broadcasting quadraphonic sound.

Television was speculated about in the 1880s, but no work of any consequence was done until the late 1920s. The earliest work all seemed to hinge upon some form of whirling disc before the camera, with one or more photoelectric cells in the camera. Zworykin, an early experimenter

with RCA, developed an entirely electronic system using an iconoscope tube in the camera. NBC had a system operating by 1933 and a grand unveiling in 1939 at the New York World's Fair. Other prominent developers of TV gear included Baird in England and Philo Farnsworth in this country. Color TV in a practical form was first demonstrated in 1940 by Dr. Peter Goldmark at CBS, using a field sequential (revolving disc) system. Though not accepted by the FCC as the standard color system for the U. S., it is of interest to note that, because of its superior color fidelity, the field sequential system was used for the broadcasts from the moon by the Apollo 11 crew.

Technically, TV shared a problem faced by radio in its youth - how to get enough stations on the air with the limited number of channels and frequencies available. Radio solved the problem by licensing stations to operate daytime only, requiring some to reduce their power at night, sharing operating hours, etc. FM served to multiply greatly the number of available radio frequencies. TV originally had but 12 channels (2-13) for the entire U. S. To correct this inadequacy, the FCC froze all TV station applications in 1948 to use the time gained in study of the feasibility of using the UHF band. In 1952, the freeze was lifted and 70 UHF channels were added to the TV allocation table for the U. S.

There were other places where TV had problems earlier met by radio. TV signals tend to follow a straight line. This being the case, antenna height is of great importance in TV coverage. Given the same power and channel, the station with its antenna 2,000' above the terrain will cover about double the area of the station with only a 500' tower. (Antennas themselves are only about 75' to 100' high, but their height above average terrain, when placed on top of a tall tower - upwards of 2,000' - determines their coverage area.)

Another factor affecting TV coverage is the channel assignment. As in radio, the lower on the dial, the greater the coverage, power being equal. The FCC compromises here, allowing 100 kHz power for channels 2-6, and 316 kHz for stations on channels 7-13. For UHF stations, power of 1000 kHz and more has been allowed.

Transcontinental telephone service was inaugurated in 1914. Coast-to-coast radio networks on a permanent basis began in 1928. In TV, more sophisticated means of signal relay are needed. First inter-connection of stations used underground coaxial cables at very great cost. By 1955, a system of microwave relays (point-to-point over the air) had been built, enabling the TV signal to be "forwarded" over the air at reasonable cost.

Prior to radio and TV, home entertainment had taken several other forms. Up to the mid '20s, a major mark of culture in the home was the piano in the parlor. Great technical skill had been developed in the manufacture of pianos, and the player piano was a marvel of the age. Participation in music was commonplace - band and orchestra instruments of good quality were being mass-produced for a musical public. Soon the phonograph began to make inroads, supplanting the piano in the home. And the phonograph improved markedly. The introduction of electronic recording and the "orthophonic" home instrument in 1927 sounded the deathknell of the piano. Next technical advance came in 1948 when Peter Goldmark announced the LP (long playing) record, with a fidelity never before possible, and playing time per record nearly seven times that of existing records. Audio recorders, first using wire then later tape, have been around in some form since the 20s. During World War II the Nazis developed tape recording to a high level, and we began using tape in radio beginning in the 50s.

Video tape was first publicly demonstrated at the National Association of Broadcasters Convention in 1956, and it rapidly became a main element in programming the medium. Color TV, available as early as 1940, became a factor in the 60s with color tape recording available at about the same time. In radio the counterpart development was stereo broadcasting, and now quadraphonic.

For the immediate future, the most likely technical advance is in the realm of video recording for home use. Here we have a battle afoot among the proponants of several systems, all aimed at providing a greater volume of entertainment and information to U. S. homes. Along with this is the prospect for two-way communication via wired systems today, generally called CATVs. Not to be overlooked is "Cable" TV - systems of wired video capable of supplementing enormously the volume of on-the-air entertainment, information and services.

THE WIRELESS YEARS - 1900-1920

Wireless communication represented the ultimate for the 19th century dreamers about rapid communication over great distances. As early as 1872, a patent was granted to a Dr. Mahlon Loomis of Virginia for a device with which he had sent intelligible messages 14 miles between two peaks of the Cumberland Mountains. He used kites to support his antennas, as was Marconi to do nearly three decades later. And there was Prof. Amos Dolbear of Tufts who obtained a wireless patent in 1886, eight years earlier than Marconi's first signal at his father's Villa Griffone. We have already spoken of Nathan Stubblefield of Kentucky and his success so strangely ignored. The concept and term "microphone" goes back to 1827 and Sir Charles Wheatstone.

But for our purposes, we can begin with the elaborations on Marconi's first message (1894). Recognizing early (1) the maritime applications of wireless, (2) England's reliance on the sea and ships, and (3) England's position as a progressive mercantile society, Marconi went to England in 1896. A British patent that year followed a demonstration of transmission of a signal more than 2 miles over open ground. The following year it was 18 miles over water from the Isle of Wight to a tugboat.

In July of 1897, Marconi formed the Wireless and Telegraph Signal Company, Ltd., British-financed to the tune of 100,000 pounds sterling.

Capitalizing on the British interest in the sea and sports, Marconi next arranged to cover the Kingstown Regatta off the Irish Coast. A tugboat equipped with Marconi gear cruised along the course, reporting the positions of the various yachts to the Dublin Daily Express, and giving that paper a lead of many hours over its competitor in reporting the race. And a series of bulletins on the health of the ailing Prince of Wales wirelessed to the royal family aboard their yacht scarcely hindered the steady burnishing of Marconi's image in 1898.

The serious applications of wireless were sharply revealed in 1899 when Marconi bridged the English Channel with message content and provided the means of saving lives in a collision between a coastwise steamer and the Goodwin Sands Lightship. By July 7th of that year, three British warships were exchanging messages over distances as great as 75 miles. As the 20th century began, the first wireless-equipped passenger steamer - the S. S. Kaiser Wilhelm der Grosse - sailed from Bremerhaven. Instances of wireless bringing help to ships in distress along the coasts of Europe and America multiplied.

Conquering the sea as a barrier occupied considerable attention at this time. In England, wireless communication was carried on regularly with the Isle of Wight. In the Pacific, the main islands of the Hawaiian group were linked by wireless. But the big story of 1901 was Marconi's conquest of the Atlantic on December 12th.

From an antenna recently rebuilt at Poldhu, Wales, to an antenna

made by supporting 400 ft. of copper wire by kite near St. John's, Newfoundland, the single letter "s" crossed nearly 2,000 miles of ocean. A year later, Marconi transmitted a first message west-to-east from Glace Bay, Nova Scotia to Poldhu. In 1903 a ceremonial exchange of greeting between President Roosevelt and King Edward VII went off better than the earlier counterpart ceremony inaugurating the trans-Atlantic submarine cable service (1858).

England, by virtue of its financial support of Marconi, was the world leader in wireless telegraph operation. And she had good reason to be. Next in line stood Germany, already acknowledged to be in the fore-front in technological progress in nearly all fields. The Kaiser, anxious to challenge England on the seas, sought to develop naval applications of wireless under German control. Important international patents were held by Adolphus Slaby and Count Arco who operated within the typically European structure of a cartel which developed into the Telefunken operation. At some early date, the Germans foresaw the importance of wireless to them in case of war with England - since England controlled all the important submarine cables so necessary to communication with the German colonial empire. The Kaiser was a prime mover in organizing the first meeting of the International Radio-Telegraphic Conference in Berlin during the summer of 1903. Here the groundwork for international allocations of the electro-magnetic spectrum was laid.

First electronic coverage of a war was accomplished by the New York Times. With a wireless-equipped, chartered, small steamer, the Times correspondents were able to wireless firsthand accounts of the naval battle of the Sea of Japan - and were nearly blown out of the water for sailing between the battling squadrons near Port Arthur (1905). But not until

1907 did the Times feel sufficiently confident in the reliability of wireless to turn to the new medium in preference to cable dispatches.

A dramatic example of the value of wireless to safety at sea occurred in January 1909. The White Star liner "Republic" was rammed in heavy fog off Nantucket Lightship. Though the Italian Lloyd's ship "Florida" had badly damaged the "Republic's" wireless room, operator Jack Binns was able to send out the CQD distress signal and maintain contact with rescue ships and shore stations, preventing loss of life.

Meanwhile, back at the shore stations in the U.S.A., work was going on apace on the next objective in the electronics field - voice transmission. On Christmas Eve, 1906, ship operators in the Boston area were amazed to hear in their headphones not Morse code, but "Silent Night" - played on a violin and sung. It was bluff, red-haired Canadian Reginald Fessenden on both counts, aided and abetted by his small group of engineers at the experimental station at Brant Rock (today, Marshfield), Massachusetts, a scant 20 miles from Boston.

The role of wireless as a crime fighter predates Dick Tracy and his wrist watch radio by at least two decades. In 1910, one Dr. Crippen, enamoured of his young secretary, did away with his wife, invented a trip to Europe for her to explain her absence from their London home. Scotland Yard caught up with the scheme, but not before the good doctor and his "nephew" were on the high seas enroute to Canada. The doctor's description and dossier were wirelessed to the Newfoundland police to nab him and his girlfriend as they got off the boat. Hours prior to their arrival, a Scotland Yard man who had booked passage on a faster ship was on hand to take the startled pair into custody.

Another pioneer in the radio-telephone field, Dr. Lee DeForest, began voice transmissions from his laboratory in upper New York City, utilizing his newly developed audion tube. In 1910 he arranged a primitive remote pick-up from the Metropolitan Opera House - Enrico Caruso and Emmy Destinn in the traditional double bill of Cavaleria Rusticana and Pagliacci. But DeForest had fallen in with false friends. A couple of wily promoters started corporations in DeForest's name and soon were charged with using the mails to defraud. DeForest himself was treated like a con man and told to forget his idle dreams of radio and make an honest living elsewhere (prophetic advice!)

Marconi's star was higher than ever. In one after another of the countries of the Western World, he organized companies, forming a communications chain that encompassed nearly all of the British Empire (on which, at that time, the sun never set!) His policy was to build and maintain the necessary equipment, rent it to clients (ship owners, navies, governments, etc.), and man the gear with his own employees exclusively.

On April 10, 1912, the populace of Southampton, England cheered the departure of a ship that begged description - the S.S. Titanic, on her maiden voyage to New York. Her complement of nearly 2,100 passengers and crew represented a sampling of the wealthiest families of two continents, many of Europe's poor hoping for the bounty of the New World, and a crew chosen from among the top personnel of the White Star Line. Around midnight of the 14th, the "unsinkable" Titanic needlessly struck an iceberg and sank within two hours. But for wireless, fewer than the scant 700 would have been saved. Most important, if the nearby S.S. Californian had been required to provide for wireless operators around the clock, the loss of life from the Titanic disaster would have been a tiny fraction of the nearly 1,500 who lost their lives.

Also in 1912 a new name was coming to the fore in wireless - "Doc" Herrold, an experimenter in San Jose. Herrold founded a school for wireless technicians and carried on experiments in voice transmission via an antenna of several thousand feet of wire strung across the streets in San Jose between office buildings. His original goal, soon realized, was to "talk" with the wireless room in the Fairmont Hotel in San Francisco. Soon he was receiving acknowledgements of his broadcasts from Alaska and Hawaii. His station KQW proved to be too expensive for him to operate. He gave it to the 2nd Avenue Baptist Church which operated it until it proved too costly a hobby for them. Sold to a private individual the station was soon licensed to operate on maximum power (50,000 watts), making it attractive to CBS. Purchased by CBS in the mid-40s the station today is KCBS, San Francisco.

The Marconi name was to stay in British headlines for considerably longer in 1912. On the heels of the fame attached to the Marconi role in the Titanic disaster came notoriety for the Marconi companies. The British Marconi Company was negotiating with the British Post Office to construct a chain of land stations to give instantaneous communication with the farthest elements of the farflung Empire. Then from several unrelated sources came rumors of a scandal involving the Company, the Minister of Posts and the Attorney General. While a tempest in a teapot stirred up by partisan politics in the British Parliament, it did serve to whet the English appetite for revelations of a bit of sharp dealing in high places. At no time was Marconi personally involved or accused, but his profitable companies suffered a rather serious loss of prestige.

The growing tensions in Europe, soon to break out in open warfare, found wireless faced with several imperatives. Germany was a major colonial power, relying on submarine cables for communication with her colonies in Africa and the Pacific, as well as important commercial correspondence with South America and Asia. Realizing that in the event of war with England all cable service would be denied her, Germany set out to substitute powerful wireless stations for

the vulnerable cables. At Nauen she built station POZ, capable of maintaining reliable communication with the U.S. via a station at Sayville, N.Y. This served as a clearing point for diplomatic and commercial messages from Germany to all points in the Western Hemisphere. When war finally came, a similar need for overseas wireless was experienced by the U.S., and our most powerful transmitters to that date were built here and in France to handle the tremendous amount of correspondence necessitated by our troups in Europe.

Territorial ambitions and disputes had been smoldering for some time in Europe. The spark to ignite World War I was struck in June 1914 in the small town of Sarejevo, Serbia. Emperor Franz Joseph of the sprawling Austro-Hungarian Empire was shot and killed there by a joung activist for Serbian independence. Serbia and Russia had a treaty which called for Russian aid in the event Serbia was attacked, Austria had a similar treaty with Germany, France one with Russia, and England a treaty with France. In domino fashion all these powers fell into war in August and the four year slaughter of World War I was underway.

Wireless played an important, but unfortunate, role in the sinking of another important steamer. Sailing from New York with many American passengers (in spite of a German Embassy warning that the ship might be sunk), the S.S. Lusitania, largest vessel of the Cunard line, sailed eastward to her fate. Scheduled to be met by H.M.S. Juno, a cruiser, off the Irish Coast on May 5, 1915, she was left unprotected. Wireless messages from small craft in the area warned of German submarine activity, and the Admiralty recalled the unescorted cruiser to Queenstown. The Lusitania sailed across the bows of the U-20 and received the last of her 14 torpedoes forward on the starboard side. The resulting explosion doomed the Lusitania and 1,198 passengers and crew, including 128 Americans. In spite of claims by the Admiralty and the U.S. State Department that she was unarmed and carrying a peaceful cargo, later investigation revealed the Lusitania to have been an armed merchant raider, heavily loaded with munitions for England.

A second imperative for wireless was shared by all the warring powers. At sea England needed, and developed, a radio compass, adding safety to the sailing of the essential convoys carrying food and munitions through the often fogged-in waters surrounding the British Isles. Submarine detection gear of a rather primitive but fairly effective type further aided England and her allies in meeting the U-boat menace. At sea for the Germans, there was a great advantage in their high-powered transmitters, capable of transmitting orders to the submarines when they cautiously surfaced at night, and communicating with her far-ranging, swift commerce raiders, like the Emden. Also closely related to these functions was a quite effective device invented by Marconi to track the German Zeppelins overhead on their bombing raids over England.

The third imperative for wireless also stemmed from the war. Very quickly the war settled down to trench warfare with the need to communicate between field headquarters and the front lines. Field telephones had a serious drawback in that a shell could sever the line and require signal corps men to string new wire over open land in sight of the enemy. Needed was a field wireless telephone sufficiently compact to be carried easily into the trenches and requiring no more power than could be delivered by a hand-operated generator. Parallel to this was the need for similar equipment, smaller still and lighter, for use in aircraft. The planes of the day could not afford the luxury of a separate crew member to tap out Morse code, and communication with the ground was an essential for the scouting functions of the airplane.

All three of these needs were met in this country by the fashion in which the Navy administered the wireless business in wartime. When we entered the war, the Navy assumed control of all wireless gear in the country. Amateur stations were padlocked for the duration. Commercial transmitters were taken over by the Navy, along with all shipboard gear on U.S. merchant ships. The Navy was very concerned over its earlier experiences with the Marconi companies' policy of leasing equipment and allowing only Marconi personnel to operate it. As a con-

sequence, the Navy set out to insure a domestic wireless equipment industry, free from any foreign control. As a wartime measure, the Navy arranged for a pooling of all patents on wireless equipment, arranging for exemption from any suits for violation of patent rights and freedom from any prosecution under the anti-trust laws. With this free hand, the progress of American manufactureres in developing new forms of equipment was more than rapid. New companies were formed to assist the older electrical equipment companies and a full-fledged industry resulted.

But wireless did not wear a warlike face exclusively. Very early there arose an amateur interest to eavesdrop on the fascinating messages increasingly crowding the air waves. No license was required for receiving equipment, and as early as 1914 the Handbook for Boys of the Boy Scouts of America was offering a Merit Badge in "Wireless". (In 1922 the name was changed to "Radio".) In 1916 David Sarnoff, then Manager of the New York branch of the American Marconi Company, addressed his famous "little black box" memo to the president of the company. In it he suggested that soon a market would be ready for a home radio set to sell for about $75, and forecast a sale of 1 million sets within three years - a figure almost exactly reached in the span beginning in 1920.

At the end of World War I the Navy sought to continue its control over radio in this country. Nothing came of their efforts officially, but behind the scenes the Navy paved the way for an American "cartel" in the wireless equipment industry to insure against any future reliance on foreign suppliers. Specifically, they put their weight behind legislation which permitted the founding of Radio Corporation of America, free of any fear of prosecution under the anti-trust statutes. In 1919, RCA was formed by a joining of the wireless manufacturing and patent resources of the major U.S. companies in the field. Largest single share in the new company went to General Electric (30.1%), Westinghouse was next (20.6%), American Telephone & Telegraph (10.3%), and United Fruit Comapny (4.1%). Westinghouse had no patents to offer as "openers" until they hired Major Edwin Armstrong (heterodyne circuitry, later FM), and Professor Michael Pupin (Columbia U. physicist,

telegraph circuits). And United Fruit warrants a bit of explanation. The great importance in their banana business of having ships on hand at the moment the crop was ready led them to equip and maintain one of the largest installations of ship and shore stations in the world. This was useful to the new RCA as the nucleus of an overseas communication system. In 1920 the American Marconi Company was bought out by RCA and immediately the cost of overseas radiograms dropped to 17¢ a word, compared with the cable rate of 25¢.

Wireless, now Radio, was now clearly established as a major industry as the second decade of the 20th century drew to a close.

SUGGESTED OUTSIDE READING

De Forest, Lee - "Father of Radio"
Dunlap, Orrin E., Jr. - "Marconi, the Man and His Wireless"
Fessenden, Helen M. - "Fessenden, Builder of Tomorrows"
Harlow, Alvin F. - "Old Wires and New Wares"
Marconi, Degna - "My Father, Marconi"
Radovsky, M. Alexander - "Popov: Inventor of Radio"

RADIO'S INFANCY - 1920-1927

As with so many things, we arrive at a "birthday" for an industry like broadcasting by consensus. In this country we generally accept as the beginning of broadcasting in its present sense to have been the coverage of the Harding-Cox election returns on November 2, 1920. (This date is challenged by WWJ in Detroit on the basis of their coverage of municipal election returns in August of that year. And we must mention the claims of KQW, San Jose, which date back to 1913.)

So, it was a political event that launched broadcasting. Dr. Frank Conrad, an engineer in the East Pittsburgh plant of Westinghouse, had operated a radio telephone transmitter with the call letters 8XK prior to World War I. During the war he had developed much equipment for the Signal Corps, and a propeller-driven electric generator to supply current for radio in aircraft. His post-war hobby centered around the transmitter in his garage, with his teen-age sons frequently recruited, along with high school friends as talent.

The success of the Republican Party in 1920 was due in large measure to the deeply ingrained American desire for periodic change in politics. The Democrats were associated in too many minds with the rigors of World War I, and the dominant industrial and financial figures of the day (Republicans almost to a man) promised a quick return to the growing prosperity so rudely interrupted by the recent unpleasantness in Europe.

Harding was a front runner and he knew it. Consequently, he

conducted a "front porch" campaign. He sat at home in Marion, Ohio, welcomed delegations of voters, posed for the usual ridiculous publicity photos, and talked about "normalcy." This was a tough combination to beat, especially since the time immediately preceding the election had found Democrat President Wilson dangerously ill and in many ways not capable of performing the duties of his high office.

On October 16, 1920, Westinghouse applied for a broadcasting, rather than Conrad's experimental, license. It arrived in the nick of time to permit KDKA to broadcast election bulletins, supplied by telephone from the Pittsburgh Post. From its primitive transmitter and studio in a corrugated metal shack atop the Westinghouse plant, the word was broadcast that the Harding-Coolidge ticket had won 404 electoral votes to 127 for the Cox-Roosevelt slate. (But the young Roosevelt was to make a far better showing in an election a dozen years away!)

The Republican administration savored of cynicism from the start. Harry M. Dougherty, to become Attorney General in the Harding Cabinet, had spoken openly of the fashion in which Harding would be selected as the Republican nominee by a handful of delegates, originating the concept of the "smoke-filled room" in politics.

The Harding Cabinet, however, gave some promise of quality in its makeup. It included two future Presidents (Coolidge, Vice President, and Herbert Hoover, Secretary of Commerce), a future Chief Justice of the U. S. Supreme Court (Charles Evans Hughes, Secretary of State), a czar of finance (Andrew Mellon, aluminum and banking tycoon, Secretary of the Treasury), a czar-to-be of the movie industry (Will H. Hays, Postmaster General), and some oil-dipped, black sheep (Harry Dougherty, Attorney General, and

Albert B. Fall, Secretary of the Interior). The group lent itself fairly readily to Harding's traditional "cronyism" in politics, culminating in the scandals involved in leasing Navy oil reserves to private oil companies (accompanied by some rather blatant bribery).

Radio caught on quickly with the general public. A receiver of sorts was possible to be made with no more sophisticated materials than an oatmeal box, some copper wire to wind into a coil, and a very modest cash outlay for a galena crystal and a pair of Brandes headphones. Boy Scout Handbooks, dozens of do-it-yourself magazines and Sunday newspaper supplements gave easy-to-follow plans and instructions. On the broadcasting front, stations came on the air in great numbers -- 500 by 1922.

The principal talent on the air was usually more numerous than competent. Anyone who could sing a song, play a kazoo, or do rope tricks was welcome at these primitive stations. For free, of course! Soon professional performers, principally from the vaudeville stage, began to see the promotional opportunities a radio appearance offered. One of the earliest to become closely associated with the new medium was Vaughn DeLeath, a rather ample vaudeville singer, who soon learned to adapt to the demands of radio. The early microphones, about the size of a present day coffee can, were extremely sensitive to excessive volumes of sound - the carbon granules in them would "freeze" in the event of too much sound input and required a sharp blow to loosen them. Miss DeLeath quickly learned to sing softly, with a mike held close to her mouth - and "crooning" was born!

Other performers with acts not too rigidly scripted felt at ease in the new medium. Will Rogers, who needed only the afternoon newspaper to provide him with a skeleton script for his style of humor, was an early and

frequent radio performer. We have a picture of him on the cover of one of the earliest "fan" magazines - Radio Broadcasting News - published by Westinghouse (1923). And some of his early comments over radio, dealing with politics and show business, are still available for listening today. Gradually, the "name" performers of the day were attracted by the novelty of the medium. Al Jolson appeared on New York stations principally to plug his appearances in Broadway musicals (he was not to make the first "talkie," The Jazz Singer, until 1927).

An amusing instance of some of the risks run by the early broadcasters putting entertainers on the air was experienced by New York's WOR in the early 20s. A well-known dramatic actress of the day, Olga Petrova, was scheduled to do some dramatic readings over the air. She insisted on appearing in costume (looking like Scarlett O'Hara) though the live audience in the studio could be ticked off on the fingers of one hand. No sooner was she well into a scene from Shakespeare, Shaw, Ibsen or whomever, when she departed from the script to deliver an impassioned lecture on birth control. This subject was a "no-no" in the 20s, but the director had no way of cutting Ms. Petrova off the air without racing out to the control room and personally pulling the switch. No hard feelings, though - Olga was invited back for a second appearance. This time she started to ad lib on prostitution, but now there was a control console in the studio which enabled the director to silence Ms. Petrova very promptly.

Radio presented other hazards for performers. Many succumbed to severe "stage fright." The cure here was sought in devising means to conceal the microphone without interfering with its functioning. Floor lamps frequently included a mike in place of one of the usual incandescent bulbs. In an interview, if a desk or table was used as a prop, the mike was often hidden in a vase of flowers or a set of dummy books.

Many performers found it difficult to do their routines without the benefit of live reaction to their work. Eddie Cantor was terrified at the conclusion of his first radio appearance when there was no applause. Subsequent appearances found the station recruiting everyone in sight -- station personnel, elevator operators, charwomen, etc. -- for a "live" audience. In relatively few years, live audiences would become the rule rather than the exception, and sponsors would consider as assets blocks of tickets to view broadcasts of their shows in the studios.

Sports became staple fare in radio very early. Graham McNamee, one of the earliest announcers to establish a national reputation, first gained recognition via his description of baseball games. In 1921 we find WWJ, Detroit, "broadcasting" the World's Series of that year. Actually there was no interconnection of stations for the event. The WWJ announcer worked from the Western Union copy filed inning-by-inning, re-creating the game for Detroit listeners, along with appropriate crowd noises interspersed. (The Giants beat the Yankees in a "subway series," 5 to 3.)

The advent of commercial sponsorship in radio is again a matter of a consensus. Surely many local stations were charging a few dollars for time on the air used by local merchants. But again we have a consensus which says that WEAF in New York sold the first "commercial," a ten-minute talk on behalf of the Queensborough Realty Corp, apartment building operators. Many restrictions ringed about this premier. First, it could not be aired at night - one hawked one's wares during conventional business hours - so it went on at 5:30 p.m., August 28, 1922. Mention of price was verboten. Actually the ten minutes was occupied primarily with a paean of praise for Nathaniel Hawthorne (after whom the apartments were named) and his views on living in the "country" (Jackson Heights, L.I.?). Time cost for the ten

minutes was $50.

Radio could not do justice to direct overseas coverage at this point, so the rapid rise of Mussolini in Italy was left to the newspapers to report. Broadcasters at this time did not feel that their medium was destined to become important in the area of news. Suffice it for radio to entertain. In November, 1922, the San Francisco Chronicle listed all they knew about radio programs for the day in roughly three column inches of type on a very inside page. Radio news reporting was largely a matter of an announcer paraphrasing the daily newspaper accounts of major events. It was counted an important skill for an announcer to be able to so paraphrase the paper's account as to preclude the risk of charges of plagiarism or violation of copyright.

Technically, radio advanced quite rapidly. By 1922, Montgomery Ward was offering a one-tube receiver, with headphones, antenna wire and a lightning arrester, for $49.50. The air was full of signals - most interfering with each other - but still, in 1924 we find 1.5 million radio sets sold for a total of $100 million. By the time we come to the end of the era covered in this memo (1927), there will be 1.4 million sets sold that year for a total of $168 million. But listening was still largely at the novelty level, and ten minutes of programming from KLZ Denver, heard in New York, was worth two hours of listening to New York's WGBS (the Gimbel Brothers' store).

En route home to Washington from a trip to Alaska, President Warren Gamaliel Harding died, in the Palace Hotel in San Francisco, on August 2, 1923. Radio could do little to publicize the tragedy. Stations in the East and Midwest had long closed down for the night. Only a few Pacific

Coast stations carried the word that a speech the President was to have delivered in Los Angeles was being read by his secretary - and interrupted by word of the President's death. In Plymouth, Vermont, the vacationing Vice President, Calvin Coolidge, was sworn in as President of the United States by his father, a Justice of the Peace, at 3:00 a.m., by the light of an oil lamp.

Coolidge brought to the national administration an almost biblical austerity, in sharp contrast to the free-wheeling atmosphere of Harding and his friends in and out of the government. Coolidge made several radio appearances at this stage of his career, but his taciturnity and unwillingness to speak at any length about anything delayed employment of radio as a significant communications adjunct of the Presidency.

Commercialism of radio advanced at a fairly rapid pace. Self-regulation in terms of what could be said, when, and how often, was quite the order of the day. In order to circumvent the limitation set on the number of mentions which could be made of a sponsor's name, many resorted to including the name of the sponsor or product in the program name (as, The Eveready Hour), or the talent (The Browning King Orchestra). Thus was the sponsor's name kept firmly in the consciousness of the listener. Jingles, or musical mention of the sponsor's name, were another early development; (witness The Happiness Boys' opening song).

On the entertainment front, radio soon became the great purveyor of the popular in music, replacing the phonograph and the pianist who played on a platform in the Woolworth stores, featuring all the hits for sale in sheet music. Dance crazes, as the Charleston and the Black Bottom, owed much of their popularity to the publicity given them by radio.

A radio station soon became a sort of civic "badge" for communities of all sizes. A new station was inaugurated with fanfare, ribbon cutting by the mayor, perhaps a contest to choose a "Miss WBIG (We Believe in Greensboro!)" In Minneapolis we know that the ground-breaking ceremonies for the new building for WCCO was accomplished by horse drawn draglines, the Percherons proudly ridden by the wives of major officials of the Twin Cities, all for the benefit of the press cameras.

Politics occupied center stage for the country in 1924. The Republicans had little difficulty in agreeing on a ticket of Calvin Coolidge ("Keep Cool With Coolidge") and Charles G. Dawes, a Chicago banker who made famous a style of pipe where the bowl hung down from the stem, rather than being supported by it. Coolidge came out flat-footedly for prosperity, high employment, happy farmers and Europeans in Europe.

For the Democrats the choice was more difficult by a wide margin. Their perennial candidate, William Jennings Bryan, was left on the bench while a multitude of candidates, including Alfred E. Smith of New York, fought out the voting for 103 ballots. Radio covered both conventions, and few who heard the Democratic broadcasts can ever forget the 103 times the Alabama delegation announced, "Alabama casts 24 votes for Oscar W. Underwood." They finally settled on John W. Davis, a West Virginia lawyer and Congressman, with Robert M. LaFollette as Vice Presidential nominee. The Republicans won - 382 to the Democrats 136 in the Electoral College (Wisconsin gave its 11 votes to native son Bob LaFollette for President on the Progressive ticket).

Among the unusual roles played by radio in 1924 was one involving the U. S. Navy airship Shenandoah. In a severe storm over the New York area,

the airship's transmitting equipment failed and she was unable to establish her exact position. Station WOR went on the air with announcements asking all in the area to go outdoors and listen for the sound of aircraft engines. On hearing such a sound, the listener was asked to report the fact to WOR where the phone calls were plotted and sufficient information relayed to the Shenandoah to enable her to make a safe landing at Lakehurst, New Jersey.

International affairs remained beyond the capabilities of radio to cover significantly. The newspapers dutifully reported that Mussolini was making the Italian trains run on time, and began to mention the activities of a strident voiced Austrian house painter whom the Germans had just thrown in jail for disturbing the peace. He was accompanied to the local bastille by several others of the mental stability of Rudolf Hess. It would be a decade before American radio audiences would hear live the sound of serious machine gun fire in the Spanish Civil War.

On the domestic scene, radio was moving in many directions simultaneously. Public service could be illustrated in a very small example - The Denver Traffic Court. In the mid 20s, radio broadcast directly from the courtroom and perhaps gave special emphasis to a permanent exhibit on the judge's bench - a bottle of castor oil used as a sentence (one tablespoon immediately) for juvenile offenders. And sports coverage was broadening rapidly. Football was given a measure of public exposure that has increased interest in the game to the point where today it is played in a 13-month season on TV. Big news indeed were the plays of The Four Horsemen of Notre Dame, and 77, the uniform number of Red Grange, "the Galloping Ghost," was as indelibly etched in the minds of sports fans as ever TV could do it!

Network broadcasting was making its first tentative appearances. Interconnection of stations had been made on a limited, one time basis, principally by A T & T, linking New York with Boston, Schenectady and Washington. In 1924 President Coolidge spoke on a truly coast-to-coast network (with many great gaps in coverage), in an address to the U. S. Chamber of Commerce. Total station list was 26 stations, linked for just that one event. Not until 1926 were there formal networks permanently in existence, and available for sale generally to advertisers. This came about via a subsidiary of RCA, the National Broadcasting Company.

One of the earliest examples of elaborate "remote" coverage by a radio station was given by WHAS in Louisville, Kentucky. A coal miner in nearby Cave City, one Floyd Collins, whose hobby was exploring caves, got himself trapped in a cave only 300 feet from freedom. Attracted to the scene, in no small measure by the WHAS coverage, was a typical American crowd - hot dog vendors, balloon sellers, souvenir hawkers, fortune tellers, and revivalists. (Later, a motion picture, The Big Carnival, based on the Floyd Collins entrapment, was made with a southwestern locale.) For 18 February days, WHAS maintained a vigil for the radio audience, a death watch ending when the cave was sealed off as a natural mausoleum for Floyd Collins.

In that same year, WGN Chicago undertook a similar marathon coverage. The famous Scopes "Monkey" trial in Dayton, Tennessee was covered by WGN alone at a cost of nearly $1,000 a day for line charges to Chicago. Pitted against each other were two titans - in this corner, William Jennings Bryan for the cause of Fundamentalism in religion - his opponent, Clarence Darrow, champion of labor, science, and other contemporary underdogs in Tennessee. Scopes, a mild high school teacher, was found guilty of violating

the state law forbidding the teaching of evolution. On July 24th he was found guilty and fined $100. Two steaming July days later, Bryan died of the strain of the trial, plus bad digestion. Again, a movie was made of this event in our history - "Inherit the Wind."

Radio's role as a purveyor of the nation's music never ceased to grow. New chapters were added with the publicity given to Paul Whiteman's famous Aeolian Hall concert at which George Gershwin's Rhapsody in Blue was performed for the first time. A vogue for "symphonic jazz" set in, abetted by radio's coverage of the phenomenon. Not neglected were the more plebian bands playing the more familiar jazz of the day. Coon-Sanders Night Hawks became known nationwide via their late night remotes from WDAF in Kansas City, and Guy Lombardo became a byword among band buffs for his broadcasts from the Mount Royal Hotel in Montreal.

Two unusual phenomena of radio occurred in the mid 20s. One was that of Dr. John Romulus Brinkley, holder of numerous medical degrees from mail order colleges. The good doctor early recognized the power of radio to reach and to move people. He had two projects to merchandise - a line of proprietary medicines noted principally for the high mark-up allowed the participating pharmacists, and a goat gland transplant operation "guaranteed" to rejuvenate aging males. The Doc built himself a radio station - KFKB (Kansas First, Kansas Best) - to spread the good word about what wonders the Doctor could accomplish for you at his clinic in Milford, Kansas. Several things happened. (1) The good doctor made himself several millions of dollars, (2) he was very nearly elected Republican Governor of Kansas (twice), (3) he had his broadcasting license revoked by the Federal Radio Commission, in response to pressure from the American Medical Association, (4) he transferred his broadcasting activities to Nuevo Laredo, Mexico,

just across the border, with twice the maximum power allowed U. S. stations, and (5) he made a few more millions.

Meanwhile, way down south in Los Angeles, an itinerant revivalist preacher and sometime faith healer had found the vibrations good and settled down to establish a religious group with great pecuniary prospects. Aimee Semple McPherson, after a series of failures in the mid-and southwest, developed in Los Angeles a large following, principally of older people. She built a radio station - KFSG (the Four Square Gospel) - to promote her enterprise. She was something more than careless about abiding by the radio regulations of the day and found her station padlocked by U. S. Marshals for failure to stay on its assigned frequency, observe licensed operating hours, etc. An indignant telegram to Secretary of Commerce Hoover (plus some improvements in station operating procedures) got the station back on the air. Aimee made headlines again in 1928 when she disappeared for several weeks at the same time the manager of her radio station dropped out of sight. There was considerable speculation and a few legal actions stemming from this concatenation of bizarre circumstances.

Radio was beginning to develop its own talent and formats by 1925. In Chicago a comedy team, known as Sam 'n Henry, did a blackface routine, first over WEBH (the Edgewater Beach Hotel) five nights a week, receiving only their dinner as payment. Station WGN (the World's Greatest Newspaper, the Chicago Tribune) hired the act and introduced the boys to a novelty - money, $75 a week for the pair. Their comedy routines were soon the rage of Chicago.

Some other examples of radio's adaptation to local tastes are to be found at WCCO (the Washburn Crosby Co., millers in Minneapolis). For the

large Scandinavian population, the station regularly scheduled Oscar Danielson and His Orchestra. Oscar announced his own program in Swedish. Then there was Whoopee John, the Polka King. In the Upper Midwest, polkas have long been as popular as C & W is elsewhere today. Whoopee John was but one of a group of polka bands based on New Ulm, Minnesota - Fez Fritsche, The Six Fat Dutchmen, etc.

Technically, the year 1926 saw one of the earliest automobile sets installed by KDKA. It was bulky, occupied the space of about one and a half human passengers, but it could communicate with a stationary installation while cruising the highway.

Much more important was the inauguration on November 15, 1926 of the National Broadcasting Company and its formally established network of 25 stations. The first program aired was a gala to end all galas - stars and outstanding personalities from almost every field of endeavor were on hand. It was one of the last important functions to be held in the Grand Ballroom of the old Waldorf-Astoria Hotel (where the Empire State Building now stands). Incorporated in the original plan for NBC was a Committee of people outstanding in the arts, education, labor, religion, politics, etc., to guide the new network in establishing program policies of maximum benefit to the public. The idea proved to be unworkable.

Sports continued to enjoy expanded coverage via radio. As early as 1921, radio had broadcast boxing -- the Dempsey-Carpentier fight that year. It required a special transmitter to be built for the occasion near the arena in Jersey City. On September 7, 1926, Gene Tunney won the heavyweight championship from Jack Dempsey in a bout broadcast from Philadelphia. Listeners heard the fight described in the abrasive, nasal tones of Clem McCarthy, an announcer who was to become virtually synonymous with broadcasts

of championship boxing for several decades.

On February 3, 1927, President Coolidge signed into law the Federal Radio Act of 1927. Here began the first meaningful government regulation of broadcasting. Up to this point the Wireless Act of 1912 had prevailed, patched almost beyond recognition in attempts to make it applicable to a broadcast, rather than to a message service. The 1927 Act set up five geographic districts, each intended to include about the same number of people. Each of the Commissioners (5) was to be a resident of the area he was intended to represent. This geographic concept was soon abandoned as unworkable. First order of business for the new Commission was to develop an Allocation Table which would accommodate the maximum number of radio services for the maximum number of people, within the limitation of the number of frequencies assigned to us by international treaties. Beyond this the primary concerns were with qualifications for licenses and general operation of broadcasting properties "in the public interest, convenience and necessity."

The big news of 1927 was the non-stop solo crossing of the Atlantic by Charles A. Lindbergh. Radio followed his flight in considerable detail. (There had been a large number of false starts by other flyers which led to a "show me" attitude on the part of the press and radio.) Lindy's welcome, first in Washington and subsequently in other major cities, was covered in great detail by radio. Popular songs like "Lucky Lindy" were played constantly on every radio station. Again, in typical American fashion, Lindbergh was soon eclipsed in the news, only to return in a tragic role in 1932.

The sports world gave radio one of its most bizarre moments in 1927 in the return Tunney-Dempsey match in Chicago. The famous "long count" was

clearly and dramatically brought to the radio audience, to be the basis for arguments persisting to this day in some old-time saloons.

On August 22, 1927, two poor Italian immigrants, charged with murder during a holdup in 1920, were executed in Charlestown, Massachusetts. Sacco and Vanzetti, whose innocence was believed by many thousands of people throughout the world, had lost their last legal appeal. Radio had the final word.

A happier note was sounded on September 18, 1927. A new network of 16 stations took to the air under the name of Columbia Broadcasting System. At the outset, it was a badly underfinanced organization, burdened with debts of an unsuccessful predecessor. By comparison with the NBC premiere, that of CBS was modest. But among the initial offerings of CBS on that night was the world premiere of an opera by Deems Taylor - The King's Henchman, a symphony orchestra presided over by Don Voorhees (which included in its number Red Nichols and His Five Pennies!). Under the stimulating leadership of William S. Paley and financial assistance from confident relatives of his in Philadelphia, the network was very soon a force to be reckoned with in the world of commercial radio.

As a closing footnote to these first seven years of American broadcasting, we might note that the 3½ column inches of space the medium rated in the San Francisco Chronicle in November, 1922 had grown to 4 columns, full page deep by November, 1927.

SUGGESTED OUTSIDE READING

Archer, Gleason - "History of Radio to 1926"

Bliven, Bruce - "How Radio is Remaking Our World"

Carneal, Georgette - "A Conqueror of Space: Dr. Lee de Forest"

Davis, H. P. - "The Early History of Broadcasting in the United States"

Dunlap, Orrin - "The Story of Radio"

Goldsmith, Alfred N., and Austin C. Lescarboura - "This Thing Called Broadcasting"

Schubert, Paul - "The Electric World"

The Voice of Experience - "Stranger Than Fiction"

RADIO'S GROWTH - 1927-1934

In our preceding lecture, we left radio with two networks in business (really three, if we count NBC's Blue Network) and a Federal Radio Commission to oversee the burgeoning medium.

Probably the most typical element of the years we will be dealing with here is the phenomenon of Amos 'n Andy. We saw their early beginnings in radio working five nights a week for dinners over WEBH (the Edgewater Beach Hotel), Chicago, hired by WGN (The World's Greatest Newspaper) as Sam 'n Henry at $50 a week (for the pair). Attracting huge audiences, and the attention of the fledgling NBC, they were brought to New York and soon were being paid $100,000 a year as Amos 'n Andy (a name change necessitated by the fact that WGN owned the name Sam 'n Henry).

We must not let 1927 go by without noting an event of great importance to radio. October 6, 1927 saw the world premiere of "The Jazz Singer", the first all-talking film, starring Al Jolson (who already had an established reputation in radio).

Herbert Hoover was the successful Republican candidate for president in 1928 (Calvin Coolidge "did not choose to run"). Politics warmed up in that presidential year, and radio transmitted its share (and perhaps more) of the hot air generated by the politicos. The Republicans felt themselves on safe ground. The country was prosperous, growing richer in money every day (if only on paper). The Democrats sought to move ahead of the hypocrisy of Prohibition and chose to live particularly dangerously by nominating Al Smith, a "wet", a Catholic, and a New Yorker who said "raddio." He was

nominated by a rapidly rising star in the Democratic galaxy - Franklin Delano Roosevelt. Radio covered the campaigns with new techniques and vigor, often to the disillusionment of the electorate at home.

Just prior to convention time, the New York Times carried a brief obituary of note to us today. Nathan Stubblefield, the Kentucky farmer who had demonstrated wireless voice transmission as early as 1892, died of starvation. A recluse at an advanced age, he was trapped in his Kentucky cabin by a terrific blizzard and starved to death, virtually unnoticed and unmourned by any but a few radio historians.

New talent was being developed by radio. One of the earliest "regulars" owing his start to the new medium was Rudy Vallee, a young musician with a rather run-of-the-mine college band, made it big with "crooning." The inventor of this low-keyed style we saw earlier to have been vaudevillian(ess) Vaughn DeLeath. We meet her again in 1928 in a publicity shot of NBC featuring its very early work in Television, sharing the miniscule screen with a small chimp. A few TV sets were built to receive a barely recognizable picture of 60 scanning lines quality.

More important was the beginning of radio sets sufficiently "portable" to be installed in automobiles (at the expense of a couple of passenger spaces!) WGN equipped one of the earliest radio prowl cars for the Chicago Police Department. The amount of space taken up by the gear and an operator, plus two regular policemen, automatically limited the capacity of the car to bringing in no more than a single lawbreaker. While radio played no significant part in the event, the year 1929 did see former Secretary of the Interior Albert Fall finally convicted and jailed for bribery in the Teapot Dome oil scandal that dated back to the Harding administration.

Herbert Hoover won over Al Smith by a plurality of 1.3 million votes at the polls and 444 to 87 in the Electoral College. The campaign had been a bitter one, with much bigotry evidenced in the South and West on the issues of Al Smith's religion and his stand on Prohibition (termed by Hoover as a "noble experiment"). In any event, the country clearly associated the Republican party with prosperity - and prosperity there was. Radio was participating in this prosperity. During the four years of the Coolidge administration (1925-1928), the U. S. public spent $933 million for 8,381,000 radio receiving sets - average price, $112. In Hoover's first year in office, nearly half as many (4,428,000) sets were sold as during the entire Coolidge administration. By the time Hoover had seen the collapse of Wall Street and the beginnings of the Depression (1929-1932), there were 14,675,000 sets bought at a total cost of $1,265,000,000. The average price per set was now down to $86.

As an entertainment medium, Radio was establishing itself ever firmer with the American public. Listening to "Amos 'n Andy" reached the level of a ritual daily in millions of homes. Theatres re-arranged the schedules of their films so that A&A could be brought to their audiences at 7 o'clock. Telephone traffic dropped to nearly zero at the 7 o'clock witching hour. Stores open evenings played A&A over their public address systems at 7 o'clock. Americans observed a new "angelus" at 7 o'clock, EST, Mon.-Fri., NBC Blue.

Other talent was being established by Radio. Paul Whiteman and his Orchestra featured a singing trio, The Rhythm Boys. One, Harry Barris, was to become a bandleader, playing for many later years at the Cocoanut Grove in Hollywood. The second, Al Rinker, whose sister was Mildred Baily, a top flight blues singer, became a radio director, responsible for the CBS show,

"Gay Nineties," for one. Harry Lillis (Bing) Crosby was to enjoy the greatest fame of all. His style of singing was unique, and soon his records headed the "best seller" lists from coast-to-coast. Bing was one of many top rank singers and comedians personally discovered by William S. Paley, President of CBS.

On the band front, many names were being established by the maturing medium of Radio. From a lackluster start in Cleveland, a young family-type aggregation emigrated to Canada. Late night remote pickups from the Mount Royal Hotel in Montreal over Station CKAC served to popularize with American audiences Guy Lombardo and his Royal Canadians. To this day, New Year's Eve is not official without a midnight broadcast of Auld Lang Syne by Guy Lombardo. Prohibition was still with us and speakeasies thrived. In New York, West 52nd Street had curb-to-curb speakeasies, operating in the basements of mouldering old brownstone mansions. Smoke, noise, and bad booze at exhorbitant prices were the common denominators. Among them was the Club Durant (Jimmy Durante was one of the owners but couldn't afford to have the "e" added to the electric sign outside the club). Clayton, Jackson and Durante held forth here with a raucus vaudeville style show that fit neatly into the gaudy ways of the "Roaring Twenties." Durante is durable, to say the least, as his continuing appearances on TV testify. He was early sought for radio appearances.

Then it happened. The overextended credit economy (responsible for the heavy stock market gambling) exploded on October 29th. More than 16 million shares were traded that day - a fantastic new record. By the end of December, 1929, over $50 billion in stock values were lost. The bellwether of the radio industry, RCA, sold off from a high of $420 a share in the Fall of 1929 to a low of $8 a share in 1932. The Great Depression had

begun - or at least its presence was finally recognized. Variety, the show biz weekly, headlined the market crash in its own succinct style - "Wall Street Lays An Egg!" And many a performer was caught short, unable to raise margin money to protect the highly speculative trading he had been engaged in. It wasn't fair - everyone was supposed to win!

American industry ground to a screeching halt. Excepting Radio. Radio sets manufactured in 1929 set a record of 4,428,000 sold to the public for $600 million, an average cost of $135 per set. This was the peak of the "acquisitive era" when there was money around to buy the "best" and "most" of everything, including radios the size of spinet pianos. Production of radio sets fell off sharply - to 3.8 million in 1930 and a low of 3.0 million in 1932. Value of the sets sold dropped from $600 million in 1929 to a mere $140 million in 1932, a level not known since 1924! Interestingly, automobile radios began to be a significant factor in 1930 with 34,000 produced that year. By 1934 production had reached 780,000, value $28 million, and the average price per auto set over this five-year period (to 1934) was only $46.

Many would count it dark, that spring day in 1930 when the first Crossley report (the earliest syndicated "rating" service) made its appearance. From that day forward to our time, the broadcasting industry has had to reckon with various attempts to "count the house."

Understandably, the comedians found humor in the Depression. Will Rogers commented that we were the only people on earth who could drive to the poorhouse in our own cars. Eddie Cantor joked about businessmen who now could afford only to return to their wives, and were queried by hotel desk clerks when they requested a 19th floor room - "for sleeping or for jumping?" Cartoonist Gardner Rea showed the interior of a swank club offering

the gear to commit suicide by a wide variety of means, to accommodate its striped-pants membership.

Among the steps taken to reduce the burden of government spending was the Disarmament Conference, meeting in London in 1930, designed to reduce the naval forces among the principal nations. Radio covered the Conference in detail via short wave, and some radio commentators in this country editorialized on our participation in the Conference in terms which would scare the daylights out of station managers today.

Radio moved to fill an important unfilled need for serious music in the early 30s. NBC led off with a series of Saturday morning Music Appreciation Hours, designed for young listeners and presided over by venerable Dr. Walter Damrosch. In-school participation in the program was encouraged by the availability to teachers of a guide book to the series prepared by NBC. A few blocks away, CBS made a major contribution to good music on the air with the Sunday afternoon concerts of the New York Philharmonic, then conducted by Arturo Toscanini. Also in 1930, CBS inaugurated The American School of the Air series, a five-a-week program with each day devoted to different subject matter. Again, a Teachers' Guide Book was a valuable assist in adapting the program to the needs of the small town and rural schools. And we must mention "The Standard (Oil) School of the Air" on the coast here, born 1924 and more than a half century old today.

While the Depression brought on the apple sellers on the street corners and the issuing of all sorts of substitutes for money (scrip) by various cities and towns, Radio "prospered" in terms of audience. With no money to spend on entertainment at the movies or in night clubs, millions turned to Radio for hour after hour of top flight entertainment provided free by the medium. The volume of listening increased, and this meant hearing

more of the commercials on the air by more people, who proceeded to buy more of the radio-advertised brands than the competing brands. Thus did Radio attract increasing investments in time by sponsors at a time when the other advertising media and most industries were suffering severe, steadily-increasing losses of business. Radio succeeded in these trying times for the simplest of reasons - it worked!

On April 21, 1930, radio covered extensively its first major disaster. In Columbus, fire broke out in the Ohio State Penitentiary claiming 320 lives, mostly convicts trapped in two inaccessible cell blocks of the aging buildings.

The U. S. had quite recently become indubitably an urban nation, (urban population exceeded rural for the first time). Hence, the Depression seemed to be an urban phenomenon - closed banks, bread lines, and apple sellers. But agriculture had its share, and more, of the distress of the times. While we still liked to think of the farmer in a stereotype that resembled Grant Wood's "American Gothic," the truth was more nearly to be found in the limning of abject poverty on the small farms which was found so often in the work of contemporary artists. The bankrupt, the dispossessed, the "Okies," were farm folk who had seen their land disappear in the swirl of the dust storms that plagued the southwest, or dribble away to the drone of the auctioneer's chant in Massachusetts, Missouri or Minnesota. Uprooted, they migrated to the west searching for arable land, a fair market for their labor and produce. The Pacific Ocean halted them by the thousands in California.

More than ever before, Radio sought to serve the farmer in these dark times. Full time Farm Directors were added to the staffs of every major station in an agricultural area - and in the case of many a middlin' to small station. As farm marketing became increasingly a business, a science, the farmers' need for rapid, accurate reporting of prices and market conditions increased. WCCO in Minneapolis built a studio in the South St. Paul Stockyards exclusively to serve the farm audience with the fastest, most complete

and accurate data on livestock marketing conditions available anywhere. In Cedar Rapids, Iowa, Station WMT financed a 160-acre farm for Farm Director Chuck Wooster. His twice daily (5:30 a.m. and 12 noon) farm news shows were so popular among Iowa farmers that soon Chuck's popularity won him a network show on CBS on Saturday mornings, coast to coast. But Farm News, then and now, is primarily a local or regional function.

Trading on the misfortunes of American farmers was an old "friend" - Dr. John Romulus Brinkley. Pressure from the American Medical Association had finally resulted in cancellation of the license for his radio station KFKB (Kansas First, Kansas Best). Undaunted, the good grey doctor left Milford, Kansas for Texas, and soon saw the profit potential in a super power station just across the border in Mexico at Nuevo Laredo. He built a 100 kHz station (double the maximum power allowed in the U.S.) and directionalized his signal north, out of Mexico. For a while, the Mexican government paid little attention to "Old Doc," not being a signer of the international treaty governing the allocation of frequencies at the time. As a consequence, Brinkley broadcast on frequencies of his own choice, roving the dial to positions adjacent to U.S. stations serving the farm market. This opened up entirely new "markets" for his patent medicines and goat glad transplant operation, along with a very shady "real estate exchange" racket wherein trusting farmers paid Brinkley $5 to list their farms for sale in a mammoth catalogue of the "Doc" - which had as its circulation only those farmers who were trying to sell - there wasn't a buyer in a carload!

The Empire State Building was completed and provided an irresistable locale for a movie or two. Best remembered is King Kong about the giant gorilla brought back from darkest Africa. Escaping, he proceeded to climb to the very pinnacle of the Empire State tower, where he beat off attacking

Air Force bombers with one hand, all the while holding lovely, screaming Fay Wray in the other. Fortunately, it was only a movie, and the tower remained undamaged, ready to receive the TV antennas of all major New York stations in another decade or so.

The Roman Catholic Church took a long stride into 20th century technology in 1931. After persistent efforts by Marconi to equip the Vatican with a radio transmitter capable of carrying the voice and the pronouncements of the Church to most of the globe, Pope Pius XI dedicated the new powerful Vatican broadcasting station.

An era in American history was coming to a close; the foes of alcohol had their day in the 16 years that the 18th Amendment had been in force. Among the dying of the most vocal foes of the Demon Rum was Billy Sunday. After a career in big league baseball, Billy hit the sawdust trail to save sinners from the blandishments of spiritus fermenti. His cause was a legally lost one with Repeal of Prohibition in 1933, and he was reduced to the minor leagues among soul savers, still displaying the old vigor, however, when he posed for newspaper photos in the alley behind the press room of a daily paper - just for a bit of the publicity which had been his in abundance just a short while ago.

Home radios were becoming increasingly "styled", to be artistic assets in the American living rooms. And they brought into that living room a steady flow of "firsts" for the medium. Gertrude Ederle, the sturdy American girl who first swam the English Channel (girl), treated radio listeners to a vicarious ride on an aquaplane behind a speedboat on the Hudson River, via a newly developed waterproof portable transmitter. Short wave brought us Mussolini verbally strutting before cheering thousands of Fascisti, while returning American tourists marveled at his accomplishment - making Italian trains run on time. Al Smith made a trip to his beloved Ireland, returned to share with the radio audience his joy at seeing the New York skyline from his incoming ship - especially the Empire State Building (of which he was President).

Tragedy struck at home on March 1, 1932 when the infant son of the country's greatest contemporary hero - Charles Lindbergh - was kidnapped. Radio covered every phase of the fruitless search for the child. Rumors about rumors multiplied and found their way onto the air waves too often. A Bronx school teacher, claiming to be in contact with the kidnappers, proved to have been duped. Painstaking police work traced the lumber in the ladder used to gain access to the child's room to a German carpenter, Bruno Richard Hauptmann. He claimed innocence to the end.

But 1932 was the year of the quadrennial expression of Americans' composite views at the polls. Franklin Roosevelt was the overwhelming choice of the Democrats; Herbert Hoover agreed to run for a second term in almost a reflex action. The economy was in a state of utter chaos. Relief was the major issue, and dispersal of the Bonus Marchers - thousands of World War I veterans demonstrating in Washington for payment of a service bonus passed by Congress, but not yet due - was carried out by troops commanded by immaculately turned out General Douglas MacArthur and a quite turned-off aide, Major Dwight Eisenhower. Prohibition was a financial as well as a social issue. The DAR wanted us dry, while the Treasury could readily use the tax dollars from legalized liquor.

President Hoover accepted the Republican nomination in the privacy of a 160-station radio network. After avoiding the medium during his earlier political career, Hoover now turned to radio with enthusiasm. FDR, however, was already a master of the art of the use of radio in politics. His experience dated back to World War I and to effective use of the medium in New York state gubernatorial campaigns.

Among the landmarks for Radio in 1932 was the first of the now weekly broadcasts by the Mormon Tabernacle Choir, direct from Salt Lake City. Their

music continues on the air to this day - a forty-five year veteran of fine, serious music programming in the Radio medium.

To no one's very great surprise, FDR won a landslide victory at the polls in November. The GOP was routed in all but 5 states (total electoral vote was 59 to FDR's 472!) The traditional Republican midwest vote disappeared in a cloud of foreclosure notices.

Radio covered the Election Returns in a greater detail than ever before. Never again would the country go to bed believing one man to be elected, only to find his competitor the winner (Wilson - Hughes, 1916). The San Francisco Chronicle on Wednesday, November 9, 1932, headlined FDR's victory along with Democratic victories in 42 governorship races, while San Francisco voted wet, and legalized betting on the city ballot. The radio programs now appeared three columns wide, full page deep, adjacent to the comics - one of the most read pages in the paper.

Some of the pioneer aspects of Radio were vanishing. Sets were simpler, handsomer, house current powered, and financed on time. Only in the rural areas did the more complex, critically selective sets with independent rotating antennas continue to be found.

Hitler made a cause celebre of the burning of the German Reichstag building, accusing communists of arson. A retarded young Dutch hitchhiker, Marius van der Lubbe, was caught, tried and beheaded. A British newspaper correspondent was an eye witness at the blaze and reported an interesting comment made to him by Alfred Rosenberg, Hitler's adviser on foreign affairs, who was also on hand. "I hope this stupid thing was not done by our people - but I'm afraid it was!"

With the official changeover of administration on March 4, 1933, President Roosevelt acted with great speed to move positively against the enveloping economic disaster facing the country. Just prior to the Inauguration, the Governor of Michigan had ordered all banks in that state to close in order to prevent further financial panic. FDR promptly announced that all U. S. banks would close from March 6 to 9 in order to make a realistic assessment of the intensity of the national economic bind.

From overseas came the early rumblings, actually the nasal cracklings, of shortwave radio, of the beginnings of a re-making Europe. On February 16th a man who many chose to consider an insignificant, if somewhat noisy, Austrian house painter and ex-WWI corporal, had demonstrated sufficient political muscle to be named Chancellor of Germany by octogenarian President Paul von Hindenburg. Demagogue Hitler had more ambitious goals than his Italian counterpart, Mussolini, of making the trains run on time. Rather, he promoted the German flying clubs, legal under the Treaty of Versailles, into a training school for the future Luftwaffe. And camouflaged tractor plants began turning out tanks to equip Hitler's envisioned Panzer Divisions.

Radio reported the major happenings in all this - the visible parts of the iceberg of German re-armament. But little of what the radio reporters found which contradicted the official German versions ever appeared on the air waves here or in the major European countries. The day of the Kaltenborns, Shirers, Murrows, Severeids, etc., was not yet.

Meanwhile, back on the "main stem" (Broadway), people were picking themselves up off the ground where the Depression had thrust them. December 5th was "D-Day" for the assault of legal liquor on the bootleg product. 52nd Street still operated outside the law, while the law remained off 52nd Street. Clayton, Jackson and Durante continued their zany antics in the Club Durant and were on the verge of virtually guaranteeing the liquor sold would not

blind its purchaser. The 21st Amendment, repealing Prohibition, had been introduced in Congress on February 20th and was ratified by the necessary three-fourths of the states by December 5th - something of a record.

The GOP fought a rearguard action with leading figures like Herbert Hoover and Joe Martin (former Speaker of the House), "viewing with alarm" over national networks. But the recovery tide was running and it was being predicted and directed by FDR and his New Deal, guided by his political innovation - a Brain Trust of advisors, many prominent educators.

Of course there were always those anxious to use the human misery of the Depression to their personal advantage. Huey Long, the "Kingfish" of Louisiana, came to Congress with a lurid history of demagoguery in his home state, with his lieutenants beating the hustings to gather in the dissatisfied vote with "pie-in-the-sky," banners promising "share the wealth." Huey's "Kingfish" role was not readily transferable from the bayous of Louisiana to the halls of Congress. He soon locked horns with FDR - to his own great disadvantage - and along with his defeat went many of the catchpenny schemes of those who would trade on the misery of the Depression.

Surely the most important event from our point of view was the passage, on June 19, 1934, of the Communications Act of 1934. This remains the basic law under which government regulation operates to this day. In very large measure the Act was a re-statement of the Radio Act of 1927. For example, Section 315 of the 1934 law differs in only a small number of minor words from Section 18 of the Radio Act, relating to equal opportunities for air time for candidates for political office. FDR believed that a more efficient role for government would be to include all media of electronic communication under a single agency. Consequently, the Federal Communications Commission (now 7 members instead of 5) had responsibility for telephone and

telegraph in interstate communication. Perhaps the greatest differences to be found in the 1934 Act were in the makeup of the Commission - New Deal appointees with only two carryovers from the FRC - and a new spirit of attaching importance to the long expressed principle of the "air" being a national resource, and closer scrutiny of applicants in terms of anti-trust and monopolistic practices.

TV was making some halting moves in the direction of becoming a mass medium. 1934 saw the first telecast of what has become virtually the only American year-round sport, football. Philco's primitive station in Philadelphia brought its cameras into the Press Box to report the Penn-Navy game. Philo Farnsworth, an early experimenter in TV, was turning his cameras on studio variety shows with talent quite comparable in quality to Radio's earliest.

Radio performed one of its earliest marathons of news coverage in September, 1934. The New York-Havana cruise ship Morro Castle caught fire on a return voyage off the beaches of New Jersey. In the midst of the spectacular blaze, the ship was beached opposite the boardwalk at Asbury Park. Among the causes contributing to the loss of 125 lives was a fantastically badly trained crew (nearly complete turnover of personnel each voyage), and the mysterious death of the Captain in his cabin just prior to the blaze. Radio covered not only the disaster itself, but also, in great detail, the Coast Guard hearings held to fix responsibility for the disaster.

Duly noted by Radio but its importance not realized was the beginning of The Long March of Mao-Tse-Tung and 100,000 followers to remote Shensi Province in China.

Radio heard two important new voices in 1934, one strident, the other multiple. In the summer of that year, a parish priest took to the airwaves in Detroit, first addressing himself to children.. But soon the Rev. Charles E. Coughlin discovered that inveighing against the "communist menace" drew more mail (much including donations to his church) and favorable notice from conservative political figures. The multiple voice was that of the Mutual Broadcasting System, organized in September, 1934 and built on a foundation of an earlier "Quality Group" - WOR, New York, WLW, Cincinnati, CKLW, Detroit, and WGN, Chicago. MBS was soon to boast the longest list of affiliates (over 400), if not the most select list of stations. WLW was the country's most powerful station, operating experimentally at this time with 500,000 watts power.

In Germany the youth were being carefully moulded and packaged for future use by the state. On Christmas Eve, we can be sure that many thousands of them were marching (they marched every day), singing the "Horst Wessel" song, dutifully shouting "Sieg Heils." Over here in an improvised remote control booth in a box in the Dress Circle of the Metropolitan Opera House in New York, Milton Cross inaugurated the regular weekly broadcasts of the opera on American Radio. As he described the great gold curtain rising, the sound that accompanied it was the Overture and Children's Prayer music. The opera was "Hansel und Gretel" by Engelbert Humperdinck (the Elder!). The occasion - the annual Christmas Eve performance for children!

SUGGESTED OUTSIDE READING

Carson, Gerald	"The Roguish World of Dr. Brinkley"
Chase, Francis, Jr.	"Sound and Fury"
Correll, Chas. J., and Freeman F. Gosden	"All About Amos 'n Andy"
Husing, Ted	"Ten Years Before the Mike"
McNamee, Graham	"You're On the Air"
Tull, Charles J.	"Father Coughlin and The New Deal"
Wile, Frederick William	"News Is Where You Find It"

RADIO'S MATURITY - 1935 - 1941

When last we looked at Radio in this fashion, we found ourselves with a medium succeeding, in a time of almost universal business failures, and a new awareness of the medium's public responsibility written into law - The Communications Act of 1934.

The Depression was far from over. In Washington the voices of the demagogues never had died away, and Huey Long was near to the violent close of his career as a rabble-rouser on a "share-the-wealth" theme. He was importantly abetted by Father Coughlin and his National Union for Social Justice. But Father Coughlin met a milder fate - censure by his bishop.

In England in 1936, an era came to an end with the death of George V, one of the last of the monarchs who really looked the part. Radio brought to the far corners of the British Empire and most of the civilized world the sound of the great pomp and ceremony which the British mount so well for such state occasions. Soon Radio was to play to an equally large audience as people the world over shared in the ceremony of the coronation of George VI and the continuation of the British royal line.

In the small town of Flemington, New Jersey, Radio was playing out a new and rather ambiguous role. Bruno Richard Hauptmann, arrested for the kidnapping of the Lindbergh infant, was put on trial in this tiny town. All networks, many independent stations, sought to give complete coverage of the trial. Gabriel Heatter established a non-stop record for ad-libbing over the air while waiting for the jury's verdict. (Harold See,

former President of KRON-TV, was the young engineer who handled the remote for Heatter.) In a strange and rather perverse way, a new program format for Radio came into being as an outgrowth of the trial coverage. WNEW, New York, to fill time between bulletins from Flemington, had a young $25 a week announcer play records of his choice in a style of his choosing. Martin Block created The Make Believe Ballroom and set the stage for the thousands of DJs who would soon follow (or attempt to follow) his programming lead.

The carnival atmosphere created by Radio's coverage of the Lindbergh kidnapping trial was a major reason for the passage in January 1937 of Canon 35 of the American Bar Association.

On the political and economic fronts, the tension of a Presidential election was building as we came into 1936. Fleanor Roosevelt performed yeoman service on behalf of her husband, doing the travelling and visiting offbeat locales denied him by the infirmities resulting from his earlier bout with polio. The New Deal was lending a new hand to the young, the old, the blue collar worker. Much of the New Deal program drew violent opposition from the Old Guard of both parties. Surprisingly, Al Smith decided to cast his lot with the moneyed right wing of the Democratic Party which emerged as the Liberty League, pledged to defeat the nomination of FDR in 1936. The campaign for the Presidency matched (?) FDR and Alfred Landon, ex-Governor of Kansas, who campaigned as the "Sunflower Candidate." The Democrats fielded a team of campaigners headed by Harold Ickes, who debated most colorfully with General Hugh ("Ironpants") Johnson on the merits of the New Deal which was already so well established as to make debate a rather hollow gesture. Radio literally bristled with campaign oratory. Net result -- the "Kansas Coolidge," as Landon came to be called, succeeded in upsetting a venerable bit of political folklore. Maine traditionally ran the earliest primary elections of any of the states, and the saying became widely accepted,

"as Maine goes, so goes the nation," politically. When the 1936 ballots were counted, the saying had to be modified to read, "as Maine goes, so goes Vermont" - FDR having carried all but these two states for a landslide victory of 528 to 8 in the Electoral College.

The running of the 11th Olympic Games in modern times was scheduled for Berlin in 1936. Hitler was staking a lot on proving his theories of racial superiority by winning the games. Great publicity was given them via world-wide radio, and Hitler sought to immortalize his expected victory on film via the great skill of photographer Leni Refenstahl. After a string of victories in earlier games by the U. S. teams, the Germans did win. But a great propaganda blow was dealt Hitler by the "loss" of three gold medals to a single U. S. contestant who scarcely qualified for inclusion among Hitler's "aryan" supermen - Jesse Owens, black, native of Dothan, Alabama, and winner for Ohio State of three world's records in the year preceding the Olympics.

In his "Midsummer Night's Dream," William Shakespeare observed that the "course of true love never did run smooth," and British royalty and tradition did nothing to disprove this observation in 1936. The successor to the throne left vacant by the death of George V was Edward, Prince of Wales. He was designated Edward VIII, but before the coronation ceremony could be arranged, on December 11, 1936 Edward spoke to the largest radio world-wide audience ever to assemble up to that time, to announce that he was renouncing the throne. His choice was marriage to a commoner, a divorcee and an American - a combination rarely found among British Queens or royal consorts.

One remaining note of broadcasting interest -. 1936 saw the completion of the first interconnection of TV stations. New York and Philadelphia

were joined by a coaxial cable.

The year 1937 was one of continuing high hopes for lighter-than-air travel. Recent German construction of dirigibles had resulted in the Graf Zeppelin (1928) which had flown around the world in 21 days and 8 hours in 1931, flew to the Arctic on scientific missions and inaugurated regular passenger service to South America in 1933. In 1936 the Hindenburg was put in service, the largest dirigible ever built (803 feet long). She made more than thirty Atlantic crossings, carrying in excess of 3,000 passengers. Hitler's Germany was confident this would be the ultimate in trans-Atlantic travel (at 85 miles an hour) in luxury approaching that of an ocean liner - including an aluminum piano in the lounge!

On May 6, 1937 the Hindenburg was coming into a routine landing at Lakehurst, N. J., in a light rain. On hand was Chicago radio station WLS's announcer, Herb Morrison, and a recording engineer. Morrison, an aviation buff, had been given the assignment to record the arrival of the great airship to account for some extra days of vacation owing him. As the airship approached the mooring mast, it suddenly burst into flames and was completely demolished in a matter of minutes, with a death list of 36 lives. Morrison's account of the disaster remains to this day one of the outstanding examples of spot news coverage on radio. His recording, via telephone to NBC in New York, was on the air in a matter of minutes after the explosion and marked the first time a network had permitted any recorded program over its facilities.

One week later, May 12, 1937, England crowned her sixth George. The radio broadcast of the ceremony, heard throughout the world, illustrated for millions the tremendous dignity with which the British can invest such an occasion.

On the home front, things were not going too smoothly for FDR's New Deal. While great strides were being made in recovery from the depths of the Depression, the conservative forces in the country were re-grouping and were accomplishing many of their objectives via Supreme Court decisions adverse to New Deal policies and organizations. The Court in 1937 was almost entirely Republican-appointed during the Harding, Coolidge, and Hoover administrations. The three outstanding liberals on the Court - Cardozo, Brandeis, and Stone - were outnumbered two-to-one by conservatives of the Butler, Sutherland, McReynolds stripe. One after another of the major New Deal innovations were declared unconstitutional. The final blow came when the NRA (National Recovery Administration) and its blue eagle emblem was shot down in a suit brought by the Schechter brothers, processors of kosher chickens in Brooklyn.

FDR turned to Radio on one of the carefully chosen occasions when he wished to go directly to the people, over the heads of the Congress. In order to legalize much of the New Deal legislation, he proposed enlarging the Supreme Court to as many as 11 to 13 members, thus insuring a liberal majority on the highest tribunal. This proved to be one of the few times FDR failed to gain popular support even with extensive use of Radio. The public was not about to stand still for "tampering" with the sacrosanct U.S. Supreme Court.

1937 was an "off year" for elections - no Presidential or important national races scheduled. The San Francisco Chronicle for Wednesday, November 3, 1937, headlined local issues - transit and anti-picketing bills lost at the polls. On the east coast Thomas Dewey was elected Governor of New York, but more importantly, colorful Fiorello LaGuardia beat Tamany Hall to become New York City's Mayor, a semi-official fire watcher (he loved fire

engines). The Radio page of the Chron now was taking up five columns with Radio news and programs, and the duties of Radio Columnist were being borne by Herb Caen. And Christmas night was the occasion for the first broadcast by the newly-formed NBC Symphony Orchestra. David Sarnoff had succeeded in enticing Arturo Toscanini, the acknowledged finest conductor of the day, to come out of retirement. Creating an entirely new orchestra specifically for the Maestro was what turned the trick. So, over the combined NBC networks, listeners across the land heard a program which opened with a stately Vivaldi Concerto Grosso, and included the majestic 1st Symphony of Brahms. (Toscanini's contract was written in terms of an amount "after taxes." By the time World War II had sent taxes skyrocketing, NBC was paying out about triple the original gross pay in order to provide the contracted for "take home pay" for musician Toscanini!)

The systematic carving up of the map of Europe to the tastes of Hitler and Mussolini advanced rapidly in 1938. First came the annexation of Austria by the Nazis (March 11), reported fully by radio in terms of the pleas of Chancellor Schusnigg and the artillery attacks on workers' low-rent housing in Vienna. Hitler's claim that he was "liberating" Germans did not extend to some 300,000 Austrians in the Tyrol, for here Italian possession of the Brenner Pass was confirmed and Bolzano did not retain its earlier name (during World War I) of Bosen! A small measure of temporary stability was restored to European politics by the Munich Conference on September 30th when Premier Daladier of France and Prime Minister Neville Chamberlain of Great Britain negotiated a pact with Hitler (and Mussolini lurking around the edges), acknowledging the "legality" of the takeover of Austria, and promising "peace in our time." But by November 2nd, another crisis erupted in all the privacy of worldwide radio coverage, and the Rome-Berlin Axis

gained another territorial victory (practically bloodless), at Vienna. This time Hitler succeeded in annexing more than 4,000 square miles of Europe's "showcase democracy" - Czechoslovakia, on the excuse that there were Germans to be brought "home" in the Sudetenland.

The non-Axis world did win one small engagement in 1938. Hitler was planning for German aryan superiority in every field of endeavor. Max Schmeling had won the World's Heavyweight Boxing Championship in 1930 under rather dubious circumstances, only to lose the title to Jack Sharkey in 1932. In 1938 Schmeling came back for another go at the crown, now worn by American, non-aryan Joe Louis. Hitler and Schmeling lost the bout in the first round, with Clem McCarthy's gravel-voiced description of the "fight" carrying the word by Radio the world over.

The times were scarcely appropriate, psychologically, for Orson Welles' Halloween gift to American Radio on October 30th. His Mercury Theatre Players, over the CBS network, broadcast an adaptation of an old H. G. Wells sci-fic about an invasion of earth by Martians. It scared the daylights out of thousands of Americans who were convinced that the show was an authentic news broadcast. It is probably reasonable to assume that the loudest protestors the next day were to be found among the most red-faced for having been taken in by such a transparent hoax in the 20th century.

Spring 1939 saw the American public witnessing for the first time (in any considerable numbers) the newest of the electronic miracles - Television. While experimental work had been going on for some years and there were six transmitters on the air in the U. S. a few hours daily, at this time the viewing audience had been miniscule - a few engineers and some electronic freaks. But the New York World's Fair of 1939 provided a fitting

stage on which to introduce the new medium to millions. Opening on April 20th (Hitler's birthday!) the ceremonies were presided over by President Roosevelt, a covey of dignitaries, domestic and imported, and all covered by TV cameras introduced for the occasion by David Sarnoff, President of RCA. It is a fairly safe bet that at least half of the Fair's 45 million visitors paused before the closed circuit cameras and saw themselves in the TV monitors in the RCA Pavilion - all this 9 years BES (Before Ed Sullivan).

A month later, May 23rd, saw Radio performing marathon coverage of another news event. The submarine USS Squalus, on a routine training dive off Portsmouth, New Hampshire, was damaged and helpless in 240 feet of ocean. Radio reported on an hourly basis the steps taken which resulted in raising the Squalus' bow above water for a few seconds only, and the ultimate abandonment of rescue operations with a loss of 26 lives.

As the prospects for war in Furope multiplied, so did the facilities of Radio to cover any eventuality. The war correspondent cast in the Richard Harding Davis mould of the turn of the century - riding breeches, campaign hat, binoculars, and filing his stories by cable - this was a character superseded by the modern Radio correspondent. Three years earlier H. V. Kaltenborn had reported from the trenches in the Spanish Civil War, bringing the sound of machine gun bullets fired in anger overhead into American homes via shortwave Radio. Now both NBC and CBS set about building teams of reporters and shortwave facilities to cover the major points of anticipated action in Europe. Paul White, news chief at CBS, already had Edward R. Murrow in England and authorized him to recruit the news team which came to include William L. Shirer in Berlin, Eric Severeid, Charles Collingwood, Daniel Shorr and others, many still on the CBS news staff today. Others who emerged as first-rank radio reporters included John Daly, Cecil

Brown, Joseph C. Harsch, Richard Tregaskis, and dozens more. The Overseas News Roundup - a program which switched from point to point overseas by shortwave wherever the news was breaking - became a familiar element of daily news broadcasting.

On September 1st Hitler ordered the invasion of Poland, and World War II was under way in earnest. His move was made possible by a completely unexpected entente with Stalin a week earlier, thus insuring Germany against an attack from the east and a repetition of the disastrous circumstances of a two-front war which had been the case in World War I. The Polish cavalry bravely mounted sabre charges against the German Panzer divisions, and in a matter of days all effective resistance to the Nazis was at an end. Warsaw fell on September 25th - a fact confirmed to the outside world by the absence from the Polish radio frequency of the strains of Chopin's Military Polonaise which had sounded defiance every half hour from the beginning of hostilities.

Then the "phony war" set in. The Nazis made no further moves in Europe of any consequence for the balance of the year. The French "recruited" 100,000 carrier pigeons for communications with the famed Maginot Line of underground fortifications, built in the best 19th century tradition of "impregnable" fixed positions, and demobilized 100,000 men called to the colors in September! Radio was surfeited with the non-news of the days.

If the war was "phony" on land, the same could not be said about the sea. Germany immediately launched submarine warfare against all shipping bound for ports of the Allies on all oceans. In addition, there was a fair number of surface raiders cruising the world's seas flying the swastika. Of particular interest was the "pocket battleship," Graf Spee, built in strict accordance with the Versaille Treaty limits on tonnage

(10,000 tons) but mounting guns far in excess of what the treaty had anticipated. She was loose in the Atlantic, cruising at will and undetected, already having sunk a dozen merchantmen when her luck ran out.

On December 13th, a squadron of three British light cruisers sighted the Graf Spee some 200 miles east of the estuary of the River Plate. In spite of the fact that the Spee could fire half as much tonnage of shells again as the three British ships combined, the attack on her was launched. Somewhat damaged, she sought sanctuary in the national water of Uruguay, only to come to an ignominious end at the hands of her own crew - scuttled just outside the international limit. NBC did a brilliant job of covering this unique event in a war that was pretty short on events at the moment.

Unknown to the public, 1939 saw the beginning of production of a new electronic marvel - radar. Its role was crucial during World War II.

Over here, at 12:01 a.m., January 1, 1940, there began one of the very few "strikes" in Radio to be obvious to the listening public. At midnight the radio contracts with ASCAP had expired, bringing to a halt the performance of the overwhelming majority of music heard on the air. The broadcasting industry had half-heartedly sought to anticipate such a move by spawning its own musical creature, BMI (Broadcast Music Incorporated). BMI had everything but composers and publishers signed as members when the showdown came. As a consequence, Radio was forced to turn to "PD" (Public Domain) music, and in the van of the newly "popular" composers was Stephen Foster, now famous for "Jeanie With The Light Brown Hair," rather than for "My Old Kentucky Home." In short order the new topper of the enforced "hit parade" of PD music was being referred to as "Jeannie With the Dark Brown Taste!" Eight months later, Radio and ASCAP shook hands - for higher

royalty payments. But BMI was now firmly entrenched as a competitor in the music licensing field, and remains so to this day.

1940 was a crucial year in the U. S. At issue early was the question of a Third Term in office for FDR. And a critical element in such politics was the vote of organized labor. Shaggy, Shakespearean-sounding John L. Lewis, whose United Mine Workers, and later, the Committee for Industrial Organization (CIO), had delivered many a vote for FDR - now Lewis was becoming disenchanted with the New Deal. America's role as the "arsenal of democracy" was all very well, but not at the expense of the "full dinner pail" for the American worker, in Lewis' opinion.

England was not lulled into the feeling of false security that prevailed in France. In London slit trenches were dug in the public parks and subway stations were outfitted as air raid shelters. Thousands of English children were moved out of the large cities, particularly London. The wealthier of them were shipped to the U.S. for the duration. NBC established shortwave broadcasts enabling children and parents to talk over the thousands of miles of the Atlantic. Smaller and poorer children were shipped by train and bus to villages and farms around the English countryside and similarly kept in momentary but personal touch with their parents via BBC facilities.

The "phony war" ended abruptly. Norway was the scene of the first of the renewed Nazi conquests. On May 20th Hitler struck into the Lowlands, executing the famous Schlieffen Plan of World War I - a wide sweep through Belgium, Holland, and Luxembourg, executing an end run around France's famed Maginot Line. England committed virtually all of her military hardware and the best of her troops to the continent, and soon found her entire Expeditionary Force with its back to the sea on the beaches at Dunkirk.

At this point we witnessed one of the major miracles of any war. At home the British assembled a "fleet" of the most nondescript character ever to emerge in a serious military maneuver. From small cabin cruisers to fishing trawlers to minor, shallow draft naval vessels - almost anything that would float - sailed across the English Channel to the beaches at Dunkirk. More than 335,000 soldiers - English, French, Dutch, Belgian, Polish - were saved from what Hitler had confidently deemed complete destruction at the hands of his Stukas, Panzers and artillery.

Clearly, Britain was not being well led by Neville Chamberlain with his symbol of great weakness - the umbrella. At hand was the man the hour demanded - Winston Churchill. The new Prime Minister had been a steady critic of the vacillating governments of Chamberlain, Baldwin, and MacDonald. (He had also lavished praise on Mussolini when that worthy came to usurped power in the 20s.) But Churchill was the epitome of the British bulldog, and his marvelous command of the English language lent great weight to his views and his policies.

June 10th saw Mussolini declare war on France - a stab in the back in the words of FDR. France was on her knees at this time and Italy was cast in the role of a jackal, waiting for another to accomplish the kill. Paris had fallen to the Nazis, none of whom marched or drove a tank beneath the Arc de Triumphe until Hitler brought out of mothballs the ancient dining car #2419D which had been the scene of the German capitulation in 1918. Standing on the same track in the Compiegne forest, the car played its second, and hopefully last, historic role.

With renewed vigor, this country took up its role as the armorer of the Allies. While it was a physical impossibility for us to produce in

time the "clouds of planes" French Premier Reynaud begged of us during the last days of organized French military resistance, we were converting to war production at a fantastic rate. With a ready-made market for all the tanks, planes, trucks, aircraft, and ships we could produce, we moved to a war footing that was soon to stand us in good stead. Isolationist sentiment was sufficiently strong to keep on the books the Neutrality Act with its requirement of cash and carry for arms supplied the Allies.

FDR found a way to circumvent the limitations of the Neutrality Act legally, and to the satisfaction of the majority of Americans. In return for 50 overage U.S. destroyers - old four-stack, flush deck types from World War I - he obtained from Great Britain long term leases for naval and air bases at strategic points among the British colonies.

Detroit converted automobile assembly lines to making tanks and artillery, shipyards bustled, bulged and multiplied on both coasts and the Gulf, while the aircraft industry sprawled over Southern California, Wichita, Long Island and Seattle. Rosie the Riveter became a pin-up girl as women were recruited for the rapidly expanding war industries.

It was becoming increasingly clear that our own military manpower was badly in need of augmentation. October 16, 1940 was the date set for the registration of all U.S. males 21-36 years of age. On November 11th, ironically the twenty-second anniversary of the ending of World War I, Secretary of State Stinson drew the first draft number in the lottery. It was #158, held by a young Boston man (among others) whose father had held the first number drawn in the World War I lottery - #258!

In an atmosphere of world war, it is easy to view domestic politics in a somewhat different light than in peacetime. But 1940 was a Presidential

year and the Democratic National Convention, on July 29th, nominated and FDR accepted the nomination for a precedent-shattering Third Term in office. The GOP went into its Philadelphia Convention with two major figures deadlocked - Thomas E. Dewey of New York and Robert A. Taft of Ohio. To these had to be added a dark horse candidate, a "turncoat" Democrat who was building tremendous strength offstage - Wendell Willkie. Irvin S. Cobb, the Hoosier humorist referred to his fellow Indianan as the only true Democrat running for the Presidency. Radio covered the conventions gavel-to-gavel and captured much of the drama of the dark horse victory in the Republican Convention and the machine-like routine of the Democratic.

FDR enjoyed himself thoroughly in the campaign. Actually he did little campaigning, and that late. In a speech before a farm group on October 30th, he made reference to three Republican "enemies" of the farmer - "Martin (Joe, Speaker of the House), Barton (Bruce, of BBD&O), and Fish (Hamilton, Jr., an extreme conservative N. Y. Congressman)." These three names became a virtual chant in the few remaining speeches of the campaign. Harold Ickes, Secretary of the Interior, characterized Willkie as a "poor, barefoot Wall Street lawyer." A factor in the campaign, but not a major one, was the America First Committee, deeply committed to isolationism. Among the diverse supporters of this group were such figures as Charles A. Lindbergh, Alice Longworth Roosevelt (GOP), Katherine Lewis (daughter of labor leader John L. Lewis), and the National Association of Manufacturers.

In spite of a moving last-minute plea for support, Willkie came off second best in the election. FDR's Third Term majority of 5 million votes translated into a 449 to 82 vote advantage in the Electoral College. The Third Term tradition was broken for the first and only time. FDR disavowed Fourth Term ambitions - but ran again in 1944 anyhow.

By mid-January 1941, the nation and the world heard one of the great FDR speeches via Radio - the "Four Freedoms" speech which set the moral tone for our participation in all but the battles of the war. There remained a moderately strong opposition to our increasing participation, and it was voiced by perennial Socialist Presidential Candidate Norman Thomas, as well as by the American Firsters.

The war was spreading rapidly in the Far East. Japan, long at war with China, allied herself with the Rome-Berlin Axis and started gobbling up the colonies of Great Britain, France and Holland. To the east in Europe Hitler marched through the Balkans, Mussolini took on Greece (and had to be bailed out by Hitler). By June the Axis faced Russia, and on the 30th of June Hitler turned on his newly-gained "ally" and started a blitzkrieg across Russia that left little doubt in the minds of many here and abroad that he would prevail, where Napoleon had failed, in the conquest of Russia.

Throughout this time Radio correspondents were moved about the map of Europe and the Far East like chess men. Nor was the Near East overlooked. When Mussolini sought to enlarge on his earlier conquest of Ethiopia and Libya his goal was all of North Africa. (Again Hitler had to bail his Axis partner out, principally with Rommel's Afrika Korps.)

At home we could still indulge in non-military electronics. Peter Goldmark at CBS unveiled a field sequential system of color TV transmission remarkable for its color fidelity and its unwieldness. Radio audiences in 1941 were listening in great numbers to The Aldrich Family, and One Man's Family, while the Lux Radio Theatre dealt in somewhat meatier drama. Jack Benny was fighting for first place in the ratings race with an

unlikely radio star - Charley McCarthy, a ventriloquist's dummy! Bob Hope sold irium (?) in Pepsodent, Fibber McGee regularly opened the overflowing hall closet, while Kate Smith kept tabs on the passage of the moon over the mountain, and Major Bowes suffered through interminable bad acts and many millions ($) from booking them for personal appearances.

And 1941 saw several major broadcasting events that scarcely made headlines. First was the Mayflower Decision wherein broadcasters were denied the right to editorialize. The major networks - NBC and CBS - were ordered to get out of the talent booking business. And scarcely a ripple of comment greeted the advent of commercial television.

On August 25th FDR and Winston Churchill met secretly at sea aboard the cruiser USS Augusta. (Churchill arrived in a battleship, HMS Prince of Wales.) Their several days of consultation ranged the length and breadth of the war and the world. The "Atlantic Charter," which stemmed from these meetings, spelled out the lack of territorial ambitions on the part of both Great Britain and the U.S. and reiterated a respect for the integrity of the governments of all free people.

The roof fell in on December 7th with the Japanese attack on Pearl Harbor. Roughly 3,000 military and 1,500 civilians died in the raid. The Pacific Fleet was crippled. FDR asked for, received, congressional acknowledgment that a state of war existed between the U.S. and Japan, as of December 7th. On December 9th, FDR went to the people in a Fireside Chat to declare "we will win the war - and we will win the peace."

Radio now had a new and vital role to fill in bringing the news of our forces to us - quickly, accurately, honestly. The Office of War Information, otherwise our propaganda ministry, early recognized the power of Radio and the requisites for its successful use in wartime.

SUGGESTED OUTSIDE READING

Berg, Gertrude	"Molly and Me"
Brindze, Ruth	"Not To Be Broadcast"
Brome, Vincent	"The International Brigade"
Cantril, Hadley	"The Invasion From Mars"
Chester, Giraud	"The Press-Radio War"
Crosby, Bing	"They Call Me Lucky"
Frost, S.E., Jr.	"Education's Own Stations"
Harris, Credo Fitch	"Microphone Memoirs"
Hayes, John S.	"Both Sides of the Microphone"
Higby, Mary Jane	"Tune In Tomorrow"
Howe, Quincy	"The News and How To Broadcast It"
Kaltenborn, H.V.	"Kaltenborn Edits the News"
Kaltenborn, H.V.	"I Broadcast the Crisis"
Landry, Robert	"This Fascinating Radio Business"
Lazarsfeld, Paul F.	"The People's Choice"
Lessing, Lawrence	"Man of High Fidelity - Edwin H. Armstrong"
Lyons, Eugene	"David Sarnoff"
Murrow, Edward R.	"This Is London"
Rolo, Charles J.	"Radio Goes To War"
Saerchinger, César	"Hello America"
Schechter, A.A.	"I Live on Air
Shirer, William L.	"Berlin Diary"
Summers, H.B.	"Radio Censorship"
Swing, Raymond Gram	"Forerunners of American Fascism"
Tull, Charles J.	"Father Coughlin and the New Deal"
Ulanov, Barry	"The Incredible Crosby"
Waller, George	"Kidnap: the Story of The Lindbergh Trial"
White, Paul W.	"News on the Air"
Wile, Frederick Wm.	"News Is Where You Find It"

WAR - AND A RIVAL TO RADIO - 1942-1948

Radio had more than a year's experience with reporting a war to the American public prior to Pearl Harbor. But the place names had all been strange, alien - Lidice, Coventry, Trondheim - only the voices were American. True, we had some remote contact with the war via bustling aircraft factories in southern California and Wichita, tanks rolling off Detroit assembly lines, and damaged Allied ships coming into American ports for repair.

The earliest mainland warlike event took place in New York on February 9th (after Pearl Harbor.) France's "queen of the Atlantic", the huge liner Normandie was being refitted as a troopship, given a coat of lustreless grey paint at a Hudson River pier. Fire of unknown origin broke out aboard and soon the entire vessel was ablaze. Radio reported from the scene, including the conflicting opinions of the New York Fire Department and the U.S. Navy about the danger of capsizing from the weight of water being poured into the ship's blazing hull. It was a dubious victory for the firemen's opinion when the great vessel rolled over on her side - to remain for weeks looking like an elephant that had died in the street.

Our end of the war - in the Pacific - was going badly. Our outposts - Guam, Wake, Midway, the Phillipines - were falling to Japan in a steady parade of disasters. But even this string of misfortunes had to be broken. And broken it was, on Hitler's birthday, April 20th, when American radios blared the news of the U.S. on the offensive -

Tokyo bombed! A flight of B-25s, commanded by General Jimmy Doolittle did little damage to Tokyo property, much damage to Japanese morale, in a daring raid from the aircraft carrier U.S.S. Hornet - a one-way flight to the mainland of friendly China. The planes were all lost, but 71 of the 80 pilots and crew members survived.

Back in the Phillipines our time had run out. The last important fortification at Manila - the island fortress of Corregidor - fell to the Japanese on May 6th. Not made public at the time was a poignant wireless transmission to Hawaii by a Signal Corps sergeant describing the last hours in the fortress. General Jonathan Wainwright made the formal surrender to General Homma. It was to be nearly three years before General MacArthur was to return to the Phillipines in the closing days of the war. General Wainwright, released from a POW camp, was to participate in the final Japanese surrender ceremonies.

The long road back for the Allies in the Pacific began in August 1942 with landings by U.S. Marines on Guadalcanal Island. Here in the Solomon Islands began the long list of unfamiliar names of places unimportant, excepting that they were occupied by the enemy. The battle for Guadalcanal was long and costly, but it represented the gaining of a first toehold for American forces. It enabled them to begin the island-hopping campaign that this farflung Pacific battle-ground demanded.

On the home front Broadway, Tin Pan Alley, Hollywood and Radio all responded to the war in typical fashions. Broadway saw a musical revue, "This Is The Army", by Irving Berlin, produced with an all-GI cast. Tin Pan Alley chimed in with such masterpieces as

"You're a Sap, Mr. Jap", and Bob Hope started the rounds of the training camps and bases overseas. Hollywood ground out dozens of grade B attacks on the enemy, defenseless on celluloid! Many top flight musicians from the "Big Bands" were drafted, and whole orchestras were kept nearly intact as military bands, as Glen Miller's Air Force Band.

Fall saw the opening of a Second Front in the European Theatre, if not actually on the European continent. On November 7th large American forces were landed at Casablanca, Oran, and Algiers. While not exactly what the Russians were asking for by way of a military diversion away from themselves, the North African campaign served to knock Italy out of the war, tie up considerable German forces under Rommel, and re-constitute Winston Churchill's World War I strategy of attacking Europe through the "soft under-belly."

Here in the States, an off year election saw the GOP make major gains in number of congressional seats, but the Democrats remained in control. Earl Warren was elected Governor of California and San Francisco defeated a bond issue to buy street cars. Radio program listings in the Chronicle now occupied 3 full columns - on the Obituary page (one of the better read sections of any newspaper).

Allied successes in North Africa brought on Nazi occupation of all of France. The French scuttled their considerable fleet at Toulon, held out against the Allies at Dakar, forcing a showdown in the French colonies, resolved in favor of the Allies and the new Free French under DeGaulle. France as an independent nation ceased to exist, excepting for the small forces overseas under DeGaulle

which remained as a base on which to re-construct France after the war.

Early in 1943 Mme. Chiang Kai-shek visited the U.S. to solicit additional aid for China. American-educated Mme. Chiang made a strong and well received appeal to the U.S. Congress in person. She pleaded for help in Asia, even at the expense of the war in Europe.

Final success in North Africa came with the surrender of Rommel's forces to the Allies, commanded by Field Marshall Montgomery. Radio covered the campaign extensively, including Monty's congratulations to all the Allied forces, and particularly the Americans.

Well organized by this time was the Armed Forces Radio Service, more than 2,000 transmitters in the field bringing news and entertainment to U.S. troops around the world from the homeland. American planes were now sufficiently numerous in England to mount round-the-clock bombing of Nazi targets, working in collaboration with the RAF. Key industrial cities were given saturation-bombing treatment - Schweinfurt (ball bearings), Ploesti (oil refineries), Bremen (shipyards), Hamburg - while striking a great propaganda blow in the continuing devastating raids on Berlin. Edward R. Murrow brought home to American audiences something of the drama of the Berlin raids in broadcasts from London, based on his first hand experiences on a raid in an RAF bomber.

In New York, Spring 1943 brought forth one of the greatest of all American musical shows - Oklahoma. Rodgers' music and Hammerstein's lyrics fashioned the show from an earlier play - Green

Grow the Lilacs - all of which fairly dripped with Americana, nostalgia and great stagecraft. All of these were commodities badly needed in wartime America. The good people of Mahnattan, Kansas heard about "The Surrey with the Fringe on Top" as often as their New York counterparts - and knew what a surrey was, to boot!

The Red Army moved over to the offensive about this time. By the end of January 1943, the siege of Stalingrad was lifted and nearly 300,000 Nazi troops surrendered. The Nazis announced the defeat over the radio to the accompaniment of the Funeral Music from Die Götterdämmerung! Up to now there had been an elaborate fanfare played on the German radio to herald each new conquest.

The war in North Africa was transferred first to Sicily and then to the Italian mainland. By the end of July Mussolini had thrown in the towel, leaving remnants of the Italian High Command and King Victor Emmanuel to deal with the Allies. In late August FDR met with Prime Minister Churchill in Quebec to map the next steps in a war which was clearly running in the direction of the Allies at last. Great secrecy surrounded the meeting excepting releases which prepared the public for the formation of a United Nations at the end of the war. But for the moment, cooperation among the Allies was the watchword. These meetings were followed by others with Chiang Kai-shek in Cairo, and later joined by Stalin in Teheran.

The Russians finally succeeded in lifting the siege of Leningrad, after 29 months of the greatest privations and sufferings by the city's people. The Nazis were now on the defensive in the

East. In Italy, die-hard Nazi troops held out in the ancient Monte Cassino monastery and it was necessary to destroy it utterly in one of the most intensive air and artillery attacks of the war on a single target.

At home a lighter moment was to be found in the ousting of Sewell Avery, President of Montgomery Ward, from his office for refusing to recognize a union whose election had been certified by the government. Avery apparently enjoyed every moment of the government's moves against him - in a week he was back in his office, the union now officially recognized by the MW management.

When early Primaries in this country went consistently to Thomas E. Dewey as Republican nominee for President Wendell Willkie gave up all campaigning for the nomination. This pre-election maneuvering was soon to be completely overshadowed by the Allied invasion of Europe - D-Day, June 6th.

The Allied landings had been hinted at, speculated about, for several months in advance of the actual storming of the Normandy coast. The greatest concentration of men and machines, ships to transport them, and aircraft to cover them, quickly established beachheads at points relatively lightly held by the Nazis who had been expecting an attack somewhat farther south. The American public was given full coverage of the landings by radio reporters who went ashore with the troops, augmented by official statements by FDR, Winston Churchill, George VI, Generals Eisenhower and DeGaulle, plus assorted deposed heads of states in exile. The beachheads were soon secured and enlarged and the race was on for Paris, and ultimately Berlin.

FDR would clearly be the choice of the Democrats for a precedent shattering 4th Term as President. His running mate was to be Harry S. Truman, then a Senator from Missouri with an excellent record in Congress. (HST also played a bit of piano, and in a good natured moment allowed himself to be photographed with actress Lauren Bacall reclining on top of the piano. This photo was to haunt HST when he ran for President in 1948!)

Dewey won the GOP nomination but had few issues to campaign on in war time, excepting the 4th Term. FDR campaigned very little. He did take note of some of the more ridiculous charges against him, his family, and his Scottie, Fala. As usual Radio covered the election, more elaborately than ever, and reported a plurality for FDR of 4 million (out of 48 million votes cast), and a margin of 432 to 99 in the Electoral College.

In Europe Hitler's private 20th century Götterdämmerung was inexorably shaping itself. In a frenzied last minute appeal, he sought the help of the aged and the beardless to man the ramparts of his crumbling Third Reich and defend the soil of the Fatherland. But it was already too late for such heroics.

Iwo Jima forced its way into our vocabulary in February 1945. To capture the eight square miles of this tiny island - one third of the Volcano Island group - cost 5,000 casualties among the Marines. The classic picture of the Marines planting the flag on Mt. Surabachi is too familiar to be repeated - though the picture published was actually posed, accurately, after the actual event. The ring around Japan was rapidly closing in.

Meanwhile FDR was meeting secretly with Churchill and Stalin at Yalta. On his return he sought to allay rumors of ill health by riding in an open car through a cold spring rain. He addressed Congress and the public about the Yalta agreements on March 12th, via radio.

A week later U.S. troops found themselves at a Rhine bridge at Remagen which the retreating Nazis had failed to destroy completely. The Rhine was crossed for the first time by Allied troops swarming over the damaged bridge, soon replaced by a pontoon bridge capable of handling the growing volume of invasion traffic.

April 12th, 1945, a Thursday, the nation was shocked by the word over the air that President Roosevelt had died of a cerebral hemorrhage at 3:55 p.m. in the Summer White House at Warm Springs, Georgia. The grief of the people was well illustrated in the classic photograph of Navy CPO Graham Jackson playing "Goin' Home" on the accordion. The hearse moved away toward the Pullman car Ferdinand Magellan, FDR's private car for many years, now to bear him a final time to Washington, and then to his home in Hyde Park, N.Y. Silent crowds stood by the tracks as the train moved slowly north. At the funeral services in Washington, veteran broadcasters broke down as they described the ceremonies. For three days all regularly scheduled programs on radio were cancelled. Only solemn music, tributes to the dead President and news reports were to be heard on the air. Harry S. Truman became the 33rd U.S. President.

In Europe the war was rapidly drawing to a close. Swiftly advancing American troops came upon Nazi concentration camps - Belsen,

Buchenwald, Dachau and Nordhausen - each of them the scene of new horrors perpetrated by the Nazis. Edward R. Murrow broadcast one of the most graphic and moving accounts of the conditions and the inmates who were now liberated. Mussolini, finally ferretted out by Italian partisans, was slain and hung by the heels, with his mistress, in a public square in Milan.

Hitler took refuge in a bombproof bunker in the Chancellery grounds in Berlin. As the Russian troops moved ever deeper into the city, Hitler is purported to have married his mistress, Eva Braun. At this point both committed suicide and their bodies were cremated to prevent them falling into the revengeful hands of the Russians. The end of formal German resistance came at Rhiems on May 7th. Already under way were moves to establish a peace-keeping organization - the United Nations, founded in San Francisco on April 25th, with its first sessions running through June 26th.

The capstone to the structure of re-conquest of the Pacific was fashioned on the island of Tinian on August 6th. Practically all of the island's 39 square miles was occupied by the facilities for more than 1,000 B-29 Superfortresses based there. Capt. Paul Tibbets' plane, the Enola Gay, had a very special mission on that day - super secret, and rating a special send-off by the base chaplain. Nearly 1,400 miles away the world's first atomic weapon left the bomb bay of Tibbet's aircraft, to obliterate the city of Hiroshima. An estimated 200,000 of the city's 286,000 population were killed or maimed in that single blast. Ironically, it was to Hiroshima that the task force which had attacked Pearl Harbor nearly four years earlier had returned for re-fueling and re-arming. A second

bomb dropped on Nagaski on August 9th ended all plans of the Japanese for further resistance, hostilities ending on August 14th, with the formal surrender on board the U.S.S. Missouri in Tokyo Bay on September 2nd.

No sooner was the jubilation over, the peace concluded, when the shadow of the "cold war" fell across the international conference tables. Americans were warned of the possible evil machinations of the Soviets by radio reporters from reliable Elmer Davis to flamboyant Walter Winchell. On March 6, 1946 at Fulton, Missouri former Prime Minister Winston Churchill coined the phrase "Iron Curtain" to dramatize the barrier between the Soviets and the West. Bernard Baruch, American financier and elder statesman, sought rapprochement with his tennis-playing opponent, Andrei Gromyko, Russia's delegate to the UN, on the subject of peaceable uses of atomic energy, without success. Suspicion had replaced cooperation in East/West relations.

The U.S. held the undisputed lead in armaments in 1946. The atomic bomb was improved upon and tested in July at tiny Bikini atoll in the Pacific. In the enclosed harbor of the island were anchored 73 obsolete and damaged naval vessels and cargo ships. The underwater explosion wreaked terrible damage on these artifacts of war designed to withstand violence. Radiation made the island uninhabitable for years to come. Atomic fall-out caused sickness and death among the crews of Japanese fishing vessels hundreds of miles distant.

The final pages on the responsibility for World War II were written at Nuremberg in the Fall of 1946. The war trials of the leaders of the Nazis resulted in death sentences for twelve, long prison terms for others. Hermann Goering, chief of the Nazi air force, cheated the hangman by taking poison ten hours before his scheduled execution. Similar trials of Japanese war criminals had similar endings.

At home we were beginning an era of doubts and suspicions about our own people which would culminate in the excesses of the era of Senator Joe McCarthy. The Atomic Energy Commission was scrutinized for potential security leaks and its chairman, David Lilienthal, subjected to unwarranted harrassment by congressional witch hunters.

Early in 1948 a major sports figure said farewell to his fans. "Babe" Ruth, so badly afflicted with throat cancer he could scarcely be understood, made a short, touching speech to a filled Yankee Stadium in New York. Emotionally, it matched a similar speech a few years earlier by Lou Gehrig.

Among the first post-war moves toward the reconstruction of Europe was the announcement of a comprehensive loan and grant policy by Secretary of State George C. Marshall. The Marshall Plan was designed to assist all the ravaged countries, friend and foe alike, in rebuilding their economies. Expectedly, some scandals in the administration of the Plan were hinted at and several congressmen put on their investigating shoes. Among the more refreshingly candid witnesses was Howard Hughes who refused to be intimidated by

the Senate Committee (with his money?).

The San Francisco Chronicle around this time was reporting on a successful mayoralty race by Elmer Robinson. The radio "page" was now three full columns with a spillover into a fourth by an ad for the Bing Crosby Show, Ozzie and Harriet guests. And radio reported in considerable depth, via shortwave, the marriage of Princess Elizabeth and Prince Philip in London.

The war finally over, the lights were on again in England and were brighter than ever on New York's Great White Way. It was a banner season for musical shows - Finian's Rainbow, Annie Get Your Gun, Brigadoon - all served up to set a happy note on the heels of four years of wartime solemnity.

Labor troubles, held to a minimum during the war, began to appear. Affecting broadcasting was the strike of the American Federation of Musicians against the recording companies over royalties. This time it was not "Jeannie" that filled the airwaves but dozens of recordings by popular vocalists with backing by vocal ensembles, no instrumentalists. Jimmy Petrillo, controversial head of the union, testified before a Senate Committee which was considering restrictions on the use by the union of funds collected in royalties for the pension fund.

A major figure was assassinated on January 30, 1948. M. K. Ghandi, leader of India's non-violent protests to British rule, had been indulging in a very debilitating fast. Weakened, he stood no chance of surviving the bullets fired into him by a Hindu fanatic. He missed by half a year the departure of the British administration

and India's freedom. His place was taken by Jawaharlal Nehru, one of Ghandi's closest friends.

In March Jan Masaryk, son of the founder and first President of the Republic of Czechoslavakia, "jumped or fell" from a prison building where he was under arrest by the Soviet occupiers of his country. The political turmoil in Europe at this time included elections in Italy which resulted in a 30% vote cast for Communist candidates - who had expected a clear majority.

Back home, there was growing pressure for Gen. Eisenhower to enter politics - party undetermined. Instead, he chose to accept the Presidency of Columbia University and to continue to issue rather ambiguous statements about his "availability" as a Republican/Democrat. But a groundswell of popular demand for him was setting in.

In May there came the culmination of a dream of millions of nearly every nationality - Israel was recognized as a nation and a homeland for the world's millions of Jews. The tiny republic was born in strife, to strife. No easy accommodation with her Arab neighbors has yet been accomplished.

The GOP Convention of 1948 saw much popular talk of Eisenhower, much political power in behalf of Senator Robert Taft, but the telling power applied by New York's Governor Thomas E. Dewey. The Democrats had a typical rough-and-tumble Convention, this time badly split on geographic lines. Harry Truman was the nominee, with a civil rights record so good that the delegates from the states in the Deep South withdrew from the Convention, throwing their support to Strom

Thurmond who ran as a "Dixiecrat". Just for good measure, a fourth party entered the race. The Progressive Party nominated Henry Wallace, former Vice-President and Secretary of agriculture, with cowboy singer-politician Glen Taylor as his running mate. Unfortunately for the Progressive Party, there were too many vague links to the Communist Party lying about ready to be used by all three competing candidates.

On April 1st there had begun a Soviet maneuver in Berlin which was to have dramatic results. On that date a blockade was set up on all roads, railroads, canals and rivers into West Berlin. Only by air could the city be reached. And by air it was reached by the air forces of the western Allies, with cargo planes shuttling in and out of Templehof Airport nose-to-tail. Everything for a city's survival was brought in by air - food, clothing, coal, etc. The blockade and the airlift continued for 18 months during which 2.3 million tons of cargo were delivered to the beleaguered city.

In early August fireworks went off at hearings of the House Un-American Activities Committee. Alger Hiss, an officer in the State Department and active in our delegation to the UN, was accused of giving atomic secrets to the Soviets. His accuser, one Whittaker Chambers, an ex-editor of Time magazine, gave lurid, if rather confusing testimony against Hiss, culminating in leading investigators to a pumpkin patch where he revealed microfilm of classified data concealed in one of the pumpkins! Later publication of the microfilms revealed them to be of no importance to our national security. Hiss was later convicted of perjury; Chambers committed suicide. Very active in these proceedings was then-Senator Richard M. Nixon.

An event of great importance to broadcasting took place in mid-1948. Recognizing that a truly national TV service could not be built on only 12 VHF channels, the FCC announced a "freeze" on the issuing of all TV licenses pending engineering studies. Before the Commission were petitions to (a) license the field-sequential color system developed by CBS, (b) set new higher standards than the 525 line scanning, and (c) investigate the prospects for TV channels in the UHF band. At this time there were 109 TV stations on the air which proceeded to enjoy a virtual monopoly until the freeze was lifted four years later. All this served to give Radio a breathing spell against the inroads on its audiences by the new medium.

The Presidential campaign of 1948 was more than interesting. Virtually all newspapers and every public opinion poll early elected Dewey as our 33rd President. But they reckoned without the determination of Harry Truman. In a fighting mood he took off on one of the greatest "whistle stop" campaigns by train this country has ever seen. Everywhere HST made simple, down to earth speeches, notable for their sincerity. Dewey had a campaign train too, but he was without the messianic fervor of his Democratic opponent.

When the votes were counted on November 2nd, Truman had won with a margin of 2 million votes over Dewey, leading him 303 to 189 in the Electoral College. Truman revelled in showing an early edition of the arch-conservative Chicago Tribune with a headline proclaiming Dewey elected, and mimicking H. V. Kaltenborn's broadcast style in claiming victory for Dewey in the face of conclusive vote counts.

Television was making its first halting steps toward becoming a medium in its own right. Early programmers learned that TV was more than cameras turned on a radio show. Looking for action, TV began broadcasting sports relatively little known at the time - roller derbies, wrestling, billiard matches, tennis, etc. A halting start on news broadcasting in the new medium was made for audiences which counted great numbers of viewers in bars, at store windows, and in hospitals.

1948 went out in a blaze of glory(?). New York was crippled by one of the worst blizzards in its history during the Christmas holidays week. But Guy Lombardo and his orchestra were able to get to work at the Hotel Roosevelt Grill and to play "Auld Lang Syne" at midnight on New Year's Eve!

SUGGESTED OUTSIDE READING

Allen, Fred - "Treadmill to Oblivion"

Absell, Bernard - "When FDR Died"

Benet, Stephen Vincent - "This is War"

Bliss, Edward, Jr., - "In Search of Light"

Blum, Daniel C. - "Pictorial History of Radio"

Boyd, James (ed) - "The Free Company Presents"

Corwin, Norman - "On A Note of Triumph"

Crosby, John - "Out of the Blue"

Dryer, Sherman H. - "Radio In Wartime"

Kieran, John - "Not Under Oath"

Lazarsfeld, Paul F. and Harry Field - "The People Look At Radio"

Mayer, Martin - "Madison Avenue, U.S.A."

McBride, Mary Margaret - "Out of the Air"

Rolo, Charles I. - "Radio Goes to War"

Seldes, Gilbert - "The Great Audience"

Severeid, Eric - "In One Ear"

Slate, Sam J. and Joe Cook - "It Sounds Impossible"

Taylor, Telford - "Grand Inquest"

Waller, Judith C. - "Radio, the Fifth Estate"

TELEVISION'S INFANCY - 1949-1955

Harry Truman had defeated all comers in the presidential election and blasted the legend that the Democratic Party was the "war party". When he took office on January 20, 1949, he ushered in a year full of hope and good feeling. Radio carried the great music of the great musicals current throughout the land. "South Pacific" was to unfold the chronicle of Navy nurse Nellie Forbush nearly two thousand times. "The King and I", a gentle musical in a 19th century setting in ancient Siam, telling in words and music the impact of a tiny English school teacher, was to play more than twelve hundred times on Broadway. And this performance was nearly equalled by a show poles apart in setting, "Guys and Dolls", the epitome of New York in the Prohibition era with its gamblers, racketeers and their molls. Close behind followed Ethel Merman belting out hits in a quaint bit of musical Americana - "Annie Get Your Gun". Even Shakespeare had his innings on the musical stage that year - vicariously, in a play-within-a-play, "Kiss Me, Kate." And used 1948 automobiles were selling for more than new 1949 models (shortages, you know).

TV was the big and growing thing. And in New York the most noticeable evidence was the construction atop the Empire State Building's 1250 ft. tower of a 222 ft. mast for the TV antennas of all the New York stations. And every apartment house roof sprouted its forest of receiving antennas to give mute evidence of the onslaught of the new radio with pictures attached. In Camden, New Jersey 12" sets were rolling off the RCA assembly lines by the thousands per day. The Census of 1950 found more than 5 million U.S. homes with one or more TV sets. And with the lifting of the FCC "freeze" on TV licenses there came a rush of applications for new stations - 700 of them.

Children were early attracted to the new medium. High hopes were held for the application of TV to education. Set ownership was far from universal and if you owned the only set on your block, you could expect to have a living

room full of kids every afternoon and all your adult neighbors when Milton Berle or a prize fight was on the air. Viewers per set ran as high as 4.9 for Ed Sullivan's "Toast of the Town", but the average family included only 3.1 persons. And that included infants! A bit of this enforced neighborly fraternizing was alleviated by early experiments with big screen TV in theatres, playing to paying audiences for major sports events. Usually this was limited to the big downtown first run houses.

Radio was enjoying its short spell of borrowed time. TV's growth was delayed by the "freeze" on station licenses from 1948 until 1952. During these years Radio sought to retain its position as a national entertainment medium. Elaborate programs, like NBC's "Big Show" built around Tallulah Bankhead, recruited the best of radio talent as guests. 1951 innovations in TV programming inaugurated by Sylvester ("Pat") Weaver the new NBC president included the still-running "Today" and "Tonight" shows and a short run casualty - "Home". Much TV programming consisted of cameras turned on successful radio shows like Groucho Marx's "You Bet Your Life", "I've Got a Secret", Arthur Godfrey, etc. Most TV stations on the air at this time were owned by operators of highly successful radio stations who nourished radio's ultimate enemy out of radio's revenues, (sort of a trout relationship to a lamprey).

Quite a few radio shows lent themselves readily to the transition to TV. Good examples were the "Lone Ranger", "Our Miss Brooks", and "My Friend Irma". None required large casts or elaborate sets, while the exteriors for the "Lone Ranger" could be faked with stock footage. And filming for TV was often done in a much simpler fashion than was true of Hollywood. A Philadelphia station built a western town set in a nearby suburb - needed only to insure low camera angles to avoid revealing the costly colonial suburban homes in the back-ground.

Among the networks in TV, the fourth - Dumont - was the weakest and was to die in 1955. ABC was not too healthy in the early 50s, but with a transfusion of new programs in 1954 things began to look up. The Disneyland series was signed by ABC as was a very sizeable contract with Warner Brothers. WB was to produce filmed series for ABC-TV, mostly westerns, beginning with "Cheyenne" and continuing through "Sugarfoot", "Colt .45", "Lawman", and many more stock plot "oaters".

Of course many of the old time headliners found places quickly in TV. Jack Benny needed little change in the basic structure of his on-the-air "family" to make a good visual revue to be seen and heard in the home. Fred Allen took a grudging fling at television, to him a "monster", and quickly forecast, correctly, that TV would soon replace many more intellectual activities in the home.

A glaring example of the "red scare" that was emerging in this country came about in the Spring of 1951. Julius and Ethel Rosenberg went on trial for stealing atomic secrets for the USSR. Others implicated in the plot included Klaus Fuchs, arrested by the British as a Soviet spy, Harry Gold, Fuch's contact here, David Greenglass, an Army sergeant. Elizabeth Bentley, a reformed Communist, among others appeared for the prosecution. The trial led to the death sentence and international demonstrations against the verdict passed on the Rosenbergs. They were electrocuted on June 19, 1953 - their two small sons given new names and identities.

And a man who was truly a creation of broadcasting slid easily into a commanding role in TV. Edward R. Murrow quickly adapted his highly successful treatment of history in radio from "I Can

Hear It Now" to "See It Now" in 1951. As a widely acquainted and accepted world figure he was able to create a new program that captured a rare measure of intimacy lacking elsewhere in the medium. "Person to Person" was, as its name implied, a simple visit (technically difficult) with some outstanding person(s) in his own home, with Murrow in his own home viewing his guest on a TV screen. He was chosen to preside over our end of the first intercontinental TV broadcast via Tele Star.

One of the great "See It Now" broadcasts took place in 1953. Ed Murrow ran across a very blatant miscarriage of injustice in the Air Force, involving a lieutenant who had been dismissed because of alleged "subversive" activities by his sister and his father! "The Case Against Milo Radulovitch, AO 589839" brought the Air Force and the Pentagon down around Murrow's ears. Net effect - Murrow gained stature as a crusader, the Pentagon lost face.

Probably Murrow's greatest service to the country was his broadcast on March 9, 1954, exposing Senator Joseph McCarthy of Wisconsin for the bigot he was. In April began the famous McCarthy-Army hearings which were to complete the demolition of one who will rank among the country's greatest demagogues. (By the end of the year the U.S. Senate had voted to censure McCarthy - a very unusual procedure). Shortly thereafter Murrow left commercial broadcasting to become Director of the U.S. Information Agency - a post he soon resigned out of impatience and disgust with political interference. He died in 1964 of lung cancer.

Pay-TV, a system whereby a scrambled picture is broadcast which can be unscrambled only by a specially equipped receiver in the home of a subscriber to the service, this medium has had a couple of abortive starts. One in Tulsa, Oklahoma, died a-borning. A UHF station in Hartford operated part-time as Pay TV, part-time as a commercial outlet, with no measureable success for the Pay-TV operation. A later effort in San Francisco was defeated by a "loaded" referendum on the state ballot, while one system limped along in a suburb of Toronto.

Before moving on to Radio's (and TV's) next war, there were a couple of loose ends from WW II left to be tied up. "Axis Sally" (Mildred Gillars) was convicted of treason in March 1949 and sentenced to 10 to 30 years in Federal prison. Her counterpart around the world, "Tokyo Rose" (Mrs. I. Toguri D'Aquino), was sentenced in San Francisco to 10 years for treason. She was paroled in 1956. That pretty well accounted for the major WW II propaganda broadcasters. Briton William Joyce ("Lord Haw-Haw") had already been hanged in London on January 3, 1946, just two days after signing of the official ending of the war.

The big news of the year 1950 was the "police action" in Korea. The U.S. supplied the vast bulk of the troops and material for the UN force dispatched to save South Korea from an attack by communist North Korea, and later from being overrun by troops from Red China. For the GI the war was any one or more of three things - cold, rainy, noisy. Gen. MacArthur was placed in command of all UN troops, and after early setbacks proceeded to push the North Koreans back to the 38th parallel - and planned to follow into enemy terri-

tory. Such a move was not desired by the President and the State Department. In short order MacArthur was recalled to the U.S. and relieved of his command. He campaigned rather flamboyantly as the aggrieved "old soldier" and won considerable support among conservatives as a potential Presidential candidate.

With the war now bringing blood into the living rooms of American homes in glorious black and white, it was not to be marvelled at that TV sports would also be a bit bloody. The Stanley Cup playoffs in hockey supplied a goodly amount of mayhem as did wrestling and the Roller Derby. Boxing was pretty old hat even in the new medium, particularly since few colorful fighters were around at this time. On the gentler side of sports TV showed us a top flight Black girl athlete, Althea Gibson, win every worthwhile tennis trophy in sight, while Ms. Carol Pena proceeded to gather an armful of laurels in swimming meets in 1952.

But the sports event that would highlight 1951 took place in Ebbets Field in Brooklyn. The pennant race in the National League was in a tie going into the World Series - New York Giants and Brooklyn Dodgers. At the ultimate crucial moment (trailing, two men out, last half of the ninth) Giant pinch hitter Bobby Thompson lined out a two run homer that had announcer Russ Hodges shouting "the Giants have won the penant - the Giants have won the pennant" for a full three minutes. Unfortunately, this particular "subway series" was finally won by the Yankees.

Among the sports being "made" by TV, the Roller Derby and wrestling were playing to ever larger audineces - in the arena as

well as in the home. And TV lent a new dimension to the appreciation of football when it televised the Michigan-Ohio State game in a raging blizzard!

One small bit of domestic violence - a cloud the size of a man's hand - was the attempt on the life of President Truman. On the first of November, two Puerto Rican fanatics tried to shoot their way into the President's home. One was killed, as was a guard, while the second assassin, wounded, was convicted of murder and sentenced to death. President Truman commuted his sentence to life imprisonment.

From the public service standpoint, TV's coverage of Senator Estes Kefauver's investigation into organized crime was hard to beat. ABC cameras covered the proceedings in Washington and New York, showing a steady procession of gamblers and racketeers - even a mayor of New York, Bill O'Dwyer, the "honest cop", was caught up in the net cast by the Senator from Tennessee. It almost won Kefauver the Democratic nomination the following year - but not quite. One feature of the coverage of the hearings was the refusal by Frank Costello, a witness, to be seen on camera. As a result, only his hands were photographed, and they betrayed him more than would full face coverage.

While TV was turning a glaring spotlight on America's criminals, the medium was engaged in a not too savory practice - blacklisting talent. It all came about through the efforts of a couple of ex-FBI agents (few ever asked why they were "ex") who saw money to be made by warning all and sundry about the pervading threat of Communism. They started out with a modest newsletter

called "Counterattack" in which they "revealed" communists in the most unexpected places. Early the boys settled on the entertainment industry as being a particularly lucrative area for their operation. Soon they were "advising" TV and Radio sponsors of alleged communist affiliations or leanings of the talent on their programs.

For a while in the early 50s the work of these two wreaked havoc among performers, directors and writers. No subversive script or on-the-air ad lib was ever offered in evidence. Consistently the charges were based on membership in political committees (which usually included the names of obvious conservatives as well) or making appearances at benefits for the Abraham Lincoln Brigade in the recent Spanish Civil War. Finally, (1950), the authors published a volume - "Red Channels" - which detailed the "evidence" against several hundred in the television and radio performing ranks. Unfortunately the networks showed little backbone and knuckled under to the vague and unsubstantiated charges in "Red Channels".

The movies were having a bit of tough sledding. TV was making inroads on their audiences such as radio had rarely accomplished. Neighborhood movie houses closed by the hundreds, replaced only in part by the growing number of drive-ins. In searching for novelties to lure the audiences back, an abortive try was made at at Three Dimensional movies. The process required the viewers to wear a lightweight pair of glasses with one red and one green lens. This accomplished a stereo effect, but few people elected to sit through a movie looking like monster owls from outer space. There was even an attempt to accompany movie scenes with authentic odors, introduced into the theatre ventilating system. But the "smellies"

never got off the ground. A more successful note was sounded with the introduction of wide screen motion pictures, particularly Cinerama. This process required three separate projection booths in the theatre throwing interlocking pictures on a huge curved screen to create the illusion of motion within the theatre and around the audience. High spot of the first Cinerama film was a ride on a roller coaster so lifelike that the audiences squealed and shrieked quite as loudly as they do at amusement parks.

TV first tapped the valuable vein of war themes in authentic footage from military files in World War II, released as a series under the title "Crusade in Europe". After a 26-week run of hour episodes, the series was put into syndication and will probably surface again sometime in the not too distant future. Time-Life created a comparable series about the war in the Pacific and titled it "Victory at Sea". This ambitious undertaking boasted a musical score by Richard Rogers capable of standing on its own feet as a concert work.

Then death struck a second English monarch in broadcasting's short life. King George VI died early in 1952 leaving the succession to the throne to his daughter who took up her reign as Elizabeth II. As usual, the pomp of British ceremony was shared with this country via radio and TV. All networks arranged to film the BBC coverage and fly the film across the Atlantic, editing it en route.

In this time of transition in broadcasting from sound to sight plus sound, many programs were compromises. The sharply increased talent and production costs in TV compared with radio were largely met out of the revenues from radio in a great number of

instances of joint ownership of radio and TV. A very early device in the realm of economy was simply to turn a camera on a radio show. No great problem here with shows like Groucho Marx's quiz show, Arthur Godfrey's Talent Scouts, and the Chicago Round Table. Many radio shows, particularly daytime serials, made few demands on sets, costuming or outdoor scenes. It was relatively easy to play "Portia Faces Life" in TV with a couple of stock indoor sets and a courtroom set. Other shows were so strong on characterizations, as "Blondie", that sets and costumes added little to their appeal. Kids had an early favorite in TV with "Buffalo Bob" Smith and puppet "Howdy Doodie". Soon virtually every TV station in the country had an afternoon kids' show with a putty-nosed clown as MC and featuring old films of "Our Gang", "Tarzan", "Hop-along Cassidy", "The Three Stooges", etc.

At night TV was creating a legend in the tremendous audiences tuning each Tuesday night to Milton Berle's show for Texaco. Berle was really the first vaudeville-night club comedian to get continuing and concentrated exposure in the new medium. Thousands in small towns who had no earlier experience with live comedy now turned weekly to brash, costume-mad gagster Berle who was known in the trade (jokingly) for his propensity to steal other's comedy material. For commercials what could be more obvious than a midway barker - Sid Stone? And he was aided and abetted by a ventriloquist, Jimmy Nelson, and his dummy, Danny O'Day, (shades of Charley McCarthy!)

Pitched in a very different key was a program competing with Berle on another network - Monsignor Fulton J. Sheen. This energetic Catholic clergyman had a large and loyal following. Berle, known as "Uncle Miltie" used to joke about his competitor "Uncle

Fultie", and jest about the relative merits of each other's writers!

Quite early TV began to develop its own comedy stars and among the earliest was Sid Caesar. This talented young performer had been an usher in the Capitol Theatre, an accomplished saxonphonist and has a rare gift for imitating the sound of virtually any language. Teamed with him was Imogene Coca, one of the plainest of women, pixie, trained in classical ballet and a natural comedienne. As a team, with Carl Reiner as a writer and performer on the show Caesar and Coca built one of the top TV shows of the 50's in a very short time.

TV might be considered to have "arrived" in 1950. A poll of radio-TV columnists showed these to be winners -

TV Man of the Year	Sid Caesar
TV Woman of the Year	Faye Emerson
Best Dramatic Series	Studio One
Best Comedy Show	Milton Berle
Best Series	Dragnet
Best Documentary	Crusade in Europe

Politics was in the wings in 1952 and TV played onstage its first important coverage of the major party conventions. Harry Truman had elected not to run and the Democrats had been wooing Gen. Eisenhower. All to no avail - Ike was handily nominated by the GOP in the face of formidable professional political adversaries who were plumping for Senator Robert Taft of Ohio. CBS covered the proceedings with a team which included Edward R. Murrow, Lowell Thomas and Walter Cronkite understudying his future role as convention anchorman.

The Democrats, meeting in Chicago, rather grudgingly nominated Gov. Adlai Stevenson II of Illinois, with Senator John Sparkman of Alabama as his running mate. Stevenson conducted a brilliant

campaign well over the heads of the mass of the electorate, but he never struck a really responsive chord among the voters. Ike campaigned very little, resting on his vast military laurels and dutifully reading the few speeches written for him. The campaign witnessed an innovation in political broadcasts. The Eisenhower forces produced the first spot announcements (20 seconds) in which the candidate ostensibly answered the questions of voters randomly selected on the streets. But all "answers" were filmed by Eisenhower at one time in a studio.

A moment of real drama came when the GOP candidate for Vice President, Senator Richard M. Nixon, was accused of accepting an illegal campaign contribution. The GOP bought a half hour of prime time on TV networks for Nixon to make a detailed accounting of his financial affairs, with a liberal helping of bathos thrown in about a gift to his daughter of a small dog, "Checkers". It livened up the campaign.

The GOP won tidily, with a popular plurality of 7 million votes and a lead of 441 to 89 in the Electoral College. Most important, Ike broke the "Solid South", the traditional bastion of Democratic strength. There were enough conservative Texans to swing that state into the GOP column, and wealth surely played a part in the defection of Virginia and Florida.

In the USSR the long rule of Stalin came to an end with his death in March of 1953. After an internal scramble for power reported in great detail to the Western world via broadcast media, Russia emerged as a country anxious to cooperate with her World War II allies. As one European "reign" ended, another began with the coronation of Elizabeth II in England - again widely covered by radio and TV.

Here at home 1954 saw a monumental Supreme Court decision handed down. After years of backing and filling on the issues of Civil Rights the Court, with Earl Warren, Chief Justice, declared for integration of races in all public schools, to be accomplished "with all possible speed". Among the attorneys who led the fight for integration was Thurgood Marshall, then associated with the NAACP, today a Justice of the U.S. Supreme Court. But many difficulties were to lie in the path of full realization of the intent of the Supreme Court's decision. Confrontations, including armed forces, were to take place before even today's limited goals could be reached.

TV became increasingly commercial in these years. Applied psychology was combed for more devices to induce the viewer to want and to buy the myriad goods TV now paraded before his eyes and ears. Subliminal perception was the name of one of these games and it was struck down by the FCC.

TV continued to make giant strides at home. The innocuous radio quiz prize of $64 was ballooned into the "$64,000 Question". It was to spawn imitators and a scandal. President Eisenhower inaugurated the televised news conference - a custom rapidly increasing today. In England a major turnabout in broadcasting policy was the establishment of a commercial TV network.

SUGGESTED OUTSIDE READING

AWARE, Inc. - "Red Channels"

Blum, Daniel C. - "Pictorial History of TV"

Cogley, John - "Report on Blacklisting - Vol. 2"

Crowther, Bosley - "The Lion's Share"

Dunlap, Orrin E., Jr. - "The Future of Television"

Faulk, John Henry - "Fear On Trial"

Green, Abel, and Joe Laurie, Jr. - "Show Biz: Vaud to Video"

Harmon, Jim - "The Great Radio Heroes"

Hohnberg, John - "Foreign Correspondence"

Kirby Edward M., and Jack W. Harris - "Star Spangled Radio"

Miller, Merle - "The Judges and the Judged"

Murrow, Edward R. - "In Search of Light"

Parker, Everett C., David W. Barry, and Dallas W. Smythe - "The Television-Radio Audience and Religion"

Pastore, John O. - "The Story of Communications"

Rovere, Richard H. - "Senator Joe McCarthy"

Schneir, Walter and Miriam - "Invitation to an Inquest"

Slate, Sam J., and Joe Cook - "It Sounds Impossible"

TV'S PLACE IN THE SUN - 1956-1962

By the time we reach 1956, the merging of interests of film and TV are clearly evident. In a classic example of "if you can't beat 'em, join 'em" the film companies, one by one, unlocked the vaults of their accumulated feature films, with multi-million dollar TV checks providing the keys. Twentieth Century Fox and MGM were among the first to sell pre-1948 features to television, providing fodder for the hundreds of hours each day of local station programming of movies - Late, Late-Late, Late-Late-Late, etc. Local live programming declined accordingly.

TVs impact on children was immediate and was immediately traded upon. Among the better shows designed for children is Captain Kangaroo, first aired in 1955. The film vaults provided quite a bit of kid fare and many new adventure series specifically for TV went before the Hollywood cameras. Among the early series was a father and son team, Olympic swimming champion Buster Crabbe and his son, in a series about the Foreign Legion, titled "Captain Gallant".

For adult fare TV soon began mining the valuable vein of interest in the traditional Wild West. A whole clutch of series flowed forth from the Hollywood studios based, in title at least, on actual figures of the post-Civil War west. Billy the Kid was played by several for TV, including Barry Sullivan, all much handsomer than the original. Tyrone Power made a dashing and debonair Jesse James, quite unlike the "Mr. Howard" who legend tells us was shot in the back by "a dirty little coward". Even harder to take is the role of Belle Starr, a one-time companion of Jesse, who, in real life was a very unhandsome gal who spent most of her adult life with a particularly unappetizing looking half breed named Black Duck. But for TV, Belle was played by winsome blonde Gene Tierney. Calamity Jane looked more like a roustabout in Buffalow Bill Cody's Wild West show than talent in same. Jean Arthur played Jane in the TV series. Numerous other examples could be cited, but these are things that must be seen to be appreciated.

Mention should be made of an outstanding carryover from radio, now in syndication on TV today - "Gunsmoke".

And there was again a sea disaster to rivet the attention of listeners and viewers. Early in July 1956 the luxurious Italian liner Andrea Doria was within hours of docking in New York, sailing through heavy fog. Outbound, the Swedish liner Stockholm was sailing eastward near Nantucket Light. A one in-a-million concatenation of misreadings of the radar on both ships resulted in a collision around midnight. The Andrea Doria was mortally stricken and sank in the early morning. The Stockholm, with a seriously damaged bow, picked up most of the Doria's crew and passengers and returned to New York. Fortunately only 51 lives were lost in the mishap.

Television was building many shows which made good use of the unique features of the medium. An early innovator came out of Chicago - Dave Garroway. Here he had done a delightfully informal late evening show which made no pretense of elaborate production, merely followed the talent around the studio from set to set with all the cables, cameras, lights and microphones hanging out in a wonderfully relaxed way. Brought to New York, one of Garroway's earliest assignment was to the "Wide, Wide World" show, again a show informal in presentation but quite complex technically as it brought to the screen in the home a steady stream of short bits on happenings the world over.

Television was also accomplishing much favorable exposure for public figures who might otherwise have remained local in their influence. High on any list of such personalities was the Rev. Martin Luther King who won a nationwide audience for his work in the Montgomery bus boycott in 1955.

Many an old voice and face from radio and vaudeville survived intact into the TV era. Among the most durable of these is Jimmy Durante with us today, still featuring on occasion his early partner Eddie Jackson, now a retired song-and-dance man.

And there were new faces on TV. One of the comedy sensations of 1954 was a short young man with a crew cut who had begun his career in radio as a child guitarist (C&W) - George Gobel. And some old faces appeared in new and unfamiliar roles. Eddie Cantor played a straight dramatic role in the play "George Has a Birthday", with never a mention of his wife Ida and his five daughters or a single "mammy" song. And TV lent itself readily (given a competent cast) to shows simply staged, as "Our Town" by Thornton Wilder. Many were the popular books adapted for TV and among the earliest was "I Remember Mama", a gentle family drama of a San Francisco-dwelling group guided by old country Swedish parents. The series played successfully for several years beginning in 1954.

TV brought to millions the more elite forms of culture in such events as broadcasts of Margot Fonteyne as the premiere danseuse in a beautiful production by the Sadler's Wells Ballet of "Swan Lake". With even closer ties to the new medium was the NBC Opera Company, founded in 1955 to produce TV versions, in English, of the most popular operas, and also to travel the company to smaller cities rarely visited by the major opera companies.

TV history can be written around the development and continuing appeal of Lucille Ball who, with her then husband Desi Arnaz, launched the "I Love Lucy" show in 1955. Oddly enough, essentially the same show had been auditioned for radio as far back as 1941, but no merit was detected in it at that time. Today the Desilu Studios provide the facilities for dozens of shows for TV and originate some on their own.

Anticipating the election in 1956 Edward R. Murrow gave a TV style object lesson in practical politics by including on his "See It Now" show coverage of a school board election in an Illinois county. Here in microcosm was the entire political and election process for all to see.

Politics made a new use of the TV medium in the campaign of 1956. The GOP had no difficulty nominating President Eisenhower for a second term in

spite of the serious heart attack he had suffered the preceding fall. There was no change in the choice for Vice Preisdent - Nixon. The Democrats fielded Adlai Stevenson for a second try with the number two spot going to the "crime buster" - Sen. Estes Kefauver.

The GOP won by an even greater margin than in 1952 - a plurality of 9.5 million votes and a score of 457 to 73 in the Electoral College. Used in this campaign for the first time were five-minute politcal spots, arranged by inducing network sponsors to agree to cut back their prime time shows by five minutes. Understandably, it was a Republican innovation, soon copied by the Democrats.

President Eisenhower's second Inaugural was the first ever to be recorded on videotape.

One unusual aspect of long running shows on TV is well illustrated by the "Lassie" show. For openers, Lassie is a male dog. More than this, the current Lassie is about the fifth dog to play the role on TV. Then there is the problem of having Lassie always teamed with a boy about ten years old. Since ten year olds have a habit of becoming eleven year olds, twelve, etc., it has been necessary to have Lassie change owners every few years in order to maintain the ten-year-old-boy-and-his-dog relationship. Also on the canine beat was King the Wonder Dog of "Sgt. Preston of the Yukon". This was another straight takeover of a radio show, this one from the same people who gave you "The Lone Ranger" and "The Green Hornet".

Among the film properties in existence and suitable for TV, an early winner were the old "Our Gang" comedies. Quite a few years had elapsed since the original filming and distribution of the series - enough years for one of the original Gang - "Spanky" McFarland - to be old enough for a job at a Tulsa station as the MC for kid show featuring "Our Gang" (now renamed "The Little Rascals".) And not far behind in popularity among the young viewers

were the old films of "The Three Stooges". These were not so popular among parents because of the recurring ridiculous violence which characterized the shows.

A few rather prophetic events transpired in 1957. The American Cancer Society made its first public statement condemning cigarette smoking and advertising. Fifteen years later, by law, all cigarette advertising was banned from the air. A CBS correspondent, William Worthy (also a correspondent for the Baltimore Afro-American), went to Peking in violation of State Department restrictions on such travel. He broadcast from the capital of the Peoples Republic of China. On his return to the States his passport was revoked and the State Department "requested" CBS to broadcast no further material of Mr. Worthy. Fifteen years later President Nixon was to pay a ceremonial visit to Peking with the full blessing of the State Department and Henry Kissinger.

The East German government, at the instigation of the Soviets constructed a wall separating the two Germanies in the Summer of 1957. The ostensible purpose of the Wall was to stop the many and increasing defections to the more opulent life to be enjoyed in the Western Zone. A rather haphazard affair at first the Wall soon became a menacing obstacle of concrete, barbed wire barricades, numerous border guards with attack dogs, searchlights and machine-gun towers. Still they defected, many of them East German soldiers.

Very positive was the action taken by President Eisenhower in the Little Rock school disruption. Governor Faubus of Arkansas had defied the mandate of the U.S. Supreme Court to desegregate all schools. A showdown brought National Guardsmen and U.S. Paratroopers into Little Rock to enforce the Federal ukase. No one was killed or seriously injured in the confrontation which saw Federal law triumph and the bigotted views masquerading as States' Rights toppled.

An American public well insured to the capers of Superman got a rude surprise on October 4th. The mechanical and impersonal beeping in headphones and the clamoring voices of Soviet broadcasters announced Sputnik I - the first man-made satellite to orbit 140 miles above the earth's surface. We had scarcely time to recover from this initial shock and legislate Physics and more Math as required courses at the High School level when the word came of Sputnik II. This newest marvel carried a payload of man's best friend - a dog named Laika, who not only survived the historic journey but lived on for several years, among the royalty (in the USSR?) of dogdom.

Amos'n Andy finally bowed off radio in 1957 after more than 10,000 broadcasts. For a short while a TV version of the A&A characters was on the air but displeasure voiced by minority viewers at the portrayal of Black people on the show led to its withdrawal.

The scope of network TV at this time is illustrated by a quick look at the CBS rate card. The Full Network comprised some 135 stations and an hour of time at night would cost roughly $107,000 before discounts. And TV was growing up in other ways as well. In 1957 CBS commissioned a full scale operetta to be written by Rogers and Hammerstein. The result was "Cinderella", starring Julie Andrews. On the dramatic front an outstanding play by Reginald Rose, "Twelve Angry Men", exposed the tensions of a jury's deliberations. Shortly, the show was done as a movie, again with Franchot Tone in the lead.

A couple of the very rare instances of dubious conduct by FCC commissioners surfaced in 1958. It was all sort of a very E-flat Watergate in the Eisenhower administration. Commissioner John Doerfer resigned under something of a cloud for accepting too many personal favors from broadcasters who had actions pending before the Commission. Commissioner Richard Mack was found to have accepted a bribe in a case involving a particularly valuable TV license being

applied for, and he quit under fire. And President Eisenhower's trusted advisor, Sherman Admas, resigned over disclosure of his intervention on behalf of a friend in a case before the FTC.

These years were studded with "firsts" for TV. In Chicago WGN-TV was the first station to broadcast a Catholic service presided over by a bishop (Strich). Pay-TV had a few more trials and an equal number of failures. In 1959 TV had the chance to cover in depth the first visit to the U.S. of a Prime Minister of the USSR- Nikita Kruschev. From coast to coast TV reported the doings and impressions of the Russian dignitary. Considerable time was spent on the farm of John Garth in Iowa where Kruschev showed great interest in our agricultural methods. In Hollywood Nikita was greatly disappointed to be denied a chance to visit Disneyland, even threatened to go home in a huff because of what he felt was poor hospitality. But his visit did improve relations between our two countries.

Closely allied with international Communism was the rise to power in Cuba of Fidel Castro. Many here and in Europe saw him at first as a Robin Hood type who would free his people from an oppressive regime, the dictatorship of tough Fulgencio Batista and his wealthy supporters. In short order, Castro's true allegiance to Communism became known and soon he was a potential enemy of the U.S. only 90 miles from the Florida coast.

But the big news in broadcasting in 1959 was the final eruption of the Great Quiz Show Scandal. The lid blew off the big money shows - "$64,000 Question", "$64,000 Challenge", "Twenty One", "Tic Tac Dough", - with the revelation that many of the successful contestants had been coached on their answers. A steady stream of new-found "geniuses" paraded into District Attorneys' offices and before Grand Juries. Few could document that they had been coerced into this easy way to a quick fortune. Central figure was Charles VanDoren, Professor of English at Columbia, son of noted literary man Mark VanDoren, nephew

of historian Carl VanDoren. Charles deserved an Oscar for his performance of excruciating cerebration - seeking the answers he had already been given!

To top off the year, the Mutual Broadcasting System found itself in deep, very hot water because of actions of its then president, Alexander Guterma. This gentleman headed a combine (which included movie maker Hal Roach) which bought out MBS for $2 million. Shortly thereafter Mr. Guterma, on a social visit to the Dominican Republic, made a deal with dictator Rafael Trujillo whereby for $750,000 MBS would agree to carry a minimum of 425 minutes per month of news favorable to the Trujillo regime. Little came of this deal since financial difficulties brought about Guterma's downfall and the revelation of this highly unethical agreement.

Walt Disney, in the meantime, was making serious inroads into television. In addition to airing his many nature films, he created the "Mickey Mouse Club" for a young audience. Also being filmed by Disney were historical shows - Daniel Boone, Davey Crockett - to create a demand for coon skin caps the market could not supply!

Two major events in broadcasting occurred in 1960 - one memorable, the other unforgettable. For the Presidential election campaign Congress passed a law suspending Section 315 of the Communications Act in order to allow four "Great Debates" between the candidates of the major parties. John F. Kennedy had the most to gain - national recognition via a most effective medium, - while Richard Nixon, already Vice President for four years had little to gain. The match clearly went to Kennedy on points and in the ensuing election JFK squeaked through on a 100,000 vote plurality, though his lead in the Electoral College was greater - 333 to 219.

Soon after taking office in 1961 President Kennedy approved "live" coverage of White House news conferences. Earlier President Eisenhower had allowed filming of these conferences but reserved the right to preview and edit them.

Unforgettable is the level of evil and mayhem paraded as "history" in "The Untouchables". Purporting originally to be based on the experiences of G-Man Elliott Ness in tracking down hoods and bootleggers, the series soon turned to outright fiction and each week sought to soar to new depths of violence.

In 1961 man made his first halting conquests of space in the persons of Yuri Gagurin (USSR) and Alan Shepard (US). Television brought all the excitement of the American launching and the tension of the flight and the landing to the country over all three networks.

Meanwhile man in the U.S. was abdicating his responsibility over the airwaves in the opinion of FCC Chairman Newton N. Minow. Addressing the annual convention of the National Association of Broadcasters, he termed TV to be intellectually "a vast wasteland" and called for greater responsibility on the part of broadcasters.

Had it not been for the fact that real bullets were used and some people were killed, the "Bay of Pigs" invasion of Cuba, mounted in Florida, could have passed for an act in a comic operetta. The CIA established a level of bungling that has been well maintained to this day in Southeast Asia.

Television as a chronicler of the times worked overtime in 1962.

Technically the big breakthrough was Telestar, the first communications satellite. Now it was possible to transmit live virtually around the globe. An international organization - COMSAT - was formed to administer communication via satellites on behalf of all nations.

Television programming was playing in its usual contrapuntal fashion. On the one hand NBC staged and filmed "The Tunnel" in West Berlin. This carefully documented account of the methods used by East Germans to evade The Wall and escape to the West was topflight television. At about the same time,

television brought to the American public what was to become a seemingly endless saga of the triumphs of native backwoods shrewdness over big city slickers in "The Beverly Hillbillies". It was "corn" that shamed Iowa - but people flocked to the show!

One of the oddest station sales on record as consummated in 1962. WNTA, channel 13, Newark, N.J., owned by National Telefilm Associates, had fallen on parlous times. Actually serving New York City as the seventh VHF station in the largest market, it was losing money. NTA sought to sell the station - the FCC sought to discourage the sale since New York had no non-commercial TV station. Upshot - the six commercial stations pungled up $5,750,000 to buy the station on behalf of a non-profit group which would operate it.

Here at home the Chronicle headlined the defeat of Richard Nixon for Governor of California by Edmund Brown, and reporters were to hear shortly the classic comment of the defeated candidate, "Well, you won't have Nixon to kick around any more!"

SUGGESTED OUTSIDE READING

Baker, Samm Sinclair - "The Permissable Lie"

Bluem, A. William - "Documentary in American Television"

Boorstin, Daniel J. - "The Image"

Crosby, John - "With Love and Loathing"

Ernst, Harry W. - "The Primary That Made a President: West Virginia 1960"

Frost, David, and Ned Sherrin (eds) - "That Was The Week That Was"

Gregory, Dick - "Write Me In"

Johnson, Haynes, et al. - "The Bay of Pigs"

Kendrick, Alexander - " Prime Time"

Kennedy, Robert - "Thirteen Days"

Lamb, Edward - "No Lamb for Slaughter"

Lukacs, John - "A New History of The Cold War"

Mannes, Marya - "More in Anger"

Mehling, Harold - "The Great Time Killer"

Michie, Allan A. - "Voices Through the Iron Curtain"

Miller, Merle - "Only You, Dick Daring"

Montgomery, Robert - "Open Letter form a Television Viewer"

Ogilvy, David - "Confessions of an Advertising Man"

Roe, Yale - "The Television Dilemma"

Seldes, Gilbert - "The Public Arts"

Severeid, Eric - "This is Eric Severeid"

Skornia, Harry - "Television and Society"

Swing, Raymond Gram - "Good Evening"

Walton, Richard - "The Last 170 Days of Adlai Stevenson"

Weinberg, Meyer - "TV in America"

White, Theodore H. - "The Making of the President 1960"

Whitworth, William - "An Accident of Casting"

Witcover, Jules - "85 Days: The Last Campaign of Robert F. Kennedy"

Wycoff, Gene - "The Image Candidates"

TELEVISION IN YOUR TIME - 1963-1969

Few of you have not known the Television Environment from your earliest youth. All of you have been witnesses, and hopefully increasingly enlightened critics, of the electronic media since 1970.

But back to our history.

By 1963 satellite transmissions were fairly commonplace. Telestar was orbiting the globe, expanding our horizons to their earthly limits, much as Edward R. Murrow had broadcast our first view of our national horizons by showing on a split screen simultaneously the Atlantic and the Pacific Oceans, live. We had experienced the first encounters engendered by the Supreme Court decision of 1954 integrating U.S. schools. Governor Ross Barnet had been unsuccessful in denying James Meredith admission as the first Black student at the University of Mississippi. Richard Nixon had bid a farewell to politics, brought on by his defeat in 1962 for the Governorship of California.

The 1963-4 season contained few surprises. One welcome bit was a "special" with Danny Kaye and Lucille Ball. One of many undistinguished series, hailed by NBC with great fanfare, was another courtroom drama - Burke's Law, starring Gene Barry. It did not survive.

Television followed President Kennedy abroad and brought to us his triumphal appearance in West Berlin, complete with his ringing phrase "Ich bin ein Berliner". Our international stock went up sharply

and we bathed in the warmth of this firsthand exposure to a great moment in our history. (England at about the same time was reeling at the scandal of a Cabinet officer's dalliance with one Christine Keeler, who was dallying simultaneously with a Soviet naval officer. The British press had a ball.)

Civil Rights occupied center stage during most of these years. TV caught and preserved for us Governor Wallace's confrontation with Attorney General Katzenbach over the admission of Black students to the University of Alabama. Martin Luther King, whose first major success we saw earlier in the Montgomery bus boycott, organized and led a gigantic peaceful march for Civil Rights to the nation's capital. To a crowd of more than 300,000 and a TV audience ten times that size he spoke his long-to-be-remembered "I have a dream" speech. But peace on the racial front was a long way ahead. The riots in Watts, Detroit, Newark kept the cauldron seething and stamped Civil Rights a first priority of the American people.

In the Fall of 1963 TV News made a significant advance. Almost simultaneously the networks lengthened their early evening news to 30 minutes, virtually compelling affiliates to follow suit with their local news. In the van was the team of Huntly and Brinkley on NBC, beginning a series which was to last until very recent times.

Then began the series of assassinations that were to mark this era. President Kennedy started a speaking tour, accompanied by his wife Jacqueline, that began in Fort Worth, Texas on November 22nd. Following a happy civic breakfast there hosted by Governor Connelly, the party drove to Dallas. While there had been some veiled threats against the President in the newspapers no trouble was anticipated. But as the

motorcade approached a freeway underpass three shots rang out, mortally wounding the President, slightly wounding Governor Connelly. Radio was on hand at the scene, but the only pictures of the sequence of events were recorded in the movie camera of tourist Zabruder. Within hours the President was dead, Lyndon Johnson was sworn in as the 36th President of the U.S. in the cabin of Air Force One. The ceremony is preserved for us only on a Dictaphone recording.

Broadcasting observed three days of mourning - no commercials, no regularly scheduled entertainment, just news, commentary and quiet music. The actual funeral was extensively covered by TV and Radio and deeply etched in the minds of the audience was the great gathering of notables from around the world, on foot, tiny John John saluting the flag as his father's cortege passed, the strident voice of Cardinal Cushing speaking soft words of praise for a parishioner departed.

Punishment for this heinous crime did not follow an orderly course. Very quickly one Lee Harvey Oswald was arrested for the slaying of a Dallas police officer, quickly connected with and accused of the murder of the President. The nation was denied a lawful trial of Oswald. In the cellar of the Dallas Police Headquarters he was shot to death by the operator of a sleazy night club. And TV covered these dramatic moments when, in a way, a new "shot heard 'round the world" was fired.

The 49th State was severely damaged by an earthquake centered on Anchorage in March 1964. Radio and TV performed valuable services in providing emergency communications and enlisting public support for the relief of the victims of the Alaskan quake.

Overseas a new form of radio was rapidly taking shape. The BBC was under increasing criticism for failing to play contemporary popular

music. Into this void moved several groups of young broadcesters who equipped various small ships with powerful transmitters beamed toward England. These "pirate" stations caused quite a stir. There clearly was an audience for their music but their legal status was dubious at best. They were finally closed down by the simple device of a prohibitive tax levied on any sponsors who advertised on the stations.

The 1964 GOP Convention here in San Francisco quickly nominated Sen. Barry Goldwater, with William Miller of Buffalo, N.Y. as his running mate. (Miller is best known today for his testimonial TV commercials for American Express Credit Cards!) Lyndon Johnson won the Democratic nomination in Atlantic City hands down, the election in November comfortably.

TV gave us its first nighttime "soap opera" - Peyton Place. Originally scheduled one night a week its popularity spawned two additional episodes a week until its demise shortly thereafter. The supernatural got quite a play with "Bewitched" and "The Addams Family" while a sleeper came on the air - "The Beverly Hillbillies" - to prove there's humor (and gold) in them thar hills! Not to mention a tribute to contemporary popular music in "Shindig". And soon came one of the many great monuments to humen greed - "Supermarket Sweepstakes" - long on prizes, short on lasting values!

A pervading aroma of death is to be found in these years, of the great, the well known and the little known. Broadcasting brought them all into the home. The pageantry of the funeral of Sir Winston Churchill came to us in color via satellite. The assassination of Malcolm X was extensively reported and commented on, as were the raging flames and inert bodies of the unknown victims of the riots in major cities. Plus battle scenes from Vietnam for a chaser. Not killed but shot was

James Meredith, central figure in the controversy surrounding his admission as the first Black student at the University of Mississippi a short while earlier.

Pope Paul visted the U.S., addressed the U.N. and a huge crowd of the faithful in New York's Yankee Stadium, urging earthly peace and granting heavenly benediction. A thousand miles to the south rehearsals for lunar examination via Apollo VIII ended in a fire on the ground, killing the three man crew.

One of broadcasting's few strikes by its performers occurred in 1967 when AFTRA walked out in a dispute over wages for newsmen. It didn't last long but served to disrupt some of the established news shows with Edwin Newman on the picket line, David Brinkley off the air and Chet Huntley still broadcasting.

The Six Day War between Israel and Egypt came on too quickly, was over too soon for elaborate or extensive coverage by the broadcast media. Once more the Israelis had unlimited access to their sacred Wailing Wall in Jerusalem.

But war was not to the liking of a rapidly growing number of people here. Demonstrations on college campuses dotted the news with much of the early (bad and little deserved) publicity going to SFSC. The killing of four students at Kent State University marked the high point of violence on the campuses. In the cities the riots continued, over civil rights and the war. Assassination of the Year award might well go to George Lincoln Rockwell, slain by one of his own American Nazi Party "storm troopers".

On the plus side, educational television began to come into its own. A sympathetic attitude by the FCC, sparked largely by Commissioners

Nicholas Johnson and Kenneth Cox, moved forward this and other liberal causes in broadcasting.

Among the minor events - the New York City area fell victim to a power failure resulting in about a ten-hour "blackout" of everything electrical (excepting portable radios) that shocked many into a realization of some of the risks inherent in our advanced technology. And on December 25 the famed New York Central's train #25 - 26 - The 20th Century Limited - made its final runs between New York and Chicago.

But 1968 ushered in another election year with plenty of issues and happenings. It started off with the capture of the USS Pueblo, an intelligence ("spy") ship, by naval vessels of North Korea. Much popular indignation, but unfortunately little significant TV coverage was possible. The political scene saw new potential candidates emerge. Sen. Eugene McCarthy of Minnesota got off to a fast start in the New Hampshire primary and quickly enlisted a large enthusiastic following among the young and the idealistic. Robert F. Kennedy entered the lists a bit late but rapidly caught on even better with the young voters. But he was not to be nominated by the Democrats. The Democratic race was wide open with the announcement by President Johnson that he would not run.

The war in Vietnam was spreading a growing pall over American politics and the American people. The My Lai massacre of civilians by American Troops commanded by Lt. William J. Calley was little known at the time but was later to become a major issue. Anti-war demonstrations were frequent here and increasing.

In March the crack of a rifle once again denied the American people a great leader. On the balcony of a Memphis motel the Rev. Martin Luther King was shot and killed. Riots in protest broke out in

major cities - in Washington buildings less than half a mile from the White House were burned to the ground. The nation was impressed and chastened by the sight of the coffin of this leader of our times borne humbly through the streets in a Georgia farm wagon drawn by two mules. Justice more traditional was applied here. James Earl Ray was soon caught up in one of the greatest manhunts yet mounted, tried and sentenced to life imprisonment.

Our next assassination involved a smaller caliber weapon but another national figure similarly on the threshold of great national prominence and worth. Robert Kennedy, campaigning fiercely to make up for lost time, attended a banquet in a Los Angeles hotel to celebrate his victory in the California primary. In a corridor near the kitchen he was shot at close range by one Sirhan Sirhan, a young Jordanian ex-jockey and current dishwasher. Again the nation was present. We have preserved all of the deadly drama as reported by a radio newsman who was standing near to the assassin. Again the nation mourned and shared the grief of the victim's brother Edward's touching eulogy in St. Patrick's Cathedral.

As a result of one of the most carefully orchestrated campaigns in American history, Richard M. Nixon was nominated overwhelmingly by the GOP Convention, held in a carefully isolated and well guarded location in Miami. His running mate, a little known Governor of Maryland, Spiro Agnew, hoped his name would soon become a household word (it has!). Off in the wings, Russia invaded Czechoslovakia, to the great indignation of the U.S., and contributed a new campaign issue.

The Democrats were far less fortunate in their convention in Chicago. Politically they had lost their front runner, Robert Kennedy,

and "Clean Gene" McCarthy was not up to the rigors of backroom politicking. Worst was the spate of street demonstrations and floor fighting that set in. The Chicago police and the National Guard handled the demonstrations in a way that can most charitably be called "poorly". TV cameramen were assaulted by the police and a very frank confrontation between Mayor Daley and Walter Cronkite of CBS pretty much capped the performance. A group of arrested demonstrators, to be known as the "Chicago 7" were brought to trial before a very conservative judge, Julius Hoffman. The case dragged on to a bitter conclusion. Hubert Humphrey was nominated, but having run in no primaries and having little time to organize a campaign, went down to severe defeat by Nixon.

We finally got Apollo VIII off the ground and circled the moon - no landing. Timothy Leary went to jail for his espousal of LSD and other drugs, and NBC gave us "Laugh In". Somewhat more serious and useful fare was to be found in the "Drivers' Test" for TV viewers, soon followed with a "Health Test" a "Politics Test", etc.

The Summer of 1969 saw a crowning achievement of man's technology. Apollo 11 successfully landed two men on the moon, transmitted TV pictures in color to the earth, using the early field sequential color system for accuracy.

In the Fall Spiro Agnew unburdened himself of a quite vicious attack on the broadcast news media in a speech in Des Moines, Alcatraz was occupied by Indians to the delight of tourists and the consternation of the Government.

And so the end, as it comes to all years, came to 1969.

SUGGESTED OUTSIDE READING

Abel, Elie - "The Missile Crisis"

Arlen, Michael J. - "Living Room War"

Barrett, Marvin (ed.) - "Survey of Broadcast Journalism 1968-1969"

Dizard, Wilson P. - "Television: A World View"

Emery, Walter B. - "National and International Systems of Broadcasting"

Fisher, Paul L., and Ralph L. Lowenstein (eds.) - "Race and the News Media"

Friendly, Fred W. - "Due to Circumstances Beyond Our Control"

Goldman, Eric F. - "The Tragedy of Lyndon Johnson"

Halberstam, David - "The Unfinished Odyssey of Robert F. Kennedy"

Johnson, Nicholas - "How to Talk Back to Your Television Set"

Koenig, Allen E. - "Broadcasting and Bargaining"

Lang, Kurt, and Gladys Engel Lang - "Politics and Television"

MacNeil, Robert - "The People Machine"

Mailer, Norman - "Miami and the Siege of Chicago"

McGinniss, Joe - "The Selling of the President 1968"

Morgan, Edward P. - "Clearing the Air"

Paulu, Burton - "Radio and Televison on the European Continent"

Schlesinger, Arthur M., Jr. - "A Thousand Days: John F. Kennedy in the White House"

Seldes, Gilbert - "The New Mass Media"

Skornia, Harry J. - "Television and the News"

Sopkin, Charles - "Seven Glorious Days, Seven Fun-Filled Nights"

Sorensen, Theodore C. - "The Word War"

Steiner, Gary A. - "The People Look at Television"

Vidal, Gore - "Sex, Death and Money"

White, Theodore H. - "The Making of the President 1964"
— "The Making of the President 1968"

Whitefield, Stephen E. - "The Making of Star Trek"

Witcover, Jules - "85 Days: The Last Campaign of Robert F. Kennedy"

Wood, William A. - "Electronic Journalism"

Wycoff, Gena - "The Image Candidates"

The 70s have been unquestionably TV years. Color receivers were to be found in three of every four TV homes in the country, homes with two or more TV sets had risen to 45%. Networks were beginning to listen to complaints about violence - and ushered in the years of the "screaming tires" as the "cops and robbers" increasingly turned to the highways. The little old lady of 85 could not drive off in her 1961 Plymouth without "laying down a patch" with a drag race style of start.

The Nixon administration was halfway through its first term in office - dignified (?) by RMN outfitting the White house police detail in uniforms that looked like hand-me-downs from a road company of "The Student Prince".

Broadway was brightened by a rare stage appearance of Lauren Bacall in the hit musical "Applause", while Danny Kaye fared not so well in a musical comedy treatment of Noah and the Ark, "Two by Two". Carried over into the 70s was the occupation of Alcatrez Island by Bay Area Indians who laid claim to it in part payment for lands illegally seized in violation of a treaty dating back to the 1850s. They wanted the island used for an Indian museum, but rather it provided a new tourist attraction. Among the miscellaneous events at this time was the last run of the California Zephyr - 71 hours running time out of Chicago, unable to compete with the airlines' schedules of less than five hours.

Politically and socially, the year 1970 witnessed several important events - all covered by television. Cesar Chavez, the patient, devoted leader of the movement to better conditions for contract farm laborers, saw a considerable measure of success in the signing of United Farm Workers contracts with more than a score of the principal grape growers in California. In return the union called off its 2-1/2 year boycott of table grapes. Boston seethed with discontent over school integration and saw sporadic violence as well as orderly demonstrations as the one led by a candidate for Congress, Louise Hicks. She was not elected.

Anti-war demonstrations escalated with President Nixon's announcement of the bombing and invasion of Cambodia in southeast Asia. After relative quiet since 1968, a terrible confrontation took place May 4th at Kent State University in Ohio. Student protestors against the war were faced by the usual police in riot gear, their ranks augmented by a company of the Ohio National Guard. Perhaps it was the order of a confused parttime lieutenant that caused a volley of rifle fire which cut down four students and wounded many more. National - and worldwide - anger at this senseless slaughter found no satisfaction in the myriad suits brought against the State, the Governor, the National Guard and the police - all were disposed of by the courts with no punishments meted out. Even the arrival of the first troops brought back from Vietnam scarcely dented the anger.

Elsewhere other violence was visited upon us. In the Middle East guerillas of the Palestine Liberation Organization (PLO) hijacked four commercial jet planes over Europe, blew up all of them (more than $60 million scattered to the desert sands of Jordan) but fortunately all hostages were released unharmed. In southern California a shattering earthquake - 6.6 on the Richter scale - brought death to 62 while injuring more than 1,000. Worst casualties (46) occurred at a Veterans hospital in suburban Sylmar.

Spring saw the trial of Lt. Calley for his part in the massacre of civilians at My Lai end in a conviction, a life sentence. Television brought to us Mike Wallace interviewing one of Calley's company describing the cold slaughter of "men, women - and babies". By Presidential order Calley's case was reviewed and his sentence reduced. In March we responded to an invitation by the People's Republic of China to send a ping pong team to play exhibition games in Asia. (We lost, playing this relatively obscure game.)

World aviation was talking up a storm about the prospects for supersonic passenger travel. England and France had jointly pledged over $3 billion to the Concorde, a plane with a flexible nose that closely resembled a praying mantis on take-off and landing. Russia joined the race with the TU-144 with a passenger capacity of 120, slightly more than the Concorde. Here at home Boeing rushed to completion a mock-up of the SST, designed to carry 280 passengers - could we do with less? Congress decided we could and after bitter debate refused funds for building our entry in the international flying machine sweepstakes. Result - we were spared many of the subsequent complaints and embarrassments which have visited the U.S. visits of the Concorde, but it put 8,000 Boeing employees out of work. The battle for landing rights for the Concorde continues with the environmentalists making much of the violence the Concorde would wreak in terms of noise and air polution.

A national scandal erupted with the publication in June by the New York TIMES of excerpts from classified documents about our involvement in Cambodia. The Pentagon Papers were soon the focal point of controversy over the propriety of "leaking" classified material to the public. The U.S. Supreme Court supported the publication of the papers which were soon published in their entirety in a paperback. Daniel Ellsberg, responsible for the release to the papers was vilified and harrassed by the FBI. This led to the creation within the Nixon administration of a covert group to be known as the "plumbers" to plug the leaks of secret government data by whatever means necessary. This in turn was to become a major issue in the beginning disillusionment of many with the activities of the White House staff.

Here in California we had long become inured to tales of prison violence, but we and the country were greatly shocked as we heard and saw a bloody riot in New York State's Attica prison. For four days 1,000 inmates held 32 prison employees hostage, were defeated when a force of 1,500 lawmen stormed the prison, with a death toll of 32 prisoners and 11 hostages.

Bloodlessly came the end of two of our leading picture magazines. LOOK, a longtime competitor of LIFE suspended publication at the end of 1971. Almost exactly a year later LIFE rode off into the sunset after 36 years as our most read picture magazine. Rising costs without corresponding increases in advertising revenues spelled doom for these two mighty print media - each with a circulation in excess of 7 million when they quit. The removal of these two formidable media competitors served to increase television's share of the steadily growing advertising budgets of American business. (There was a new magazine born about this time - Ms. - but it has yet to reach the circulation levels of the defunct picture books.)

The broadcasting industry suffered a major loss in the death in December of 1971 of Brig. Gen. David Sarnoff. Gen. Sarnoff was broadcasting history personified. As a youth he had played a role in the Titanic disaster, monitoring the message traffic from the rescue ships in a 72 hour stint at the Marconi equipment in New York. Rising rapidly to Office Manager of the American Marconi Co. he was immediately in an executive capacity when RCA was formed. His vision of the role radio would play was accurate and he worked tirelessly to realize it. In short order RCA became the dominant figure in the U.S. electronics industry, urged on and driven by Sarnoff. His similar vision of television's future was well realized in his lifetime, sparked

by his confidence in color TV to the tune of millions of RCA dollars expended. When we get around to casting in marble and bronze for a Broadcasting Hall of Fame, David Sarnoff will occupy a well deserved place of honor.

(Quietly, in the relative obscurity of Hong Kong harbor, the beautiful and mighty Queen Elizabeth came to an undignified end. The liner sailed without passengers to Hong Kong to be broken into scrap - but escaped the wreckers torches in an act of immolation. She burned while anchored in the harbor, fortunately with no loss of life.)

The intransigence of the northern Irish vs. the southern Irish has been amply demonstrated over the years. Sporadic fighting between the Irish Republican Army (IRA) and the Protestant population of northern Ireland had been brought to us via sounds of gunfire, pictures of bombed and burning buildings. One of the most violent outbreaks came on January 20th - "Bloody Sunday" - in Belfast. British solders, who had been called in much earlier, accounted for 13 Catholics killed, 16 wounded. In quite obvious retaliation, a mob of 20,000 in Dublin burned the British Embassy three days later. Only recently have we learned that the Irish in this country have been an important source of arms and supplies to the outlawed IRA.

The gates of Red China swung wider in February 1972 when President Nixon visited the country, ending 22 years of isolation from us by the Peoples Republic. The President's entourage included a press corps of 87, including color television crews. Duly televised were the conventional banquets, ballets, gymnastic exhibits and a trip to the Great Wall. Walter Cronkite was permitted a bit of a side tour of an army training camp where he reported witnessing exercises involving artillery drills demonstrating destruction of American tanks. Nixon met with Mao Tse Tung and Chou En-lai for probably innocuous discussions. The Chinese sent a ping pong team to the U.S. to play exhibition games before the UN. (We lost here too.)

Back here the quadrennial quadrille of national politics was getting off to a modest start. Gov. George Wallace of Alabama, campaigning in the primaries in Laurel, Maryland, fell, badly wounded by a shot fired by a disturbed young man. Wallace was paralyzed from the waist down but elected to appear at the Democratic Convention in July and was rewarded with nearly 400 votes - a nice, but quite meaningless gesture.

In May another instance of violence in the Middle East came about when three Japanese terrorists, aligned with the PLO, bombed Lod Airport in Tel Aviv, killing 28 and wounding 70. Retaliation against Libya, the staging area for the guerilla attack, had to wait.

A plush apartment complex in Washington was to lend its name to one of our greatest political scandals. The offices of the Democratic National Committee in the Watergate Building were broken into by five men soon to be linked to the Republican administration. A security guard in the building discovered the break in, called the police who captured the five burglars. (The security guard lost his job, had difficulty getting another.) So began the tortuous trail of evidence of illegal acts participated in by high government officials. The story reached a climax within two years.

The conventions of 1972 saw nothing like the violence which had marked the Chicago convention four years earlier. The Democrats met first, rather badly divided. Sen. George McGovern (Dem., So. Dak.) was nominated on the first ballot and chose as his running mate Sen. Eagleton (Dem., Mo.). Bad luck seemed to dog the footsteps of the Democrats. The day after the Convention Sen. Eagleton revealed that he had spent some time in a mental hospital and withdrew his nomination for the Vice Presidency. Not until August was a new nomination announced - Sargent Shriver, holder of numerous political posts and brother-in-law of the late President Kennedy.

The GOP Convention met again in "safe" Miami and quickly nominated Richard Nixon for a second term. There was some resentment against Spiro Agnew but he was nominated for a second term as Vice President. While TV covered both conventions there was little of the drama and none of the violence which had characterized the Chicago meeting of the Democrats.

But violence was to occur in one of the least likely places. The 1972 Olympic games were played in Munich. Great effort had gone into the preparation for the games in the grounds and stadia, including outstanding television facilities. The games were to produce both heroes and villians. For the U.S., swimmer Mark Spitz garnered seven gold medals, but our basketballl team lost to the USSR by one point in a much disputed ruling of an extra three seconds of playing time allowed by the referee. Russia was the big winner with 50 gold medals to the U.S. 33.

But the real drama came on September 5th when eight Arab commandos invaded the Olympic compound, killed two Israeli atheletes in their dormitory and took nine others as hostages. The price demanded for the release of the hostages was the freeing of 200 Arabs held prisoner in Israel and a plane to take the guerillas out of the country. Sixteen hours later the police ambushed the group on their way to the airport, adding nine hostages and five Arabs to the toll of dead.

On a gentler note, the public was unanimous in its acclaim of a Russian gymnast - 17 year old, 84 pound Olga Korbut.

On the 11th of September Bay Area residents saw the accomplishment of a fifteen year old dream. BART (Bay Area Rapid Transit) began carrying passengers between San Francisco and the East Bay. That the system (only 28 miles open at first) cost $1.5 billion, many times the original estimates, was overlooked by those enjoying swift, comfortable travel beneath the bay in sleek airconditioned cars. Conceived as a fully computerized system, BART soon developed a series of "bugs" which somewhat dampened the original enthusiasm.

Came the Elections in November. Few expected anyting but a Nixon victory resulting from his well orchestrated campaign and the succession of misfortunes experienced by the Democrats. Carrying Illinois early in the balloting the GOP established an overwhelming victory - 46 million voting for Nixon to 28 million for McGovern. This translated into a 521 to 19 victory in the Electoral College (McGovern carried only Massachussetts and the District of Columbia). Richard M. Nixon was duly sworn in for a second term on January 20th with only a faint rumble of Watergate drowned out by the traditional "Hail to the Chief".

The long running peace talks with Hanoi in Paris finally agreed to a cease-fire in January 1973. Earlier there had been much pointless haggling about the shape of the table around which the delegates would meet. The cease-fire resulted in the immediate release and repatriation of many prisoners of war (POWs) on both sides.

The Watergate break-in, simmering on the back burner for a year, began to bubble more actively. Early in February the Senate voted 70-0 for a Select Committee on Presidential Campaign Activities to be chaired by Sen. Sam Ervin (Dem., North Carolina). Quickly it became known as the "Watergate Committee" and it began extensive probing into the break-in, the participants, their motives and their supporters (who became known to be holders of high offices in the Administration). Some of the Committee members were soon to occupy positions of considerable public notice, thanks to TV coverage of the hearings. Sen. Gurney (Rep., Florida) was soon to be involved in a rather ugly suit involving bribery in his home state, Sen. Baker (Rep., Tenn.) was soon to be mentioned as a Presidential possibility in 1980.

A succession of public officials, mostly credible, began to unfold a story of incredible activities on the part of high government figures. Jeb Stuart Magruder, a deputy director of the Committee to Re-Elect the President (CREEP), was among the earliest to reveal some of the financial shenanigans of his group. Major revelations came from John Dean, the President's attorney, on the efforts by the White House to cover up Watergate as a "third rate burglary", with the active participation of the President, via the FBI, to frustrate any real investigation. The witnesses included James McCord, the ex-CIA agent who had participated in the break-in, reached higher levels in the Administration with the details revealed by the President's most trusted assistants, John Ehrlichman and H. R. Haldeman, on up to Cabinet members Maurice Stans, Secretary of Commerce and former Nixon law partner, now Attorney General, John N. Mitchell. The revelation that an elaborate taping system had been installed in the Oval Room of the White House came from aide Alexander Butterfield and the battle for the tapes was joined. The Committee hearings were extensively televised and reached an audience in the first ten days estimated by the A.C. Nielsen Co. at 47 million U.S. households.

Meanwhile, back in the television industry - . In the 1940s Dr. Frank Stanton, President of CBS, inaugurated a company policy of compulsory retirement at age 65. After more than 40 years as a major force in CBS policy and often referred to as "the conscience of the industry", on March 31st Frank Stanton and CBS Chairman of the Board shook hands for the last time as fellow employees. (Paley was 72.)

Among the networks CBS was still the leader in terms of number of viewers, as it had been for more than a decade. High on the list of CBS' leading shows was "The Waltons". This story of a poor Virginia family in the 1920s, based on the life of author Earl Hamner, was a welcome alternative to the spate of cops and robbers, private eyes and violent adventure series that crowded the schedule of television in 1973.

Another echo from the 20s was heard in the death, at age 93, of Rep. Jeanette Rankin. This staunch advocate of women's rights and avowed pacificist had served two terms in Congress - 1917-1919 and 1941-1943. The lady from Montana cast the sole vote against our participation in both World Wars. And rationing was back - usually a wartime measure, now applied to petroleum products to meet the challenge of the Arab nations' refusal to export oil to us.

As if Watergate was not enough of a blow to the Republican party, they now faced another crisis in the trial of Vice-President Agnew on charges of bribery, extortion, conspiracy and tax evasion. By pleading "no contest" to only the evasion of roughly $14,000 in taxes, Agnew was fined $10,000 while his legal costs of some $200,000 were paid for him by W. Clement Stone, Chicago insurance tycoon. Little time was lost before President Nixon submitted the name of Gerald R. Ford, a member of Congress from Michigan, for the Vice-Presidency and Ford was quickly confirmed by the Senate.

Crime figured early in 1974 when Patricia Hearst was kidnapped by members of the revolutionary Symbionese Liberation Army (SLA). The broadcasting media, particularly in San Francisco, kept up a drumfire of reporting about the wealthy young newspaper heiress. An original ramsom demand for $230 million for food for the poor was scaled down to $2 million, which Patty's parents paid. Distribution of the food bought resulted in a near riot. Shortly thereafter Patty was photographed by a bank camera participating in a hold up mounted by the SLA. And the case dragged - curiouser and curiouser - with a small stream of messages from the SLA covertly provided to selected Bay Area radio stations.

A monument of Radio's past moved into history in the Spring of 1973. For nearly 50 years WSM in Nashville had originated the "Grand Ole Opry" from the Reiman Theatre. Now the venerable show was to be heard from a new "temple" of Country Music. In recent times Nashville had established itself as the home of country and western music and a recording industry had sprung up there and become a leading recording center in the U.S. Today it is the Mecca of aspiring talent in the fast growing C&W music cult.

On May 20, 1974 a pioneer among TV newsmen died. Chet Huntley, a top ranking newscaster, with his teammate on NBC, David Brinkley, had first won national recognition covering the 1956 Conventions. Huntley had retired in 1970 to his ranch in Montana and now for the last time the well known sign-off "goodnight Chet, goodnight David" had been given.

In sports a record which had stood since 1935, when Babe Ruth hit his 714th home run, this record was broken in Atlanta by Hank Aaron. Aaron, a good outfielder, had been steadily working his way to the record, tied it, at the age of 40. By season's end his total was 733 home runs and more than 3,000 base hits accomplished during his career.

With the Watergate tapes as the centerpiece of the Ervin committee hearings, President Nixon made a gesture to blunt the impact of the inferences which were being drawn about what the tapes contained. Late in April, with considerable fanfare President Nixon, on television, announced that he was releasing to the Committee transcripts which purported to be full and accurate accounts of the tapes. It didn't work. The Committee insisted that the original tapes be provided. They were and revealed significant differences from the transcripts. To this day in 1977 Nixon is still trying to regain possession of the incriminating tapes.

The Patty Hearst case provided a fiery, bloody sub-climax in mid-May. Traced to a modest house in Los Angeles, six members of the SLA were attacked by a virtual army of the Los Angeles Police Department. In short order the house was riddled with rifle fire, caught fire from tear gas shells and burned to the ground, incinerating all the occupants, including the reputed leader of the SLA, Marshal Cinque. No trace of Patty.

Among the best "ambassadors of goodwill" we have sent around the world, many were musicians and orchestras. In this category two would probably tie for first place in terms of overseas acceptance and enthusiasm - Louis Armstrong and Duke Ellington. But on May 24th, the Duke passed away at the age of 75. He had played everywhere, from the Prohibition days' New York Cotton Club to Westminster Abbey. He first toured Europe in depression stricken 1933. Among his best known compositions in the jazz idiom were "Take the 'A' Train", "Satin Doll", "Don't Get Around Much Anymore", and the best known of all, "Mood Indigo". In his last years Ellington turned to sacred music with jazz overtones, performing his works in the Cathedral of St. John the Divine in New York, Grace Cathedral here and many others.

Fundamentalism, Applachia-style, surfaced in Kanawha county, West Virginia. The local Board of Education had approved 325 texts for school use, bought 96,000 copies at a cost of $400,000 when a religious group objected to some of the books on ethnic, social and religious grounds. The protests spawned shootings, fire bombings and dynamiting of schools, with many a bonfire made of the offending books. Somehow it resurrected visions of brown shirted Nazis burning books in the 1930s!

Another landmark disappeared, probably noticed by very few. About the time we had become resigned to the demise of the Railway Post Office car the last run of a

Highway Post Office truck, intended to replace the vanished railway car - the last run was made at the end of the federal fiscal year, June 30th. Thus did the Post Office hasten the accelerating decline of the delivery of the mails.

High point of the 1974 television season was the award winning play, "The Autobiography of Miss Jane Pittman", closely followed by the excellent "The Execution of Private Slovick". Cecily Tyson played "Miss Pittman" in a virtuoso performance that saw the young actress age from 19 to 110 years, aided by a magnificent assist from the make-up department. And there was a fine one man performance by Henry Fonda as Clarence Darrow.

On the 7th of August the Nixon family posed for a cheery portrait, the last to be taken of them in the White House. Two days later President Nixon went on television to announce his resignation as President. Almost immediately Vice-President Ford was sworn in as President, with Nixon looking on rather benignly. (Shortly thereafter President Ford granted Nixon a full pardon for any crimes he might have committed. Something short of unanimous approval this act of the new President.)

(Television saw the advent of a new character soon to be much copied - Morris the Cat, plugging cat food. Morris' owner published a book - "Morris" - which enjoyed a fairly good sale. Soon we had cats in commercials who apparently had graduated from the Fred Astaire School of Dancing!)

A curtain raiser to the upcoming Bi-Centennial Year was the re-enactment of the Battle of Lexington on the original site with a cast in authentic uniforms and firing blank cartridges. Turning the clock back more than 500 years was the discovery in a church attic of an unknown copy of the original Gutenburg Bible - auctioned for more than $3 million.

Smokey the Bear had appeared on many a television screen for many years pleading for help in preventing forest fires. Smokey had been raised from a cub by a forest ranger and was given a place of honor in the Washington Zoo. In the Spring of 1975 Smokey, at age 25, was retired, probably discouraged in his attempts to be paid residuals!

In the volatile Mid East there came an end at midyear to the eight year closure of the Suez Canal. A procession of ships led by the Egyptian destroyer, October 6 sailed uneventfully through this vital link for seaborne traffic.

Almost a year to the day after his resignation Richard Nixon began talks with David Frost, British TV personality, about a series of televised interviews for release after the 1976 elections. We know now that the agreement provided for Mr. Nixon to be paid $650,000 plus a cut in the profits.

A more upbeat note was to be found in a travelling troupe of young people in a revue "Up With People". Definitely patriotic in theme, the cast of singers, dancers and instrumentalists were all in their early 20s and performed with such verve and conviction that the show was really refreshing. Several companies were organized and "Up With People" toured around the world.

Steadily over the years the Teamsters Union had been increasing its membership, influence and intransigeance. Leading figure in more recent years had been Jimmy Hoffa who had succeeded Dave Beck of Seattle when Beck went to jail for manipulation of union funds. Hoffa stood trial in the 60s for jury tampering, was sent to

prison and pardoned by President Nixon on the condition that he never again hold office in the union. Rumors of efforts by him to stage a comeback in the union came to a grinding halt in the summer of 1975 when he disappeared from his Detroit home - yet is he to be heard from. Foul play has been suspected but investigation by the FBI has revealed nothing on the fate of Jimmy Hoffa.

Television saw another case of a spin-off from a successful series in 1975. Valerie Harper had established a solid place for herself in the cast of the very successful "Mary Tyler Moore Show". Now Valerie was rewarded with a show of her own, "Rhoda", continuing to play the role she had done so well in, along with seasoned trouper Nancy Walker continuing to play Rhoda's mother.

And of course Ireland could not keep out of the headlines. Scarcely a week went by without television bringing the violent scenes of the internecine strife in Northern Ireland. Open warfare was averted only by the presence of British troops which kept an uneasy and often broken truce between Protestant Northern Ireland and the Irish Republican Army (IRA) based in the Catholic Republic of Eire.

In the Fall of 1975, we skirted the edges of another rash of assassinations. President Ford set out to do a little early campaigning for the 1976 nomination and in California twice faced assassins' weapons. September 5th in Sacramento a follower of convicted mass murderer Charles Manson, one "Squeaky" Fromme edged her way through a crowd and aimed a loaded pistol at the President. The gun misfired, "Squeaky" was seized. A couple of weeks later - President Ford was walking from the entrance to the St. Francis Hotel in San Francisco when a most improbable assassin, matronly Sarah Jane Moore, fired a shot at him at close range. The shot was deflected by a bystander, ex-Marine Oliver Sipple, and Ms. Moore was arrested. She was a middle aged, middle class woman, a former school teacher with no activist affiliations. In December, both women were tried, convicted and sentenced to life imprisonment.

The unremitting diligence of the FBI paid off in December when Patty Hearst was captured at a hideout in San Francisco. With her was Wendy Yoshimura, a young woman connected with an arms cache of the SLA. Patty put up a cheerful front originally, corraborating earlier communications from her that she had joined the SLA. Defended by famous attorney F. Lee Bailey we saw the start of many moves to delay court action by any and all devices.

Supreme Court Justice William O. Douglas was appointed to the Court in 1939 and served longer than any Justice in the history of the Court. On New Year's Eve in 1974 he suffered a severe stroke. However he soon returned to the Court apparently resolved to serve through the 1976 elections in order to permit the nomination, hopefully by a Democratic President, of a Liberal to the Bench. Despite rugged health via such hobbies as mountain climbing Justice Douglas felt he could not continue on the Court and retired at 76. An outstanding legal mind and a dedicated liberal was lost to the Court.

From the ranks of academia - Harvard, MIT - had come an outspoken Irishman, Daniel Patrick Moynihan, into the political arena. He had held several advisory posts in earlier administrations and had been Ambassador to India, 1973-75. President Ford appointed him Ambassador to the United Nations where his forthright style found him in conflict, particularly with some of the emerging nations, particularly those from Africa.

While violence continued to be found in much TV fare the militaristic overtones of our society were ebbing a bit. Symptomatic of this was the group of best-selling toys in 1976. Gone was GI Joe and the paraphernalia of war, replaced by "The Fonz", "Cher" and "Mohammed Ali". But WW II still held a fascination for some as witness the auctioning of Herman Goering's armor coated 1944 Mercedes-Benz for $160,000!

The fires of unrest had not cooled perceptibly in Boston. In April, a monster rally broke into violence again. It was still more police to guard more busses, more attacks on students inside and outside the troubled schools - more of just about everything to disturb the staid city.

The preceding month Richard Nixon again emerged into the spotlight. He and his family spent eight days in the Peoples Republic of China. There were many among us who saw in this trip by "private citizen" Nixon the subtle beginnings of a campaign to re-enter political life.

Another honored name among news broadcasters made his last scheduled appearance in May. Lowell Thomas began his broadcasting career in 1929, had been heard regularly on all the major networks in the ensuing years. In his early years he had gained fame as a world traveller and author. Now we had heard for the last time "So long, until tomorrow". At 85 he is still making occasional guest appearances and some TV commercials.

We noted earlier that the U.S. had withdrawn from the race for supersonic passenger aircraft. Echoes of our feelings were heard when the British and the French met with strong opposition to granting rights to the praying mantis-like Concorde. The objections were made on the grounds of violating the environment with excessive noise and needless air pollution. Permission was finally given for regular service to and from Dulles Airport in Washington. The dispute continues to rage - New York will not grant landing rights, Braniff Airways wants the Concorde to serve Dallas.

Election time again and the races in the primaries were off and running. In the GOP the nomination by tradition should go to the incumbent Gerald Ford. But Californian Ronald Reagan campaigned mightily on an ultra-conservative platform. And late in the day California's Govenor Jerry Brown began a whirlwind campaign for the Democratic nomination. More to come.

The mideast was the scene of a truly thrilling event - if we overlook the dead. Airplane hijacking had become nearly epidemic. In July guerillas of the PLO hijacked an Air France jet bound for Israel, forced it to land at Entebbe Airport in Uganda. Deadlines for the lives of the passengers were set contingent on the release by Israel of Arab prisoners. Uganda made no moves to discourage the hijackers, merely made minimal provision for the shelter and feeding of the 258 passenger hostages. Then, on July 3rd Israeli commandos swept into the airport with huge transport planes. Very quickly the hostages were airborne for Israel, leaving behind seven of the hijackers and 20 Ugandan soldiers killed. It was one of the most daring and well executed maneuvers of modern times.

But we had a 200th Birthday to celebrate. Local celebrations had taken place all across the country. Bi-Centennial materials faced us at every turn, up to and including a toilet seat decorated with stars and stripes offered for sale by one patriotic(?) manufacturer and an appropriate Bi-Centennial coffin! But the high point was, of course, July 4th. The Liberty Bell in Philadephia had been moved from Independence Hall to a new shrine nearby and available to more people. It was duly sounded, this time for the world to hear. New York's Statue of Liberty was illuminated as never before by one of the most elaborate fireworks displays ever seen. But probably the most impressive event was "The Parade of the Tall Ships" up the Hudson River. Fifty sailing ships, 16 of them square riggers, from a score of countries around the world, sailed majestically past the reviewing party of President Ford, led by the beautiful USCG training ship, the bark "Eagle".

A somber note was sounded in Philadelphia late that month. The American Legion was holding its annual convention there, headquartered in the famous old Bellevue Stratford Hotel. With no warning, scores were taken ill with a disease that still has not been identified. In all 29 died, there or immediately after returning to their homes, while 150 were hospitalized. As a result of the publicity, the Bellevue was forced out of business.

Came the Conventions. Meeting on Bastille Day (July 14th) after a long and bitterly contested series of primaries the Democrats met in New York and quickly nominated Jimmy Carter with Sen. Walter Mondale (Dem., Minn.) as his running mate. Jerry Brown was well out of the running.

Some events of local and international interest occupied TV in the time between the political conventions. First was the bizarre hijacking of a school bus carrying children from Chowchilla in Northern California to a choral concert. A demand for $5 million ransom was made but very quickly the children were found - in a truck trailer buried in a desolate location - but not before 15 harrowing hours underground. Good police work soon resulted in the arrest of three middle class young men, who as yet (summer 1977) have not come to trial. And we received TV pictures back on earth from our spacecraft Viking I of the planet Mars. Viking II also photographed a satellite of Mars and we are still undecided whether or not there is life on the red planet.

The Olympic Summer Games got under way on July 25th in Montreal. The grounds and some of the buildings were still unfinished and Montreal was in debt $1.4 Billion for the Olympics. Disagreeable squabbles arose. Taiwan refused to compete if Red China was admitted, New Zealand and several African nations threatened to, or did, abstain. The idol of the 1972 games, 17 year old Olga Korbut went down to defeat by Nadia Comaneci of Romania, 14 years old. Once again the USSR won the greatest number of gold medals, the U.S. came in second, while East Germany made a surprising showing.

Back to politics. On July 26th the GOP met in Kansas City, the crossroads of mid-America. A contest to the very end ensued between supporters of Gerald Ford and Ronald Reagan. Ford's cause was scarcely helped by his pardon of Richard Nixon. Reagan supporters made strenous efforts to stampede the convention to the support of their man but they lost by a margin of 60 votes of the 1130 needed for the nomination. Reagan had taken the unprecedented step of naming Sen. Schweiker (Rep., Conn.) as his choice for Vice-President prior to the convention. Gerald Ford won the nomination and confirmation of Sen. Dole (Rep., Kan.) for Vice-President. Ford generously invited Reagan to address the convention following the balloting and Reagan gave a rather vague and somewhat ungracious response.

September witnessed a scandal in the Congress that set off a bit of a chain reaction. Powerful but not very well liked Rep. Wayne Hays (Dem., Ohio) was found to have on his government payroll a curvaceous blonde, Elizabeth Ray, who was an inept typist and clerk but a frequent companion of Hays at various hotels and motels. Hays resigned. Rep. Allen Howe (Dem., Utah) was next to be revealed to have been indulging in some after hours dallying with an employee, was convicted on a morals charge and lost his bid for re-election.

Boston riots again. This time the TV cameras caught the reprehensible act of a demonstrator attempting to spear a black man with the metal tip of a pole holding an American flag.

The Korean Truce Commission at Panmunjon had been out of the news pretty much since the Pueblo incident. Violence flared as American soldiers sought to prune a tree which obstructed a view of the North Korean lines. They were attacked

with shovels and axes and two American officers were brutally murdered. Three days later the North Korean government sent a note of "regret" for the incident.

Here in the Bay Area we were treated to a rather spectacular "happening". Artist Christo Jaracheff's "running fence", a series of nylon panels suspended from a cable was erected all the way across Marin County - 24-1/2 miles. It was on display for three weeks, paid for primarily by the artist, aided by enthusiastic disciples.

At the age of 83 death came to the undisputed leader of China's 800 million people (Red China). Mao Tse Tung had been a communist since the days of the last Empress of China and was the guiding spirit in the "Long March" of the Chinese 8th Army in 1934. This fantastic march saw thousands of followers flee to Shensi province, carrying with them entire factories, to set up a communist regime in Northern China. He lived to see China, a country voluntarily shut off from the rest of the world, emerge as a world power with nuclear capabilities. In his last years very tentative moves were made to court the friendship and trade of the West, while keeping a wary eye on Soviet Russia.

From the start in the news department of WCCO, Minneapolis Harry Reasoner advanced rapidly at CBS as a competent, knowledgeable newsman with a puckish sense of humor. In the early 70s he was wooed away from CBS by ABC for a salary in excess of $200,000 a year. Now, in the Fall of 1976 he found himself sharing the co-anchor spot no longer with Howard K. Smith but with one of the pillars of NBC's "Today" show - Barbara Walters. Ms. Walters, an accomplished "newshen", was offered a contract in excess of $1 million a year to come over to ABC. After the ritualistic "give me time to think it over" Barbara accepted. ABC's hope to unseat Walter Cronkite as the most watched network news personality has yet to be realized.

Another phenomenon appeared on TV. Innovative Norman Lear, with a resounding success in "All in the Family" produced a nighttime soap opera, "Mary Hartman, Mary Hartman". Turned down by the networks, Lear released the show in syndication and soon had it sold to more than 150 stations. It did remarkably well in late evening time.

In September Patty Hearst was finally adjudged capable of standing trial, found guilty of charges of armed robbery and use of firearms. Her sentence - 7 years for armed robbery, two years on the firearms count. Subsequently her sentence was reduced to seven years probation. Charges against her in Los Angeles are still to be tried.

Election night saw victory for Jimmy Carter with a margin of 57 votes in the Electoral College. Among the scattered Republican victories in the Congressional races was that of S.I. Hayakawa over incumbent John Tunney for the Senate seat for California. TV projected the winners of the Presidential race via sophisticated computers at an earlier hour on Election Night than ever before.

1976 had been good to the Stock Market. The Dow-Jones Index of Industrial Stock Prices rose from 650 to just over the much worshipped 1,000 mark. And Cadillac built the last American made convertible - farewell to the "rag top" among American cars!

SUGGESTED OUTSIDE READING

Barrett, Marvin	"The Politics of Broadcasting"
Brown, Les	"Television: The Business Behind the Box"
Cohen, Richard M., and Jules Witcover	"A Heartbeat Away"
Epstein, Edward Jay	"News From Nowhere"
Johnson, Nicholas	"Test Pattern for Living"
Liebert, Robert M., and John M. Neale and Emily S. Davidson	"The Early Window"
Metz, Robert	"CBS - Reflections in a Bloodshot Eye"
Mickelson, Sig	"The Electronic Mirror"
Minow, Newton, and John Bartlow Martin, and Lee M. Mitchell	"Presidential Television"
Newcomb, Horace (ed.)	"The Critical View of Television"
Passman, Arnold	"The DJs"
Polsky, Richard M.	"Getting to Sesame Street"
Sampson, Anthony	"The Sovereign State of ITT"
Schulman, Arthur, and Roger Youman	"The Television Years"
Shanks, Bob	"The Cool Fire"
Small, William	"To Kill A Messenger"

SOME NOTES ON REGULATION OF BROADCASTING

Government concern with the means of communication began early. Probably the earliest evidence is found in the control of, and responsibility for, land communication beginning with the building of public roads by the countries of the Middle East and China, dating back to 3000 B.C. The greatest of the early road builders were the Romans, for one of the reasons we find so often in the development of communication, the use by the military in war. In this hemisphere the Incas built a network of 10,000 miles of roads between 1200 and 1500 A.D. The early Roman roads were frequently made of stone blocks with grooves for chariot wheels 4'8-1/2" apart - the gauge of nearly all railroads today.

Surfaced roads were introduced by a Scot, John Loudon Macadam, in the early 1800s, using crushed rock and a coating of asphalt and tar. The use of many of the roads required the payment of a toll to offset their cost to the governments which built them. Soon there was an office to supervise the maintenance of the "post roads". The advent of mail service, first between Vienna and Berlin in 1576, became a major government operation in this country in 1775 with the appointment of Benjamin Franklin as Postmaster General. The mails became a virtual monopoly of government from this date forward. The government set postage rates, rules and regulations, thus influencing a major form of communication in the early days. Postage stamps did not appear until 1840 in Great Britain, in 1847 here.

The advent of the telegraph as a means of communication was quickly considered to be a government concern in most countries. Here we exercised no direct control over telegraph excepting in wartime. (The Civil War accounted for an increase of several thousands of miles of wire and hundreds of telegraph stations built by the military. Nearly all telegraph operation was under government control and censorship - the reverse side of this massive underwriting of this new medium.) In Europe the Department of Post Roads soon included Post Offices and Telegraph as instruments of government control. At first messages were required to be transmitted to the border of the sending country, carried across the border and sent on by the telegraph system of the receiving country. An organization of European countries - The International Telegraph Union - came into being to facilitate message transmission across national boundaries in 1865. A measure of governmental control was represented here in the requirements of the international treaties. Telephone logically fell within the purview of this organization.

Wireless represented a new problem requiring government action. It was early realized that some sort of international agreements and national control was needed and the scope of the ITU was broadened to include the new medium which was no respecter of national boundaries. The early treaties here agreed on which segments of the electromagnetic spectrum would be assigned to the various countries, which call-letters were to be used.

In this country the first major regulation of wireless was the Wireless Act of 1910. By this law all ships carrying 50 or more passengers of American registry, or calling at American ports, were required to be equipped with wireless capable of sending and receiving over a radius of 200 miles. The sinking of the S.S. Titanic, with a loss of life largely due to the ship's inability to notify the S.S. Californian of her plight (the one wireless operator on the Californian had shut up shop at 8 o'clock in the evening) brought a quick response in this country. Within four months of the Titanic disaster the Radio Act of 1912 was passed. Now it was required to have sufficient licensed radio operators to man the equipment 'round the clock on every ship. Many details of operating procedures were incorporated in this Act, including a requirement that secrecy be accorded

private messages. The Act of 1912 addressed itself primarily to maritime uses of wireless and message traffic between stations.

With the shift in emphasis from code to voice transmission came the realization that the new medium was really a broadcast, rather than a point-to-point message medium. This the 1912 Act never anticipated. The earliest broadcasting stations (KDKA, KYW for example) were assigned ship call letters. In 1920 the rather ill-defined powers of the 1912 Act were quickly shown to be inadequate to regulate the burgeoning new industry represented in the tremendous number of applications for broadcasting stations. Station operators ignored the frequency allocations made by the Secretary of Commerce (who administered the Act through the Department of Merchant Marine and Fisheries), with resulting confusion and interference among stations.

Secretary of Commerce Hoover recognized the need for better, more stringent regulation. In February 1922 he called the first National Radio Conference, attended principally by manufacturers of radio equipment and the modest number of broadcasters. None of the Conference's suggested legislation was passed. A second, third and fourth Radio Conference was called in succeeding years, still to no avail as far as new legislation was concerned. The 1912 Act became increasingly meaningless.

On February 23rd the Congress passed the Radio Act of 1927. Now geared to the realities of broadcasting rather than a message service, the Act established a Federal Radio Commission of five members, each to represent one of the five geographic areas defined in the Act. The Act borrowed from the Interstate Commerce Act of 1887 the phrase "in the public interest, convenience and necessity" to describe the fashion in which a broadcast licensee must operate. The principle of regulation of interstate commerce, implied from Article I, section 8 of the Constitution, was applied to broadcasting principally because no one could prove that any radio signal did not cross state lines.

Coupled with this basic concept of station operation were many regulations relative to licensing - citizenship, equipment, frequency allocation, term of license, etc. Of great importance was the clear statement that a license carried no property right in the frequency assigned. The airwaves are a natural resource belonging to all the people. A concern about monopoly is found in the prohibition of a license to any applicant found guilty of violation of the anti-trust laws, attempting to monopolize the production of radio equipment or broadcasting facilities, or indulging in unfair competitive practises in this area.

Of continuing interest to us today is Section 18 of the 1927 Act which required a station providing facilities to a qualified candidate for public office to provide facilities to all other qualified candidates on the same terms. Recognition of the commercial aspects of broadcasting is found in the requirement that any time or program sold must include on the air identification of the sponsor.

The communications Act of 1934 was New Deal legislation in the first Roosevelt administration, designed to bring under one authority regulation of broadcasting and the other message forms of radio, telephone and telegraph operations. The fashion of regulation of telephone and telegraph facilities was more in the tradition of public utility regulation in that it included jurisdiction over rates charged, valuation of property and requirements to perform services.

Carried over verbatim from the Act of 1927 was the "equal time" provision for political candidates, now appearing as Section 315. The licensing power was reaffirmed in greater detail, along with a new allocation of frequencies. Licen-

ses are granted for three years, but no property right in a frequency accrues to the licensee. Licensees must be citizens of the U.S. and foreign participation in a license may not be greater than 25%. Sponsor identification of all time bought is reaffirmed. Censorship by the FCC is expressly forbidden but all licensees are held responsible for any obscene material broadcast over their properties and are forbidden to broadcast information about lotteries.

The Federal Communications Commission is comprised of seven members appointed for seven years by the President with the consent of the Senate. No more than four Commissioners may be of the party in power. The President designates the Chairman of the Commission. Within the Commission the Broadcast Bureau is of greatest interest to us. It is within this group that license applications are acted upon and rules and regulations promulgated.

In many respects the Act of 1934 resembles the Act of 1927 with an important difference. While the earlier Act had been administered rather loosely by the principally Republican-appointed Commissioners the new Act was New Deal legislation and much more inclined to rigid enforcement of the provisions of the Act.

Applying for a broadcast license involves meeting the requirements of citizenship, the availabiility of a frequency or channel in the desired market. Further, the applicant must demonstrate financial responsibility - enough money to build the proposed station, and to operate it for the first year on the premise of no revenue. This is to insure that licensees will be broadcasters, not speculators. Beyond this, a licensee may not sell his station during the first term of his license.

In the event that two or more applicants vie for a channel or frequency the Commission sets the case for hearing, where the public has an opportunity to be heard. Hearings are presided over by an Administrative Law Judge. The Broadcast Bureau has one of its attorneys present to state the case for the Commission. A Review Board examines the findings of the hearing on points of law and may uphold or overturn the ruling of the ALJ. The litigant who loses before the ALJ and the Review Board can petition for a hearing by the full Commission. Failing here he can take his case to the U.S. Circuit Court, and if still not finding redress here, can eventually apply for a hearing before the U.S. Supreme Court, if any constitutional point is involved. This is his last resort.

The FCC can mete out several types of punishment for violations of its rules and regulations (which have the force of law until successfully challenged in the Courts). Mildest is a letter of reprimand for relatively minor infractions. A bulging file of minor violations or a more serious infraction can result in a fine up to $10,000. If the violation is still more serious the station can be put on a short term license, as, one year instead of three. Finally there is the "economic death sentence" represented in the revocation or non-renewal of a license. Revocations have been few.

A glance at a few cases arising under the FCC regulations may prove illuminating. Freedom of expression is a matter of great concern to broadcasters and is rooted in the First Amendment to the U.S. Constitution. One of the earliest rulings here was the Mayflower Decision in 1941. The owner of a group of stations in New England was challenged for using his facilities to promote political candidates of his choice. The Commission ruled that this was an unethical use of his facilities and broadcast license and banned editorials. In 1949 this stand was reversed with the declaration of the Fairness Doctrine. This action stemmed from cases as in Cleveland where the United Automobile Workers claimed WHKC had denied them time on the air while allowing it to competing or antagonistic groups.

Here in San Francisco in 1946 attempts by a Mr. Scott to air views favorable to atheism from several stations were unsuccessful. Many religious groups were granted time to speak against atheism. Fair treatment of controversial issues was clearly lacking.

Under the Fairness Doctrine licensees are permitted, encouraged, to air controversial subjects, as editorials, but they must seek out speakers for alternative points of view and grant them time. The Fairness Doctrine served as a platform on which to build a case for non-smoking announcements when the Surgeon General of the U.S. labelled cigarette smoking a controversial issue. A compromise was reached wherein stations were obliged to schedule one non-smoking announcement - usually provided by the Heart Foundation, the Cancer Society and other health groups - for every three cigarette commercials aired. This was followed by an Act of Congress outlawing cigarette advertising on the air - $200 million in billing lost to broadcasters. Print media were merely required to carry a statement that the Surgeon General warned that smoking cigarettes could be harmful to your health in all ads for cigarettes. Today broadcasters stand in fear of the Fairness Doctrine being applied to other commodities.

Few FCC regulations deal directly with broadcast revenues. Among those which have, and do, is the ruling in 1940 whereby no station would be licensed which dealt with a company owning more than one network. This effectively divested NBC of the Blue network which had been used as a competitive weapon against CBS. The rationale however, was to prevent concentration of control of the airwaves. More recently the FCC has forbidden stations to carry more than three hours daily of network programming in prime time - a blow to the revenue of the networks (which the FCC ostensibly does not regulate). A direct charge against stations was the recent raising of license fees from a flat $75 to a graduated scale based on station earnings, which reached a maximum of $90,000 for the largest TV stations. These fees have been successfully fought and stations are now suing for refunds.

Indirect pressure is found in such practices as the FCC deeming "over-commercialization" a bad mark against a station at license renewal time. But no standard of what constitutes reasonable "commercialization" is given. Stations are expected to present a schedule of "balanced" programming as an outgrowth of the "Blue Book" investigation of station practises. This includes time devoted to local news, locally produced programs, promotion of local talent, etc. Inferred is programming in the areas of agriculture, religion, education, etc.

Current issues before the FCC include interpretation or possible repeal of the Fairness Doctrine and Section 315. In 1960, by an Act of Congress, Section 315 was lifted temporarily to permit the Great Debates between John F. Kennedy and Richard M. Nixon, without incurring the liability of granting time to the many minority candidates and parties. Cross-ownership, the owning of more than one medium - radio, TV, newspaper, CATV - in the same market, by any one individual or corporation, is being bitterly fought out. Also pressing at this time (1977) are the questions of changing the license term from three years to five, and Congress is looking into the prospects of a re-write of the whole Communications Act of 1934.

From the earliest days of radio there has been a considerable measure of self-regulation by broadcasters. Expressed as the "sense of the industry" there have been Codes of Good Practice since 1928. The Code Authority exists separately from the NAB, charges its own dues. Roughly half of all radio stations and about two thirds of the TV stations subscribe to the Codes. These Codes define limits of commercial time, products acceptable for broadcast, methods of commercial

presentation, guide lines for news and for children's programs, etc. Membership is voluntary, though there is a move afoot to make Code membership a part of NAB membership, which would increase the number of participating stations. However, there are no penalties for failure to observe the Codes other than the loss of the right to use the Code Seal in station promotion.

CATV is the newest area of concern to the FCC. Originally the Commission avoided this medium on the grounds that no part of the electromagnetic spectrum was being used. With the increasing number of CATV systems applying for microwave links, which do occupy spectrum space, and finally Congressional pressure, the FCC now exercises considerable control over CATV. Recently a CATV Bureau was formed within the Commission. First concern here is with technical standards, but questions of the right to carry programs from remote stations have raised new areas of regulation.

Purposely, the role of the FCC relative to telephone and telegraph has been given short shrift here. The impact of these areas on broadcasting and within the purview of the FCC is quite small. Rates for lines charged by the telephone companies to broadcasters and CATV operators is the principal area.

It is necessary to note the impact on broadcasting of some of the other Federal agencies. The Federal Trade Commission with its concern about advertising practises brings it in frequent collaboration with the FCC. All actions taken by the FTC against advertisers are noted by the FCC and all stations alerted to them, although no formal action by the FCC is necessarily inferred. The Food and Drug Administration occupies a very similar position relative to the FCC. The Department of Justice has, on numerous occasions, acted in station transactions approved by the FCC but objected to by the D. of J. on anti-trust grounds. Occasionally the Securities and Exchange Commission acts in concert with the FCC when questions of financial dealings are at issue. The Federal Aviation Administration is required to approve transmitter sites and antennas in licensing stations by the FCC.

This then, is an extremely brief examination of the role of government relative to broadcasting. Any one of the items mentioned could occupy one or more lectures. Many of the lesser issues have been omitted entirely. For further information in this area these books are recommended for outside reading:

Emery, Walter B. - "Broadcasting and Government"
Kahn, Frank J. - "Documents of American Broadcasting"
Smythe and Mastrolianni - "Issues in Broadcasting"
Lichty and Topping - "A Source Book on the History of Radio and TV"

SOME NOTES ON BROADCAST NEWS

In the beginning, Radio was NEWS. Today, news is RADIO for scores of stations (all news) across the country.

Early radio saw no important place for news - the emphasis was on getting the human voice over the air via phonograph records, chatter between experimenters. But the role of radio in news came about soon, if not overwhelmingly.

As early as 1915 an experimental station at Tufts college was regularly broadcasting news - for the ships at sea. In 1916, Dr. Lee DeForest broadcast the presidential election returns - courtesy of the New York AMERICAN and announced Charles Evans Hughes elected (not contradicted until the following morning, when the final returns from California tipped the scales in favor of Woodrow Wilson). 1917 saw station WHA University of Wisconsin, offering news and weather reports for the farm audience (unfortunately - still in Morse code). By consensus we are pretty well agreed on 1920 as the starting point for radio broadcasting. At least two stations vie for the honor of being on the air first and with news. WWJ (then 8MK), owned by the Detroit NEWS, aired the results of the Detroit primary elections on August 21st. The newspapers had plugged the broadcast in advance and requested listeners to send in any more recent returns than the station had at 8 p.m.

But most agree that the honor belongs to KBKA (originally 8XK) for its broadcast of the Harding-Cox election returns on November 2, 1920, if for no other reason than the Westinghouse station had been granted a broadcast license for commercial operation on October 28th, assigning the call letters KDKA (a ship call) to replace the experimental call letters used earlier by Dr. Frank Conrad. Again the source of the election returns was a newspaper - the Pittsburgh PRESS.

This early we will do well to define news a bit. News has embraced sports, weather, commentators, documentaries, in the evolution of the broadcast media, and Sports were early on the scene. On July 2, 1921 a broadcast of the heavyweight championship bout between Jack Dempsey and the French contender, Georges Carpentier, was aired over WJZ, New York.. Actually, it was a relay of information by telephone from a man at the ringside to an announcer in the radio "studio", (the dressing room of the Pullman porters in the railroad yard adjacent to the stadium). Part of the gate went for relief for war torn France, and notables, including Franklin D. Roosevelt, made appeals for contributions during the broadcast.

In October of that year, a similar relay coverage was made of the World Series, (N.Y. Giants 5, N.Y. Yankees 3). And news became a regular item of the fare of WOR, Newark, via resources of the Newark, N.J. CALL-NEWS. By 1924, the wire services had been won over to the extent of supplying their services to radio stations in return for a credit line over the air.

Commentators were early on the scene. A pioneer was H.V. Kaltenborn, a columnist for the Brooklyn DAILY EAGLE. Accustomed to the latitude accorded newspaper columnists, he soon ran afoul of the restrictions of broadcasting. A broadcast criticizing some Washington politicos resulted in pressure on the station to take HVK off the air for a while. Sponsors were particularly cautious about him even though WEAF was offering his program at a price of $10 a minute. Broadcast radio performed a valuable function in a criminal act in 1933. The son of Dr. Alexanderson, a prominent engineer at General Electric, was kidnapped. News accounts, describing the boy and his captors were heard by an upstate New York motor court operator who reported he believed he had criminals as guests. Police closed in - to a happier finale than the later world known kidnapping of the son of Col. Charles A. Lindbergh.

Approaching the halfway mark of the decade of the 20s, radio moved into the area of interconnection - primitive networking. In June 1923, Warren Harding spoke over a small network on the subject of the World Court (he was for it, against the League of Nations). On November 10th, Woodrow Wilson made his last public speech over a limited network (he was for the League, and very soon was to die). Four cities - New York, Schenectady, Washington and Providence could hear his last public words).

1924 brought the quadrennial tribal rite of the national political conventions. New to the people (those who had radios) were the proceedings of these solemn(?) deliberations. They were treated to a spectacle (aural) of 103 Democratic ballots, each heralded by "Alabama casts 24 votes for Oscar W. Underwood". The Republicans had less difficulty - Calvin Coolidge was a shoo-in.

Radio blazed a new trail in news coverage (soon to be smothered by the American Bar Association). Dayton, Tenn. was the scene of one of the landmark trials in American law. At issue was the right of a high school teacher - John Scopes - to teach the theory of evolution. A Tennessee law forbade the teaching of anything but the theory of "special creation". First rank legal talent - William Jennings Bryan, Clarence Darrow, Dudley Field Malone - appeared in this court battle of Fundamentalism vs. Science. WGN, Chicago, arranged to carry the complete proceedings for its audience at a cost of $1,000 a day for telephone lines. (Canon 35 of the ABA recommending the exclusion of broadcast gear from court trials and legislative proceedings was not to be formulated until 1937.)

Outspoken H.V. Kaltenborn was finally signed to a continuing series of broadcasts by CBS (two quarter hours a week, for $100 a week). Still no sponsors for HVK in 1930. But a year later saw an innovation in news broadcasting - The March of Time, produced and sponsored by TIME magazine. A skilled cast of performers dramatized the highlights of the week's news, announced by sepulchral voiced Westbrook VanVoorhees, sounding like the voice of Doom itself.

The initial broadcast was concerned with the re election of "Big Bill, the Builder" Thompson in Chicago. He ran on a "Keep King George III out of the public schools" ticket! While today, and since World War II, we have held the news broadcasts of the BBC in high esteem, they were not always so objective. American listeners found them pompous, pedantic and rather slanted toward the government's views. No British listeners learned anything of the great movement by Mahatma Ghandi at this time.

In this country a great stride toward the humanizing of the news occurred in 1933. President Franklin Roosevelt had used the technique of the "Fireside Chat" in his campaigning for the governorship of New York. Now, to a greatly enlarged audience, he brought simple, forthright explanations of his policies - the New Deal. During his first half year in office, FDR addressed "My Friends..." on four occasions, each serving to instill confidence in a population wracked by doubts.

While radio had been pretty much tolerated by the wire services - AP, UP and INS - there had been early friction with the newspapers. The radio newsmen were rarely trained in newspapers and their practices. In 1922, they got in trouble by airing a Harding speech earlier than the designated release time - something no newspaper would dream of doing (or only once!).

A decade later the impact of radio on the advertising revenues of newspapers was sufficient to start a movement against the upstart medium. Up to 1933 newspapers had given space freely to radio to plug shows and talent while program logs of radio stations had become a standard, and well read, section of most newspapers.

Now a move was started to charge stations for the space used for program listings. There was an element of conflict of interest in all this. In 1923 there were 69 radio stations owned by newspapers, among them WDAF (Kansas City STAR), WWJ (Detroit NEWS), while full radio supplements were printed by such New York papers as the GLOBE, EVENING MAIL, the Chicago NEWS, Milwaukee JOURNAL and many others.

The real crunch came in 1933. Newspapers tried to prevent radio stations from using the papers' accounts of stories. A qualification for a radio announcer in those days was his ability to paraphrase a newspaper story sufficiently as to disguise its source. Finally the newspapers forced the wire services, which looked to them for support, to deny their material to any radio station.

Anticipating such a move, several regional groupings of stations were formed to exchange news in their markets. (Such groupings, usually on a statewide basis, are surfacing again today.) From here it was but a short step for the networks to enlarge their news departments and look to their affiliates to supply them with a reasonable national coverage. Overseas bureaus - Reuters in England, Havas in France, and (unfortunately) DNB, Hitler's lackey press in Germany - were available for some measure of international coverage.

Soon the warring parties got together. By agreement, the Press-Radio Bureau was formed to serve radio. It was a rather limiting arrangement for radio. The wire services agreed to provide two 5 minute newscasts a day, no single item to be longer than 30 words. Sponsorship of these newscasts was forbidden. But an immediate and obvious loophole existed in these arrangements. The newspaper-owned stations, overtly or covertly, had made available to them the full wire service reports by their newspaper owners, in many instances for competitive reasons. By the time World War II arrived, a satisfactory peace had been arranged between the two media. The wire services accepted radio stations as full members, with no restrictions on sponsorship and copy written to be spoken rather than read. It was a self-liquidating project.

Meanwhile radio was developing its own style of reporting. Extensive on-the-spot coverage of catastrophies, as the Ohio Penitentiary fire, the entrapment of Floyd Collins, the Hindenburg disaster, had carved a new and important niche for radio as a news medium.

Anticipating the impending war in Europe, both CBS and NBC had started toward a goal of having their own overseas correspondents. In 1937, H.V. Kaltenborn scored a journalistic "beat" by broadcasting live from the front lines in the Spanish Civil War. Radio had by now made feasible overseas broadcasts on a reasonably reliable schedule. At CBS a former UP editor was made News Director. Paul White quickly availed himself of a fortuitous circumstance in having a great, though yet untried, newsman in Europe - Edward R. Murrow. Murrow's original assignment had been to arrange exchange broadcasts with the BBC for the CBS American School of the Air. Soon he was recruiting newsmen for CBS in all the potential trouble spots in Europe - Wm. L. Shirer in Berlin, Charles Collingwood, Howard K. Smith, Eric Sevareid, Cecil Brown, Larry Leseuer, Joseph C. Harsch and many others. NBC, under the guidance of Abe Schecter (an ex-promotion man) similarly recruited outstanding reporters in Europe.

While these reporters were poised to cover all aspects of the impending war, a concern was growing over the role of "commentator". The division between "news" and "opinion" was being drawn ever more sharply. CBS opted for a new title, "analyst", and insisted that its personalities in this area give only background on news events, based on their own experience. Unsupported opinion was frowned upon. There remained a few borderline cases, like Walter Winchell, who were

little hindered by the increasing restrictions - and played to increasingly large audiences.

Formal recognition of this problem cane about somewhat tangentially in 1941 with the Mayflower Doctrine. In this case, John Shepard III, owner of several New England radio stations, had vehemently campaigned over the air for candidates of his choice. The license for his Boston station, WAAB, was challenged by a group, the Mayflower Broadcasting Corporation. The FCC proceeded to pronounce the "Mayflower Doctrine", declaring that a station licensee was not operating in the "public interest, convenience and necessity" when he used his facilities to promote his personal views. Editorializing was out - until 1948.

Our involvement in World War II had a great impact on U.S. broadcast news. We might stretch the definition of "news" to include the use of the radio medium to give currency to basic principles of our government. On December 15, 1941 was broadcast one of the first full scale documentaries aimed at reiterating these principles - "We Hold These Truths...", carried on all networks. Of more immediate impact were the government moves in the area of censorship. First, as long provided by law, all amateur transmitters were ordered closed down. To combat espionage all quiz shows were carefully screened to ensure that all contestants were incapable of conveying information useful to the enemy by means of questions used or answers given. The March of Time voluntarily submitted all scripts to the government office of censorship for scrutiny. Even free-wheeling Walter Winchell submitted to pre-broadcast examination of his "scoops".

News, direct by shortwave from the news scenes of the world became commonplace. The major networks scheduled such "round-ups" twice a day - many of them still subject to censorship at the source. And, since they were live, there had to be a 4 a.m. origination in London to play to early morning audiences here. News took on a new significance to American listeners as they heard first hand reports from Cecil Brown of the sinking of HMS Prince of Wales and HMS Repulse in the South China Sea, Edward R. Murrow describing an air raid on London from an exposed position on a deserted street, Eric Sevareid describing his parachute jump from a cargo plane over the Himalayas and the subsequent days of travel on foot struggling through the jungle to the Allied lines.

Probably the greatest achievement of wartime news here was represented in the creation of an "official spokesman" - Elmer Davis, reporting nightly to the U.S. audiences on the day's events in the war. Davis was quickly accepted for his impartiality and his veracity. His Iowa speech and his reporting of the war in all its phases - warts and all - accomplished in 5 minutes each night, made Davis a national figure almost immediately. Commentators were quick to assume the role of "analysts". Military experts surfaced quickly - George Fielding Elliott, Henson Baldwin, Capt. Liddell Hart in England, became oracles on the progress of the war.

"Pooled" coverage (one reporter for all four networks) gained ground as network rivalries were set aside in favor of completeness of news coverage - and to meet military restrictions. D-Day found George Hicks, ABC, on board the invasion command ship Ancon reporting for all networks, all America. Not that individual reporters did not have their day. Edward R. Murrow's flight in a bombing plane over Berlin, his description of the conditions at the concentration camp at Buchenwald were virtuoso performances, bringing us face-to-face with the ugly realities of war, all done in magnificent prose - words alone, no pictures.

The dual ends of the war - V-E Day and V-J Day - were covered elaborately and joyously. The celebrations in the cities of the Allies were broadcast for hours, a thousand New Year's Eves telescoped into a single outpouring of joy and relief.

Radio took us to the schoolhouse in Germany to witness the surrender of the Nazis and to the decks of the USS Missouri in Tokyo harbor to hear Gen. Douglas MacArthur read the terms of surrender to the leaders of Japan.

A brief footnote here in the area of biased news. During the war a rather discordant note was sounded over the several broadcasting stations owned by G.A. Richards. Here, arch-conservative, anti-New Dealer Richards had set news policies for his stations in Detroit, Cleveland and Los Angeles which flagrantly abused the principle of objectivity so earnestly being sought by all responsible broadcasters (and they were the vast majority). He was violently anti-semitic, insisted that any item about Eleanor Roosevelt appearing on the air be bracketed by items about communism, forbade any mention of President Truman by name, etc., etc., etc. Charges were brought against Richards in the courts and before the FCC for biased presentation of the news. Unfortunately, Richards died before any case could come to trial, denying us an opportunity for a landmark case in this area.

With the end of the war came television - with a rush Radio started downhill - first a dribble, then a cascade. New radio stations were licensed by the score. Advertising revenue for radio failed to keep pace with the increasing number of stations. Operating costs were slashed right and left and to the bone, and one of the early casualties was news. The network news departments continued to function but on a reduced scale. Individual stations reduced their news departments - many to the vanishing point. Once more it was the duty announcer who handled the small station's news - rip and read. While the total number of minutes of news on the air increased, the duration of the news broadcast diminished. Stations went to formats scheduling 5 minute news every half hour, few newscasts were longer than 5 minutes. Locally, the commentator (or analyst) became an endangered species. The tape spewing forth from the wire service tickers was chopped and pasted into about 3 minutes of already truncated news, enabling these radio stations to play a part in the news function, but in a very low key.

Television set out to be the "window on the world" for its burgeoning audiences. At first, pictures of anything that moved were legitimate "news". Any sort of pre-announced event was covered - parades, billiard matches, strikes, and even a few unscheduled events of long enough duration and sufficiently convenient to the TV equipment, as the burning and capsizing of the S.S. Normandie at her pier in New York. Studio productions were quite stilted, using a few charts and maps, some still photos and an announcer reading basically radio copy. None but the networks and the largest stations boasted 35 mm projection equipment to enable them to utilize newsreel film. NBC contracted with Fox Movietone News for film coverage, CBS made a similar deal. But the lead time involved here made the news fairly old by the time it hit the air, a far cry from radio's immediacy.

In the news documentary, TV found an important place quickly. Without the pressure of time value in spot news, the new medium could cover elaborately and compellingly the important issues of the times. Murrow made the transition from radio to TV quite readily. His "See It Now" series was a logical follow up to the radio series "You Are There" as historical documentaries. The human side of the news was well served by his "Person to Person", informal visits with prominent people, competently interviewed by Murrow from his own living room. He presided over the first trans-continental broadcast, showing on a split screen the Atlantic and the Pacific oceans simultaneously. When the trans-Atlantic satellite was inaugurated, it spread the canvas available to Murrow to now include Europe in his "People to People" series which aimed at a better understanding among the people of the two continents.

Quickly TV changed to 16 mm cameras for news coverage. With the flexibility thus gained over the more bulky movie equipment, networks could now go farther afield,

faster and cover spot news nationally and locally. News departments expanded beyond the limits radio had known.

Documentaries assumed a new and important place in TV. Murrow opened up new areas for investigative reporting with his "The Case of Lt. Radulovitch" in which he exposed bias in the Air Force in the dismissal of the lieutenent because of alleged communist leanings of his father and sister. Soon to follow, in March 1954, was his classic expose of the evils of the tactics of Sen. Joseph McCarthy. A month later elaborate TV coverage of the Senate hearings on the charges by McCarthy of communists in the Army broke the spell that McCarthy's witch hunt for communists had cast over many Americans. (Pollster Elmo Roper found that even during the time of the hearings 33% of the population backed McCarthy's views and actions!)

For the next few years the big news in this country was Civil Rights. Elaborate coverage was given the integration of Little Rock High School and the successful efforts of Rev. Martin Luther King in boycotting the segregated transit system in Montgomery, Alabama. These were among the highlights. Network news coverage was expanding geographically with more news teams located at strategic points around the country, capable of covering quickly any news event within a few hundred miles of their bases.

News events multiplied along with the expanded coverage. On the international scene the confrontation of Vice-President Nixon and Prime Minister Nikita Kruschev was covered live and spawned lively comment in the summer of 1959. Russia again sparked the news with the U-2 incident, when they downed a U.S. spy plane and captured pilot Gary Powers. There was much confusion, denial, counter denial, confession - involving the highest government officials, including President Eisenhower. As political news it was front rank, the incident leading to the cancellation of a summit meeting of the President and the Soviet Premier.

A major change in the emphasis in broadcast news came about in 1963. Up to this time the evening network news had been scheduled fifteen minutes in length, usually followed by a local news, weather and sports show of the same duration. Almost simultaneously the networks shifted to a half hour format, presenting their affiliates with the option of increasing their local news to thirty minutes or finding some satisfactory quarter hour show to round out the hour. Quickly the affiliates elected to use the half hour format for their local offering and viewers now had a solid hour of news to digest at meal time. A trend toward greater news coverage set in and soon local stations were programming an hour of local news, usually bracketting the network news. KCRA-TV in Sacramento was an early and very successful practitioner of this one hour of local news.

In radio, news increased steadily in minutes on the air, stations vying with each other to offer "news on the hour", "news at the half hour", "news every quarter hour", "the only news at 17-1/2 minutes after the hour", etc., etc. Offbeat times were frequently chosen just to occupy a unique position on the clock relative to competing stations. Soon the "All News" format appeared. The term is not to be taken entirely literally since the news broadcasts are usually interspersed with short features, documenteries, man-on-the-street interviews, etc. The role of the radio networks was rapidly narrowing to one of being primarily a supplier of national and international news and commentary, major public events, etc. The larger radio stations (whether "All News" or not) expanded their news gathering facilities and featured increased coverage of local sports, traffic advisories via helicopter during "drive time" and generally more fully mirrored their communities.

News coverage began to acquire a series of legal difficulties, and some relaxation of restrictions. President Eisenhower permitted the first TV coverage of a Presidential News Conference (on film) in 1955 - today this is old hat. In the 1960

election campaign, Section 315 of the Communications Act of 1934 was suspended by an Act of Congress to permit four "debates" between candidates Nixon and Kennedy (no other candidates could demand equal time during this suspension of Section 315). Not until the 1976 campaign have the candidates been willing to risk this kind of coverage.

High on the list of difficulties dogging broadcast news was the increasing number of complaints filed under the Fairness Doctrine. This policy was a complete reversal of the Mayflower Doctrine in that it requires stations to air controversial subjects and to seek out and provide time for alternate points of view. The complaints ranged from failure to present alternative views on a nutritionist program, a nuclear test ban, a campaign to discourage voting in a local election to a whole melange of cases involving personal attack (usually on and/or by a politician), "staged" news, as with the case of WBBM-TV presenting a documentary on marijuana, ostensibly filmed at a "pot party" on the campus of Northwestern University, which caused an uproar of no mean proportions. CBS' "Selling of the Pentagon" stirred up a hornet's nest of opposition from the Defense Department for alleged manipulation of quotations of Army officers and generals slanting to the disadvantage of the Pentagon. A classic case, revealed in the revocation of a station license came about in the Red Lion case where the station was accused and found guilty of violation of the Fairness Doctrine in presenting predominately right wing points of view and denying the airing of alternative viewpoints (1969).

The 60s saw a succession of events of national and international consequence covered by broadcasting in a most dramatic fashion. TV coverage of the war in Viet Nam brought home to Americans an increasing understanding of the futility of war - especially this one. By the time color TV was to be found in a majority of American homes, the family dinner group was treated to the sight of blood rare steaks accompanied by bloodied combatants and non-combatants a world away - in "living color" via satellite.

Most dramatic and shocking was the assassination of President Kennedy on November 22, 1963. TV had covered the President's arrival in Fort Worth that morning, the progress of his motorcade through the streets of Dallas in the afternoon - but missed the scene of the actual shooting. Radio, understandably, filled the air with bulletins more frequently than did TV. Two days later TV was on the scene in the basement of the Dallas Police Headquarters when Lee Harvey Oswald was shot to death in the midst of a guard of Dallas' Finest! The nation went into instant mourning on the death of President Kennedy, broadcasting cancelled all commercials for three days. Coverage of the funeral was complete and moving. (A similar silencing of commercials had been observed on the death of FDR.) We were to enjoy a five year respite from assassinations, until 1968 when Dr. Martin Luther King and Sen. Robert F. Kennedy fell to assassin's bullets.

TV coverage in the 50s and 60s included major investigations by the Congress. In addition to the Army-McCarthy hearings the broadcast media included extensive coverage of the Kefauver Crime Commission investigation, much of the proceedings lending to the censure of Rep. Adam Clayton Powell, inquiry into quiz show "rigging", and many others.

The greatest technological breakthrough in the 60s came with the coverage of the manned space vehicles with two-way radio communication and actuality TV, climaxed with the Apollo 11 flight to the moon, complete with color TV transmissions to the earth. Interestingly, the color equipment used on Apollo 11 was a field sequential system, virtually abandoned by the industry in 1948, but ultimately proving its great advantage in color fidelity.

News cameras have been reduced in size until today we have the color mini-cams with the capability of on the spot coverage via a camera readily carried and operated by one man. The use of satellite relays has expanded greatly until today we are frequently witnesses to world events when they are happening (or with only a few hours delay to accommodate local time). A far cry from the coverage of the dirigible Hindenburg disaster!

The theatre newsreel services did not long survive the advent of TV. While a mainstay for pictures in TV's earliest days, they soon yielded to the still photograph services of the press associations. Soon came the worldwide film services set up by the networks themselves, often in collaboration with local facilities in the various countries. Most recently we have seen private companies offering worldwide service to independent stations. There remain exchange facilities with TV in other countries - BBC in England, ORTF in France, RAI in Italy, to name a few.

Beginning in 1959 polls of U.S. attitudes toward various news media have been conducted by the Roper Organization. Response to the question - "Where do you get most of your news..." was analyzed in terms of those who named a single source of news -

	1959	1976
TV	19%	36%
Newspapers	21%	21%

Clearly the most recent of the electronic media has established itself at a high level of public acceptance in America today.

SUGGESTED OUTSIDE READING

Effron, Edith	"The News Twisters"
Epstein, Edward J.	"News from Nowhere"
Kaltenborn, H.V.	"It Seems Like Yesterday"
Kendrick, Alexander	"Prime Time"
Mickelson, Sig.	"The Electric Mirror"
Small, William	"To Kill A Messenger"

AUDIENCE RESEARCH AND MEASUREMENT

Historically, broadcasting has been concerned with these principal dimensions of the listening/viewing audience -

WHERE? the geography of the broadcast audience, generally referred to as "coverage".

HOW MANY? the size of the audience to a station, a network or an individual program, generally referred to as "ratings".

WHO? the makeup of the listening/viewing audience in terms of the number of men, women, teens and children, generally referred to as "audience composition".

WHAT KIND? more detailed data on age, sex, family size, economic status, etc., generally referred to as "demographics".

WHY? pre-testing program content to learn the likes and dislikes for component parts of programs, generally referred to as "program analysis".

The "where" of the radio audience was first estimated from the unsolicited mail addressed to the various stations and programs. Innumerable attempts were made to find a magic formula which would make it possible (and defensible) to say that for every listener who wrote a letter to the show there were "x" number of additional listeners who failed to write. These attempts came to naught. The most forthright expression of early mail returns was to identify each letter by county of origin and prepare a map showing the total of the mail received from each county.

This procedure failed to take into account such variables as size of county (the large county should show more mail than a small one, if the volume of listening was equal); the tendency of people in small towns and on farms to be more inclined to write letters than city folk (people in the largest cities are the worst offenders here); and the obvious factor of the level of literacy in various parts of the country (a Louisiana back-country parish vs. Marin county).

Some of these shortcomings were surmounted. First, it was easy to wash out the differences due to county size. All that was needed was to consider the number of radio homes in each county and express the mail as a fraction of that number. For example, if you received 50 letters from a county with 5,000 radio homes you had a return of 10 letters-per-thousand radio homes. In an adjacent county with only 1,000 radio homes a return of only 10 letters would yield the same index - 10 letters-per-thousand radio homes. But there was no way that literacy and writing habits could be allowed for. However, one could now draw a map which showed rough levels of audience concentration. Taking the "home county" letters-per-thousand as "par" (which assumed that everyone in that county could hear the station) all other counties could be related to the "home county". The practice was to term all counties where the letters-per-thousand index was at least half as good as the home county's - these counties were designated the Primary Listening Area of the station. Where the return was 25%-49% as good as the home county the designation was Secondary Listening Area, while at the level of 10%-20% of the home county return was called the Tertiary Listening Area.

Still more improvements were needed and found. In 1937 CBS inaugurated a series of controls in audience mail surveys which helped. First, they arranged to solicit mail to every affiliate by offering a single inducement to write in. The offer had to be something of as nearly universal appeal as possible and with no real intrinsic value, to discourage any household from writing for more than one of the items. (One year they offered a booklet, "A Trip Through Radioland", handsomely illustrated.)

Each CBS affiliate was to air the same number of announcements of the offer, half at night, half in the daytime. All mail received by the station in response to the offer was sent, unopened, to Price, Waterhouse, a New York firm of accountants. Here each letter was identified by county according to the return address and the arithmetic of computing letters-per-thousand radio homes was done and the results sent to CBS for mapping.

In 1941 the entire direction of research was reversed. Whereas up to now radio had waited for the audience to respond voluntarily, the new approach was to seek answers about stations listened to from a sample of homes addressed in every U.S. county. A research company skilled in mail surveying was given the assignment of mailing more than 300,000 ballots to families in all the 3,072 counties in the U.S. An inducement to return the ballot was included and a system of follow-up letters was used. The nationwide response was over 80% of the original mailing list. Now it was possible to analyze not only one's own affiliates but the competition's as well. This technique continued in use for radio, and early TV coverage studies into the middle 50s. Subsequent studies in TV have relied on field work done for program rating surveys, and we will look at them next.

The "how many" of the radio audience was the next problem for broadcasting research. Audience mail had never given a valid size measurement. Now advertisers, networks and stations wanted to have estimates of the size of the audiences reached by individual programs.

The earliest technique limited itself to estimates of the audience to networks, which comprised a majority of the affiliates' operating hours and accounted for a major part of their revenues. And better than three out of every four stations on the air was an affiliate of a network in the early 30s. The CAB, or Crossley reports, were based on telephone calls made in 32 major U.S. cities, in a sample not adequately weighted by size of market. Interviewers inquired about all listening done in the home during the entire preceding day. This introduced a considerable bias in favor of the big name shows, to the detriment of the lesser known ones. "Ratings" were the percentages that the mentions for each program represented among those homes where some listening had been reported for the preceding day. This introduced an inflationary bias and resulted in what was really a badly skewed popularity poll among shows. Strong backing by the Association of National Advertisers kept the reports going long after more accurate methods had been devised.

Almost as old as the CAB unaided recall technique is the telephone coincidental survey. Here interviewers are assigned random telephone numbers to call while the program or time period to be studied is on the air. Calls resulting in a "busy" signal, or where the phone is answered by a child or someone unable or unwilling to be interviewed do not enter into the calculations. A "no answer", after 6-8 rings, is counted as a home where the radio is off. Other numbers called can result in an answer "we were not listening when you rang" - radio off. If there was listening going on the respondent is asked to tell the station and program being heard. Numbers are called consecutively at an average rate of one number dialed per minute by each interviewer. Industry practice has been to accept a sample of 300 dialings as the minimum for any program or time period being measured.

While this technique makes few demands on the interviewer and offers him few opportunities to gum up the works there are some considerable drawbacks to the telephone coincidental.

A "national" rating service was established by C. E. Hooper in the mid 30s. The coincidental was used and 30 major U.S. cities were in the sample. As with competing CAB there was no adequate weighting of the cities involved. Monthly reports were published on network programs only.

The coincidental technique used up telephone numbers at a very rapid rate, hence only the largest cities could be used. The surveys were further limited to just telephone homes in those cities. So we find ourselves missing all families without telephones and the large numbers of calls required per day limited us to the largest cities. Small towns and farms were too costly to reach to be included in this nationwide sample. And the hours that could reasonably be surveyed were limited to roughly 8 am to 10 pm.

Radio was still far short of its goal of a good measurement of audience sizes, but Hooper did introduce a new concept. Up to this point all "ratings" were limited to U.S. findings for network shows. Hooper's sample in any one city in any one month was pretty small. He hit on the idea of accumulating the sample in each city for three to five months and then publishing a separate report for each city. In most markets he published an October-February and a December-April report. These findings on individual markets soon came to be a major tool in the buying and selling of National Spot time.

In time - by the 60s - the Hooper reports were limited to radio only and then largely on a custom order basis. Another radio survey called the Pulse surfaced in the early 40s, designed to compete with Hooper in the individual market field. This survey employs personal interviewers who use a roster of the programs on the air to aid the respondents in their answers. Generally speaking, Pulse is today limited to use by small stations, usually in small markets.

A mechanical device which could record when a radio set was in use had been developed by Frank N. Stanton for his doctoral dissertation in the early 30s. When he became Director of Research at CBS in the mid 30s he dropped any further development of the device and by 1940 the A. C. Nielsen Company had obtained rights to the device. They developed an "Audimeter" which, when attached to a radio set would record on a calibrated tape when the set was used and which station was tuned. The Nielsen device could operate in any home which had a radio and electric power - no telephone was needed. Today all 1200 audimeter equipped homes are connected by leased telephone lines to a central computer of the Nielsen company, permitting much more rapid reporting than when the tapes had to be mailed to the Nielsen headquarters.

So, Nielsen measures in a sample which includes a truer cross-section of radio homes - big cities, small towns, farms - and measures listening in them 24 hours a day, 7 days a week, without the possibility of interviewer bias. Here are figures projectable to all radio homes in the areas served by the stations of the networks' programs. Now it is possible to compute a reasonably reliable "cost-per-thousand" (CPM) homes reached. But the technique is still too costly to use anything but a "national" sample. Hooper continued to be the by-word in ratings in individual markets until the 50s.

In 1941 a technique was developed which could parallel the types of data available from the Audimeter but at a cost reasonable to allow its use for individual market studies. The Listener Diary was satisfactorily tested in 1941 in a comparison with Nielsen Audimeter findings. It involved mailing to a sample of homes throughout the service area of a station a simple diary in which to record the family's listening for a week. This went a step beyond Nielsen in that it was possible to obtain data on which individuals were listening. This proved to be a valuable tool in selling time on radio stations at hours when the coincidental could not be used (early morning, late evening), and now represented the listening among remote farm families listening to the high powered stations.

In the early 50s the Diary technique was applied to measure TV audiences. Pioneer here was the American Research Bureau (ARB) now known as Arbitron. They started with a metropolitan area sample at first, in just those markets where they could

get subscribers. In 1959 they set out to sample every U.S. county and publish market reports for more than 200 markets. Soon ARB enjoyed an acceptance as a local market measurement as had Hooper some years earlier.

Nielsen moved into the area of TV audience measurement using an improved Audimeter. Today this device need no longer have a physical connection with the set being monitored, making it possible to measure the viewing of multiple families in apartment housing. The Audimeter remains too costly to use on any but a national basis. The national Nielsen Television Index (NTI) continues to be the bible of network programming. The Audimeter is supplemented by a parallel Diary sample to yield audience composition data, and the Diary is used in a fashion akin to ARB in offering market reports on more than 200 markets.

Radio audiences today are measured primarily by Arbitron in areawide samples of the top 150 Radio Markets. The radio Diary differs in that it is kept separately by each individual in the home. Pulse and Hooper are still in the radio audience measurement business but they are of lesser importance today.

TV has demanded increasingly detailed audience measurements. Today the emphasis is on "what kinds of viewers", in addition to "how many". The name of the game is "demographics", and Arbitron publishes its findings station-by-station, quarter hour-by-quarter hour, in a series of breakdowns by sex, age, geographic location, family size, etc. Until quite recently they carried these data to rather extreme lengths, analyzing every program in terms of the household's use of coffee, beer, laundry products, pet foods, etc. Fortunately, most of this type of analysis in Arbitron has been abandoned. Competitively, Nielsen has had to go along with many of these tabulations of dubious value.

It remains only for us to look briefly at the ways the industry is attempting to answer the question "why do people watch what they do?". This is an oversimplified statement of the thrust of the work being done in program pre-testing. Much of the work in this area has been done by advertising agencies for their clients and is not available for publication. A pioneer in this field was the Lazarsfeld-Stanton Program Analyzer (1941). Here a sample of listeners/viewers is seated in a livingroom atmosphere around a large table. At each place there is a pair of pushbuttons, one red, one green. The subjects hear/see a program and indicate the parts they like, approve of, by pushing the green button, using the red button for the opposite reaction. The buttons are wired to a polygraph being observed by the Study Director who notes the reaction of each subject to the various elements of the show. At the conclusion of the show the Study Director questions the subjects, probing to learn their motives for the reactions they have recorded.

The technique obviously yields a "profile" showing the moments of strength and weakness in the show, but more importantly, the questioning reveals the reasons for these strengths and weaknesses. Commercially there is a somewhat similar operation available in Hollywood, but their findings emphasize too much the "average" response rather than the internal structure of the show. This area of research is today the most important to be developed.

Additionally there is a considerable number of consultants in various aspects of broadcasting utilizing a number of differing research techniques. Two in particular are concerned with counselling on news programming and practices - Frank J. Magid Associates, Inc. and McHugh & Hoffman, Inc. Both firms do extensive surveys of the make up, attitudes and preferences of the viewers of news programs. They operate under contract with individual stations.

Numerous companies offer services in the marketing aspects of broadcasting. Several offer syndicated services to all stations in a market in surveying the community to fulfill part of the stations' FCC requirement to ascertain community needs. Principal among these is Mediastat.

Surveys pertinent to market descriptions can be found in Standard Rate and Data Services (Radio and TV), Television/Radio Age (frequent studies of specific market areas), the several volumes of the U.S. Census (Population, Housing, Retail Trade, etc.), various State agencies and Chambers of Commerce.

So much for a quick overview of the available research pertinent to broadcasting.

RATE CARDS IN BROADCASTING

Newspapers and magazines base their rates for space primarily on delivered circulation, with certain premiums charged for special positions for the advertising, and offer few discounts to national advertisers.

In the beginning of radio, there were no useful measures of "circulation" available. As a consequence, the earliest rates in radio were roughly scaled to the potential number of radio homes that could be reached by the station, regardless of whether or not the sets were tuned to the station or tuned in to any station. At first, no differential was charged, regardless of time of day, day of the week, or season of the year.

Very early the assumption was made (correctly) that the audience was larger at night than in the daytime - roughly twice as large (again, about right) - and rates were quoted separately for daytime and nighttime hours.

As audience size measurements became more sophisticated and generally available, new classifications of time were announced. In broad terms, the highest rate was charged for the evening hours (7-11 p.m.), designated variously as "prime," "A," or "AA" time. Earlier and later evening hours were quoted at somewhat lower rates and further into the alphabet - "A" or "B." Daytime hours were generally priced as class "C" at about half the "AA" or "A" or "Prime" rate. Followed a trend to break the day into increasingly smaller time blocks -- Morning, Afternoon, Early Evening, Late Evening, etc., and the alphabet grew.

Early recognition of the limited attention time that could be expected to be given to spoken advertising led radio to gear itself to offering time for basically one sales point per announcement(usually 1 minute or 100 words) and affording attractive discounts for frequent use of the medium. In the earliest days of full sponsorship of programs, Consecutive Week Discounts (CWD) were quoted - usually in 13 week cycles.

Along the way, the increasing detail offered in the "rating" services quoting station standings day-by-day and quarter hour-by-quarter-hour, the size of the individual station's audiences became the base for setting rate levels. And rate card formats were developed to provide readily for seasonal differences in audience sizes.

Early TV took over directly the current rate card practices of radio. In a quite short span of time, TV developed formats of its own more realistically to reflect the conditions of that medium.

Primary sources of current data on rate cards are the several publications of Standard Rate and Data Service (SRDS). Of interest to us are the SRDS publications devoted to spot television, spot radio and networds (published monthly, with weekly update sheets). (Similar SRDS publications are available for daily newspapers, weekly newspapers, consumer magazines, business publications, outdoor advertising, mailing lists, etc.)

For our purposes here we will concentrate on the principal forms of rate cards found in SRDS TV spot. Comparisons, where appropriate, will be drawn with radio rate card formats.

SRDS Spot TV Rates
Contract Data

This publication presents a series of data relevant to buying spot time in TV, over and above the complete listing of current station rates.

To simplify the listing of station data and policies, SRDS presents in coded form much of the detail about each station's operation. In this fashion, each station's rate card includes information on Rate Protection (the length of time an advertiser is protected against a rate increase), contracts, cancellations, "combinability," etc.

Following are two illustrations of this SRDS feature.

SRDS Spot Television Coded Contract Regulations

Coded Format for Spot Television

A program designed to make it easier to estimate and buy Spot TV

Regulations, operating policies and procedures common to the greater number of television stations have been arranged in code form for efficiency in usage by advertising agency personnel and to extend to every television station the opportunity of listing all of the standard provisions that apply in the handling of national accounts.

The station rate policies and practices represented by code numbers and letters have been selected based on uniformity and frequency of appearance in station listings. Provisions not readily adaptable to the coding procedure and those not appearing in sufficient frequency to warrant codes are retained in station listings.

The complete SRDS Television Coded Contract Regulations will appear in each issue of Spot Television for ready reference.

The SRDS Television Coded Contract Regulations guarantee that every standard regulation can be quickly identified by number and letter. Regulations have been grouped insofar as possible under related headings. The numbers and letters in each group will come to be associated with their respective headings (such as code 61a under Continuing Discounts).

Numbered codes based on the numbers and letters encircled by station officials will appear in each television station listing under the listing segment number "5. GENERAL ADVERTISING." Note following example:

5. GENERAL ADVERTISING See coded regulations
General: 1b, 3a, 3d, 4a, 5, 6b, 7b, 8.
Rate Protection: 10l, 11l, 12l, 13l, 14l, 17.
Contracts: 20a, 21, 22a, 24b, 26, 31b, 31c, 32a.
Basic Rates: 40b, 41a, 41c, 44a, 47, 49, 50.
Comb.; Cont. Discounts: 60d, 60e, 60f, 61a, 61b, 62a, 62c.
Cancellation: 70c, 70d, 71, 72, 73a, 73b.
Prod. Services: 80, 82, 83, 84, 85, 86, 87a, 87b.

The headings for the categories shown in the Code are repeated (as indicated above) in the individual code in each station listing for ready reference.

SRDS Detail on "Combinability"

programs may be rotated with announcements within the program at participation rates.

Combinability

60a. Programs and announcements cannot be combined to earn larger discounts. 73

60b. Programs and announcements may be combined to earn larger discount on announcements only. 73

60c. Announcements and programs of five minutes or more cannot be combined to earn frequency discounts.

60d. Participations and announcements may be combined to earn frequency discounts.

60e. 1-minute, 20-second and ID announcements may be combined to earn frequency discounts. 8

60f. All announcements, regardless of length or classification, may be combined to determine times-per-week.

Continuing Discounts/Renewal

61a. Schedules maintained without interruption after one year period will continue to be billed at earned discounts. 8

SRDS - Spot TV Rates
Media Maps

All SRDS station data are arranged by states, alphabetically by markets within states.

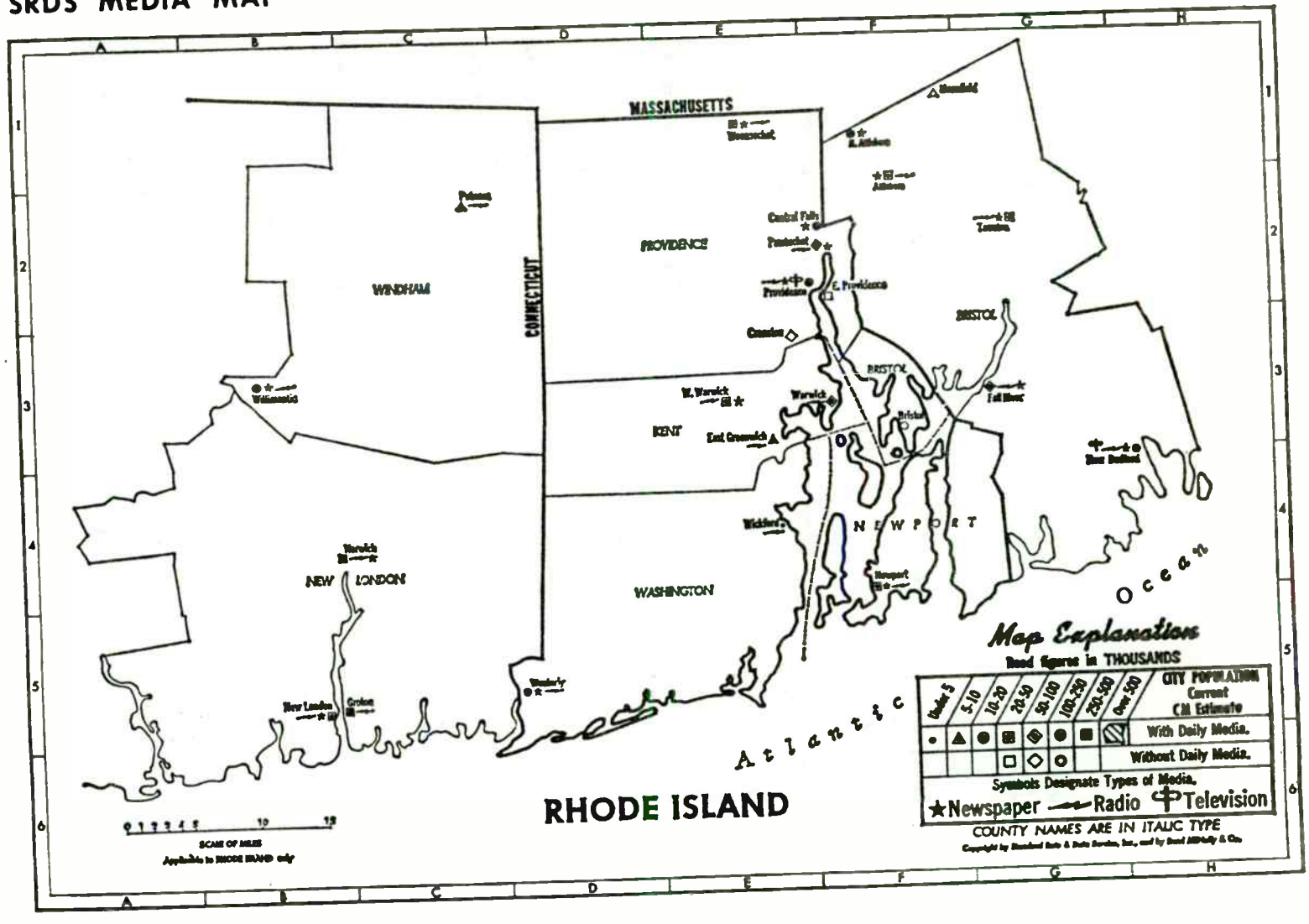
Preceding each state section will be found a map of the state, by counties, showing all cities and towns, by size, having local media - Newspapers, Radio, Television.

RHODE ISLAND

Television Market Data

See Description of Contents (page 3) for location of ADI/DMA Summary Ranking Tables containing Households, Television Households, Consumer Spendable Income, Total Retail Sales and 6 other important market data categories.

SRDS MEDIA MAP



SRDS Spot TV
Market Data

Following each state map is a tabulation of basic Market Data, by counties and principal urban places. These data are based primarily on the most recent U. S. Censuses available, updated by SRDS estimates of growth or loss.

Estimates of Population and Households have consistently correlated highly with subsequent census of population findings.

The Consumer Spendable Income data in dollars are projections on the census, while the distribution of income classes are largely SRDS calculations.

Retail sales figures are based on the 1970 Census of Retail Trade, updated by SRDS in total, per household, and in seven major categories.

Passenger Car Registrations are supplied by the various state licensing bureaus. Farm population and gross farm income are updated from the U. S. Census of Agriculture, 1970 (soon available for confirmation when the 1975 Census of Agriculture is available).

State, Standard Metropolitan Statistical Areas (SMSA's), county and city estimates are developed exclusively by Market Data division of SRDS.

State, County, City, Metro Area Data

CITIES AND COUNTIES — This list shows counties in which cities are located. Cities are first, counties next.

Coventry Town—Kent
Cranston—Providence
Cumberland Town—Providence
East Providence—Providence
Johnston Town—Providence
Newport—Newport
North Kingstown Town—Washington
North Providence Town—Providence
Pawtucket—Providence
Providence—Providence
Warwick—Kent
West Warwick Town—Kent
Woonsocket—Providence

Estimates for: STATE COUNTY—Map Loc. City Metropolitan Area	Population 1/1/73 (000)	Households 1/1/73 (000)	Consumer Spendable Income—1972 ($000)	Per Household ($)	% Distribution of Families $3000 to 4999	$5000 to 7999	$8000 to 9999	$10000 to 14999	$15000 and over	Total Retail Sales—1972 ($000)	Per Household ($)	Retail Sales—1972 By Selected Store Types: Food ($000)	Drug ($000)	General Mdse. ($000)	Apparel ($000)	Home Furn. ($000)	Automotive ($000)	Service Station ($000)	Passenger Cars 1/1/73 (000)	Farm Population 1/1/73 (000)	[illegible]
RHODE ISLAND STATE TOTALS	972.1	310.85	3,623,725	11,657	7.5	17.3	15.0	29.4	22.8	2,117,138	6,811	427,589	79,345	332,714	110,262	93,391	349,456	128,342	475.65	2.5	[illegible]
BRISTOL G-3	48.4	14.48	197,556	13,643	5.2	16.2	13.3	29.1	30.1	68,587	4,737	19,383	3,079	4,219	4,237	3,224	14,750	5,483	24.73	.1	
KENT E-3†	150.2	46.78	579,198	12,381	5.5	14.7	15.0	33.4	26.4	366,639	7,838	78,445	12,082	88,471	11,817	11,112	54,954	22,686	81.64	.2	
Coventry Town	24.8	7.30	84,187	11,532	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warwick	87.8	27.16	347,874	12,808	.....	.....	.....	.....	.....	241,300	8,884	43,365	6,259	85,161	6,125	5,527	34,635	12,614	.....	.....	.....
West Warwick Town	25.0	8.34	90,072	10,800	.....	.....	.....	.....	.....	56,775	6,808	17,146	2,605	1,655	3,995	1,999	6,437	4,537	.....	.....	.....
NEWPORT F-4†	98.1	26.17	354,998	13,565	8.2	19.5	14.2	25.7	21.6	149,555	5,715	30,433	6,020	19,750	6,998	4,598	27,638	10,184	39.56	.6	
Newport	31.9	10.01	113,831	11,372	.....	.....	.....	.....	.....	51,848	5,180	10,103	1,933	10,699	5,704	2,521	6,241	3,402	.....	.....	.....
PROVIDENCE E-2	585.8	198.94	2,180,739	10,962	8.1	17.4	15.2	29.2	21.6	1,362,794	6,850	258,420	51,470	209,094	82,322	69,556	221,246	77,632	287.99	.9	
Cranston	75.5	23.69	313,813	13,247	.....	.....	.....	.....	.....	126,747	5,350	32,642	6,980	15,260	6,965	13,375	16,977	9,756	.....	.....	.....
Cumberland Town	28.7	8.53	108,269	12,693	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Providence	49.9	16.32	186,603	11,434	.....	.....	.....	.....	.....	130,654	8,006	29,429	4,240	13,533	1,624	6,049	45,288	8,059	.....	.....	.....
Johnston Town	23.4	7.03	82,653	11,757	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Providence Town	25.9	8.31	100,046	12,039	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pawtucket	76.5	27.56	272,098	9,873	.....	.....	.....	.....	.....	168,830	6,126	31,038	7,945	29,184	13,316	9,886	33,197	9,797	.....	.....	.....
Providence	179.1	65.59	661,124	10,080	.....	.....	.....	.....	.....	592,854	9,039	85,186	17,017	97,668	49,764	23,735	85,722	26,405	.....	.....	.....
Providence-Warwick-Pawtucket Metro Area (Official S.M.S.A.)	943.3	294.50	3,029,341	10,286	.....	.....	.....	.....	.....	2,108,007	7,158	438,465	73,780	339,389	107,508	94,860	345,713	124,372	343.35	.....	.....
Providence-Warwick-Pawtucket Metro Area (county basis)	972.1	310.85	3,623,725	11,657	7.5	17.3	15.0	29.4	22.8	2,117,138	6,811	427,589	79,345	332,714	110,262	93,392	349,457	128,342	475.65	.....	.....
Woonsocket	48.0	16.87	153,916	9,124	.....	.....	.....	.....	.....	96,520	5,721	20,785	4,006	17,556	8,193	5,956	14,720	5,751	.....	.....	.....
WASHINGTON D-5	89.6	24.48	311,234	12,714	8.0	17.9	15.4	27.9	22.3	169,563	6,927	40,908	6,694	11,180	4,888	4,902	30,869	12,357	41.73	.7	
North Kingstown Town	29.8	6.83	109,291	16,002	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

(†) Consumer Market estimates for retail sales, (total and store types), do not include sales made in military commissaries, post exchanges and eating places on military posts in these counties.

SRDS - Spot TV
Market Identification

At the beginning of the rate section of each state is a designation of the time observed in the state.

For each market, some data from both the Nielsen Station Index (NSI) and the American Research Bureau (ARB) reflect the percentage of TV Homes using their sets during broad parts of the day. This is the Market as defined by these two rating services - Defined Market Area (DMA) in NSI and ADI (Area of Dominant Influence) by ARB. As a practical matter, the areas agree closely, both being based on the concept of assigning a county to a market if the largest proportion of the TV viewing in the county is devoted to the stations of the market city.

MARKET IDENTIFICATION

CALIFORNIA

CALIFORNIA

See SRDS Consumer Markets map and data at beginning of the State.

THIS STATE OBSERVES DAYLIGHT SAVING TIME.

BAKERSFIELD (3 Stations)

Kern County—Map Location E-9

See SRDS consumer market map and data at beginning of the State

AUDIENCE VIEWING LEVELS

Nielsen Station Index—DMA Households Rating %

Date	Morn	Aft	Early Eve	Prime	Late News	Late Eve
May 73	15	23	41	50	22	11
F-M 73	22	26	50	59	22	10
Nov 72	16	22	48	58	23	10
May 72	19	23	42	54	24	14

ARB/ADI Homes Using Television Rating

Date	Morn	Aft	Early Eve	Prime	Late News	Late Eve
May 73	15	22	39	45	18	8
F-M 73	22	26	52	55	21	9
Nov 72	20	27	54	59	21	11
May 72	20	26	46	51	22	11

SRDS - Spot TV
Station Personnel, Facilities, Policies

The first data shown for each station is usually an identification of the organizations to which the station belongs - NAB, TvD, Network, National Sales Representative, etc.

Next, ownership of the station, its business address, telephone and Telex numbers are shown. Only the principal executives are listed - President, General Manager, Sales Manager, Program Director, News Director, etc. This is followed by an identification of the station's Sales Representative(s), National and/or Regional.

Under Facilities we find channel number, video power, audio power, antenna height Above Average Terrain (occasionally above ground).

The conventional 15% commission is shown as allowed to recognized agencies, along with cash discounts, if any.

Section 5 - General Advertising - refers back to the coded section at the front of the volume previously described and the stations' network affiliations.

KFSN-TV

Personnel

Facilities

Policies

KFSN-TV
FRESNO
(Airdate May 10, 1956.)

CBS Television Network

BLAIR TELEVISION

TvB

Subscriber to the NAB Television Code
Media Code 6 205 0650 1.00
Capital Cities Broadcasting Corp., 733 "L" St., Fresno, Calif. 93721. Phone 209-268-6444. TWX 910-362-3911.

1. PERSONNEL
Vice-Pres. & Gen'l Mgr.—Philip R. Beuth.
General Sales Manager—Richard F. Appleton.
Program Director—Lee Jason.

2. REPRESENTATIVES
Blair Television.

3. FACILITIES
Video 1,660,000 w., audio 166,000 w.; ch 30.
Antenna ht.: 2,000 ft. above average terrain. PST.

4. AGENCY COMMISSION
15% to agencies on net time and studio charges; no cash discount.

5. GENERAL ADVERTISING See coded regulations
General: 5.
Rate Protection: 10i, 11m, 12m, 13m, 14c.
Contracts: 20a, 32c.
Basic Rates: 47a.
Comb.; Cont. Discounts: 61b.
Cancellation: 70h.
Prod. Services: 84, 87a, 87b, 87c.
Affiliated with CBS Television Network.
Announcements will rotate in program interruptions and at breaks.

Product Protection

Rebates, credits or makegoods will not be issued for any product conflict other than those resulting from back-to-back scheduling when the placing of both announcements is directly controlled by the

SRDS - Spot TV
Time Classification Rate Card

This KCOY-TV rate card closely resembles those in effect for many radio stations. Principal difference is that radio's highest rates are customarily quoted applying to early and late "Drive Time" - those hours when the out-of-home listening in cars bulks largest.

Here we see the day is divided into three Time Classes, identified in paragraph 6, and designated "AA," "A," and "B."

Rates are quoted separately for 20/30-second and 60-second spots. These rates are rarely in a straight arithmetic relation to the amount of time used. Basically, the smaller the time unit, the higher the unit price per second. Additionally, each segment is shown with two rates--Fixed and Pre-emptible. Footnotes identify the conditions which apply to Pre-emptible rates and the rates charged for announcements scheduled between two time classifications.

Rates for news are quoted separately. Program Time is quoted only in terms of one hour. (Traditionally, a half hour has a rate of 60% of the hour rate, a quarter hour 40%, five minutes 25%, though this is not a universal practice.)

Closing Time for submission of announcement copy is quoted as "48 hours," but some stations require earlier submission.

KCOY-TV

TIME CLASSIFICATION CARD

KCOY-TV
SANTA MARIA
(Airdate March 16, 1964)

TvB

Subscriber to the NAB Television Code

Media Code 6 205 2072 6.00

Central Coast Broadcasters, Inc., Drawer 1217, 1503 N. McClelland St., Santa Maria, Calif. 93454. Phone 805-922-1943. TWX 910-351-5875.

1. PERSONNEL
Exec. Vice-Pres. & Gen'l Mgr.—Paul H. Leslie.
Administrative Assistant—Rob B. Funston.

2. REPRESENTATIVES
The Meeker Company.
Seattle, Portland—Simpson/Reilly & Associates Co.

3. FACILITIES
Video 64,600 w., audio 9,700; w.; ch 12.
Antenna ht.: 1,940 ft. above average terrain.
Operating schedule: 7:00 am-1:30 am. PST, DST.

4. AGENCY COMMISSION
15% on time.

5. GENERAL ADVERTISING See coded regulations
General: 1a, 2b, 3a, 3d, 4a, 5, 6a, 7a.
Rate Protection: 10h, 11h, 12h, 13h, 14f, 17.
Contracts: 20a, 21, 22a, 22c, 24a, 24b, 26, 27e, 29, 31b, 32b, 32d, 33, 34.
Basic Rates: 40b, 41b, 42, 44a, 45c, 46, 47, 49, 50.
Comb.; Cont. Discounts: 60b, 60c, 60d, 60e, 60f, 61a, 62a.
Cancellation: 70b, 70f, 71, 72, 73b.
Prod. Services: 80, 82, 83, 84, 85, 86, 87a, 87b, 87c.
Affiliated with CBS Television Network.

6. TIME RATES
No. 8 Eff 7/1/70—Rec'd 10/12/70.
AA—Daily 6-11 pm.
A—Daily 5-6 pm.
B—Daily sign-on-5 pm & 11:30 pm-concl.

7. SPOT ANNOUNCEMENTS

CLASS AA

	(*)	(†)
30/20 sec	60	45
10 sec	30	22

CLASS A

60 sec	40	30
30/20 sec	24	18
10 sec	20	16

CLASS B

60 sec	22	14
30 sec & less	13	10

(*) Fixed.
(†) Preempt—subject to preemption by fixed rate advertisers.
Spot positions adjacent to 2 rate classifications take the higher rate.

8. PARTICIPATING ANNOUNCEMENT PROGRAMS

	(*)	(†)	(‡)
Early News—6:30-7 pm Mon thru Fri.			
60 sec	70	60	----
30/20/10 sec	41	36	----
Late News—11-11:30 pm Mon thru Fri.			
60 sec	30	25	20
30/20/10 sec	18	15	12

(*) Fixed.
(†) Preempt—subject to preemption by fixed rate advertisers.
(‡) Charter—subject to immediate preemption by fixed rate or preemptible rate advertisers.

10. PROGRAM RATES
Daily 7-11 pm, 1 hr..... 475

11. SPECIAL FEATURES

COLOR

Schedules network color, film, slides, tape and live.
Equipped with high and low band VTR.

13. CLOSING TIME
48 hours prior film, slides and artwork.

SRDS - Spot TV
Time Classification Card - Frequency Discounts

Station KAIL-TV here divides the day into three Time Classifications very similarly to KCOY-TV shown earlier. (Not all stations quote rates on a seven day basis. Some differentiate between weekdays and the week end.)

Here we find discounts offered for increasing number of appearances on the air. They are quoted in "times," not making any differentiation between times-per-week, times-per-year, or weeks. The 260 time rate is the equivalent of 5 announcements a week for 52 weeks.

While rates are not quoted individually as "Fixed" or "pre-emptible," the footnote to the rates indicates that all rates are ROS (Run of Schedule) and thus pre-emptible. A premium of 15% is charged for a "fixed" position spot in "AA" time, 10% in the other time classifications.

KAIL-TV

TIME

CLASSIFICATION

CARD

Frequency

Discounts

KAIL-TV

FRESNO

(Airdate December 18, 1961)

Media Code 6 205 0600 6.00

Tel-America Corporation, Box 5160, Fresno, Calif. 93755. Phone 209-299-2104.

1. PERSONNEL President—Albert J. Williams.
Vice-Pres. & Gen'l Mgr.—Victor D. Sanders.
Station Manager—Charles E. Griggs.

3. FACILITIES
Video 40,000 w., audio 24,000 w.; ch 53.
Antenna ht.: 470 ft. above average terrain.
Operating schedule: Sun thru Fri 5-11 pm; Sat 10 am-11 pm. PST.

4. AGENCY COMMISSION
15% to agencies on net time and studio charges; no cash discount.

5. GENERAL ADVERTISING See coded regulations
General: 2b, 3a, 3b, 3d, 4a, 5, 6a, 7a, 8.
Contracts: 25, 29, 32a, 32b.
Basic Rates: 40a, 41b, 41c, 42, 43a, 45a, 46.
Comb.; Cont. Discounts: 62a.
Cancellation: 71, 73a.
Prod. Services: 82, 83, 86.
Rate Protection: Changes which increase rates will not apply to advertisers who are on the air at time increase is announced until 3 months after effective date of new rates provided there is no interruption.

6. TIME RATES
Eff————————Rec'd 6/14/67.
AA—Daily 6-10.30 pm.
A—Daily 1-6 pm.
B—All other times.

7. SPOT ANNOUNCEMENTS

	1 min	30 sec	20 sec	10 sec
CLASS AA				
1 ti	40.00	35.00	30.00	22.00
13 ti	35.00	33.00	27.00	20.00
26 ti	32.00	30.00	25.00	16.00
52 ti	30.00	28.00	23.00	13.00
104 ti	28.00	26.00	21.00	12.00
156 ti	26.00	24.00	19.00	11.00
260 ti	23.00	20.00	16.00	9.00
CLASS A				
1 ti	30.00	26.00	22.00	17.00
13 ti	26.00	22.00	18.00	14.00
26 ti	24.00	20.00	16.00	12.00
52 ti	21.00	18.00	13.00	10.00
104 ti	18.00	16.00	11.00	9.00
156 ti	15.00	13.00	10.00	8.00
260 ti	12.00	10.00	8.50	7.00
CLASS B				
1 ti	24.00	20.00	18.00	15.00
13 ti	20.00	16.00	14.00	12.00
26 ti	18.00	14.00	12.00	10.00
52 ti	15.00	12.00	10.00	8.00
104 ti	12.50	10.00	8.50	6.50
156 ti	10.00	8.50	7.50	5.50
260 ti	8.00	6.50	6.00	4.00

All announcements rates shown are ROS. For specified times in Class AA add 15%. All other time periods add 10%.
5 or more announcements per week earns extra 10% discount.

10. PROGRAM RATES
Daily 6-10:30 pm, 1 hr..... 200

13. CLOSING TIME
72 hours prior film, slides, artwork, program content and commercial copy.

SRDS - Spot TV
Time Classification - Weekly Plans

The rate card of KHSL-TV is another variation of the basic Time Classification format, using four classes, "AA" to "C."

Again, like KCOY-TV, rates are quoted for 20/30- and 60-second announcements, but no mention is made of "Fixed" and "Pre-emptible" rates.

Here we find discounts offered for the use of at least three announcements a week. Many stations quote discounts in terms of 6, 8, 10, 12, etc. announcements per week in order to build volume in the short term contracts.

All other features of this rate card have been discussed earlier.

KHSL-TV
CHICO
(Airdate August 15, 1953)

CBS Television Network

NAB

Subscriber to the NAB Television Code
Media Code 6 205 0300 3.00
Golden Empire Broadcasting Co., Box 489, 180 E. 4th St., Chico, Calif. 95926. Phone 916-342-0141. TWX CZ71.

1. PERSONNEL
Pres. & Gen'l Mgr.—(Mrs.) Mickey McClung.
Executive Vice-President—Charles H. Kinsley, Jr.
Manager—M. F. Woodling.

2. REPRESENTATIVES
Avery-Knodel, Inc., West.

3. FACILITIES
Video 316,000 w., audio 38,000 w.; ch 12.
Antenna ht.: 1,280 ft. above average terrain.
Operating schedule: 6 am test pattern; 7-1 am programming. PST, DST.

4. AGENCY COMMISSION
15% to recognized agencies on time and talent only unless otherwise agreed upon in contract; no cash discount.

5. GENERAL ADVERTISING See coded regulations
General: 1a, 1b, 2a, 2b, 3a, 3b, 3c, 3d, 4a, 5, 6a, 7b, 8.
Rate Protection: 10c, 12c, 13c, 14c, 15, 17.
Contracts: 20a, 21, 22a, 22c, 23, 24a, 25, 26, 27a, 28, 29, 30, 31b, 31c, 32d, 33, 34.
Basic Rates: 40a, 40b, 41a, 41b, 41c, 41d, 42, 43a, 43b, 44b, 45a, 46, 47a, 48, 49, 50, 51, 52.
Comb.; Cont. Discounts: 60a, 60b, 60c, 60d, 60e, 60f, 61a, 61b, 62b.
Cancellation: 70b, 70f, 71, 72, 73a, 73b.
Prod. Services: 80, 81, 82, 83, 84, 85, 86.
Affiliated with CBS Television Network.
Multiple Product Announcements
Station requires 14 days notice when changing from straight to piggyback commercials. Otherwise station reserves the right, when necessary to reschedule new commercials in similar time classifications. Agency will be immediately notified of said change.

TIME CLASSIFICATION

WEEKLY PLANS

6. TIME RATES
No. 16 Eff 1/29/73—Rec'd 1/11/73.

7. SPOT ANNOUNCEMENTS
AA—Daily 6:30-10:30 pm.
A—Daily 12:30-1:30 pm; 4-6:30 pm & 10:30-11 pm.
B—Daily 10:30 am-12:30 pm & 1:30-4 pm.
C—All other times.

CLASS AA

	1 ti	3 ti
20/30 sec	70	65
10 sec	50	45

CLASS A

20/30 sec	40	35
10 sec	30	25

CLASS B

60 sec	45	35
20/30 sec	30	25
10 sec	20	18

CLASS C

60 sec	30	25
20/30 sec	20	15

10. PROGRAM RATES
Daily 6-11 pm, 1 hr 450

11. SPECIAL FEATURES

Mon thru Fri:	60 sec	30 sec
News—6-6:30 pm	80	40
News—noon-12:30 pm	45	30
News—11-11:30 pm	40	22
Perry Mason—4-5 pm	45	30

COLOR
Schedules network color, film, slide, tape and live.

13. CLOSING TIME
All materials for telecasting programs or commercials must be on hand 48 hours in advance of telecast.

SRDS - Spot TV
Section I, II, III Rate Card

The principal departure here was originally conceived by the John Blair Company, station representatives.

KNTV quotes rates in four Time Classifications and for 30-second announcements only in paragraph 7. For each Time Classification, three rates are quoted, successively lower. Each represents a different degree of pre-emptibility.

For example, if you wish to buy a Fixed Position spot in "AA" time, it will cost $280. If you are willing to risk pre-emption (by an advertiser willing to pay the Fixed, Section I rate) on two telecasts notice, you can buy the same time at a discount of 11% ($250). Should you be willing to risk immediate pre-emption (by a Section I or II buyer), you can buy under Section III at a 21% discount ($220).

An advantage of this card is that it permits allowance for the diminished value represented in summer viewing. An advertiser with a desirable position in the winter schedule at Section I rates may elect to reflect the lesser audience possible to him in summer by going to a Section II rate. He is gambling that no one is going to want his availability more than he during the summer. Come fall he can protect his position by going back to a Section I rate. This device can also be used within a season if a program change lessens the value of the time he has bought. Section III rates are frequently used for short, intensive campaigns where saturation at low cost is desired. This type of rate card is occasionally found for radio stations.

KNTV

SECTION

I

II

III

San Francisco-Oakland—K N T V—Continued

4. AGENCY COMMISSION
15% to recognized agencies on time, studio and rehearsal charges; no cash discount.

5. GENERAL ADVERTISING See coded regulations
General: 5.
*Rate Protection: 10i, 11m, 12m, 13m, 14i.
Contracts: 25, 26, 32a, 32d, 34.
Basic Rates: 41a, 41b, 41c, 41d, 43a, 45a, 47a, 51, 52.
Cancellation: 70h.
Prod. Services: 83, 87a, 87b, 87c.
(*) Fixed 90 days, all others 28 days.
Affiliated with ABC Television Network.

6. TIME RATES
No. 2-73 Eff 4/9/73—Rec'd 4/23/73.
Rev. Eff 9/10/73—Rec'd 7/16/73.
No. 15 Prog. rates eff 3/1/71—Rec'd 3/11/71.

7. SPOT ANNOUNCEMENTS
AA—Daily 8-11 pm.
A—Sun thru Fri 4-8 pm.
B—Daily noon-4 pm.
C—Daily 11 pm-sign-off.
D—Daily sign-on-noon.

CLASS AA

	Section I	Section II	Section III
30 sec	280	250	220

CLASS A

30 sec	150	100	75

CLASS B

30 sec	70	50	35

CLASS C

30 sec	60	45	30

CLASS D

30 sec	40	30	20

Section I—Fixed, non-preemptible.
Section II—Fixed, preemptible on 2 telecast notice.
Section III—Fixed, immediately preemptible.

8. PARTICIPATING ANNOUNCEMENT PROGRAMS
Rec'd 8/13/73.
30 SECONDS

	Section I	Section II	Section III
News separately:			
5-5:30 pm Mon thru Fri	100	80	60
11-11:30 pm Mon thru Fri	80	60	45
Early/Late News—5-5:30 & 11-11:30 pm Mon thru Fri.			
2 spots per wk	160	125	95
7:30 pm brk Sun	180	150	120
8 pm brk Tues thru Sat	180	150	120
11 pm brk Mon thru Sat	120	90	70
Star Trek—4-5 pm Mon thru Fri	100	75	50
Million Dollar Movie—6-8 pm Mon thru Fri; 6-7:30 pm Sun.	150	100	75
Movie Combo—6-7:30 pm Sun; 9-11 pm Mon, 2 spots	275	200	160
Monday Prime Movie Separately: 9-11 pm Mon	200	160	110

60 sec: twice 30 sec.
30/20 sec take the same rate.
ID's: 50% of 30 sec rounded to next highest dollar.
ID's: Immediately preemptible by 20, 30, or 60 sec spots.
Section I—Fixed, non-preemptible.
Section II—Fixed, preemptible on 2 telecast notice.
Section III—Fixed, immediately preemptible.

10. PROGRAM RATES
Daily 8-11 pm, 1 hr 1200

11. SPECIAL FEATURES

	Section I	Section II	Section III
NCAA Football—various Sat	200	.....	.....
NCAA Football—various Sat	250	.....	.....
Wide World Of Sports—5-6:30 pm Sat	150	.....	.....

COLOR
Schedules network color, film, slides, tape and live. Equipped with high and low band VTR.

13. CLOSING TIME
Programs and announcements and material for same close 72 hours prior to scheduled time of telecast. Failure on the part of advertisers to comply relieves the station of all obligations to adhere to schedule.
(C&D)

SRDS - Spot TV
Prime I, II, III, IV, etc., Rate Cards

KABC-TV's rate card is the next step in the swelling orchestration of formats. To concentrate on its unique features is to recognize a basic flaw in the Time Classification concept. Any single Time Classification will include programs with good, poor, and mediocre sized audiences. Yet the same rate is charged throughout the Time Classification.

The most critical area here is Prime Time. Programming here changes hour to hour and day to day. So it is here we encounter the widest spread in audiences from largest to smallest. (By contrast, most of the daytime is scheduled on a strip basis, the same show at the same time each weekday). Since the daytime shows tend to be of fewer types and usually appear in blocks of the same type, the single rate for a daytime Time Classification results in fewer bargains and fewer larcenies.

The American Broadcasting Company (ABC) inaugurated the concept of quoting as many as 8 different rates applying to Prime Time at their O&O stations. These rates differ by as little as 3% and as much as 30% from the highest rate.

The rate card for KABC-TV quotes these many announcement rates and points out that the rate applying to any specific availability is available on request. Note that the station reserves the right to reclassify an availability (upward, since the advertiser automatically benefits from any lower rate) on four telecasts notice. The Daytime Plans quoted refer to "packages" which the station will offer. These can be a rather random selection of availabilities, or specifically adjacent to children's programs. Note the rates quoted for individual programs.

KABC-TV

PRIME

I

II

III

IV

V

VI

VII

Los Angeles—K A B C-TV—Continued

6. TIME RATES

Fall 1972 Eff 9/10/72—Rec'd 8/3/72.

7. SPOT ANNOUNCEMENTS

CLASS:	IA	I	2	3	4	5	6	7
30 sec.....	3600	3500	3400	3200	3000	2800	2600	2400
20 sec.....	3000	2900	2800	2600	2400	2200	2000	1800
10 sec.....	1800	1750	1700	1600	1500	1400	1300	1200

Classification of individual prime time announcements available on request and subject to reclassification on 4 telecasts' notice. 30 second prime time announcements are preemptible on 2 telecasts notice.

DAYTIME PLANS

	30 sec
Rotates 7:30-8 am Mon thru Fri.....	50
Rotates 7:30-11 am Mon thru Fri.....	150
Rotates 8 am-4:30 pm Mon thru Fri.....	350
Rotates 11 am-5 pm Mon thru Fri.....	400

OTHER PLANS

Children's Plan: Rotates Sat & Sun sign-on-noon. Par 300

Weekend Plans: Rotates Sat & Sun noon-5 pm.... 200

60 sec: double the 30 sec.
20 sec: 70% of 30 sec.
10 sec: 50% of 30 sec.

8. PARTICIPATING ANNOUNCEMENT PROGRAMS

Rec'd 3/19/73.

	30 sec
Eyewitness News—4:30-6 pm Mon thru Fri.....	600
Eyewitness News—6-6:30 pm Mon thru Fri.....	700
Eyewitness News—7-7:30 pm Sat	800
Eyewitness News—6:30-7 pm Sun.....	800
6:30 Movie—6:30-8 pm Mon thru Fri.....	1200
Parent Game—6-6:30 pm Sun.....	1200
Let's Make A Deal—7:30-8 pm Sat.....	2000
Reflecciones/I Am Somebody—7-7:30 pm.....	1000
George Kirby—7:30-8 pm, approx 3 Sun a mo	1100
Family Classics—7:30-8 am, approx every 4th Sun of the month.....	2500
Eyewitness News—11-11:30 pm Mon thru Sun....	800
Saturday Night Movie/Movie 7—11:30 pm-concl Sat & Sun.....	200
World of Entertainment—11:30 pm-1 am Mon thru Fri.....	200
In Concert—11:30 pm-1 am, every other Fri as part of World of Entertainment	500
Late Report—1-1:20 am Mon thru Fri.....	100
Various—5-6 pm Sun.....	700

11. SPECIAL FEATURES

COLOR

Schedules network color, film, slides and tape. Equipped with high and low band VTR.

13. CLOSING TIME

72 hours prior artwork; 48 hours film, tape, slides and copy.

SRDS - Spot TV
Time Classification, Section I, II, Prime a,b,c,d,e.

In the KJEO-TV rate card we have just about the ultimate in utilizing rate card devices -- Time Classification, Section I, II and Prime a, b, c, d, e.

The combination of features is readily recognizable here.

One interesting feature is the "18-49 Combo" - a package of spots geared to a demographic characteristic of the viewing audience. All availabilities here will show predominent the 18-49 year age group of viewers. Note also that they quote a combination rate for their Early and Late Evening News.

KJEO-TV

TIME CLASSIFICATION

SECTION I, II,

PRIME

a,b,c,d,e

6. TIME RATES

No. I-73 Eff 1/1/73—Rec'd 1/8/73.

AA—Daily 7:30-11 pm.
A—Mon thru Fri 5-7:30 pm.
B—Mon thru Fri 3:30-5 pm; Sat & Sun 5-7:30 pm.
C—Daily 11-11:30 pm.
D—Mon thru Fri noon-3:30 pm; Sat & Sun noon-5 pm.
E—Daily 11:30 pm-sign-off.
F—Daily sign-on-noon.

7. SPOT ANNOUNCEMENTS

30 SECONDS

AA:	Section I	Section II	Impact
a	335	305	280
b	275	255	235
c	230	205	185
d	180	160	140
e	135	100	85

	A	B	C	D	E	F
Sec I	160	120	50	35	25	20
Sec II	140	100	45	30	20	18
Impact	120	80	40	25	15	15

Sec I—Fixed position, non-preemptible.
Sec II—Preemptible on 2 telecasts' notice.
Impact—Preemptible on notification by station.
60 sec: 2x 30 sec.
10 sec: 1/2 of 30 sec rounded to next highest dollar.

8. PARTICIPATING ANNOUNCEMENT PROGRAMS

Rec'd 4/13/73.

30 SECONDS

MON THRU FRI:	Section I	Section II	Impact
Flying Nun—3:30-4 pm incl 4 pm	55	45	35
Jeannie—4-4:30 pm incl 4:30 pm	65	55	45
Merv Griffin—4:30-6 pm incl 6 pm	105	95	85
6:30 PM Action News—6:30-7 pm incl 6:30 & 7 pm	115	105	95
Truth Or Consequences—7-7:30 pm	130	120	110
11 PM Rotator—11 pm Mon thru Sun	53	53	53
11 PM Action News—11-11:30 pm Mon thru Sun. Par	50	45	40
Saturday AM Kids—8 am-noon Sat	75	65	55
John Wayne Theatre—7-9 pm Sat	100	100	100
Sports & Game Shows—2:30-6 pm	50	50	50

60 sec: 2x 30 sec.
10 sec: 1/2 of 30 sec rounded to next highest dollar.
Sec I—Fixed position, non-preemptible.
Sec II—Preemptible on 2 telecasts' notice.
Impact—Preemptible on notification by station.

9. PACKAGE ANNOUNCEMENT RATES

	Section I	Section II	Impact
18-49 Combo: Mon thru Fri 4:30-6 pm, 2 spots per wk; Mon thru Fri 7-8 pm, 1 spot per wk. 3 30-sec spots	270	270	270
Action News Combo: Mon thru Fri 6:30-7 pm; Mon thru Sun 11-11:30 pm. 2 30-sec spots	150	140	130

60 sec: 2 x 30 sec.
30/20 sec: same rate.
10 sec: 1/2 of 30-sec rounded to next highest dollar.
Sec I—Fixed, non-preemptible.
Sec II—Preemptible on 2 telecasts notice.
Impact—Preemptible on notification by station.

10. PROGRAM RATES

Daily 7:30-11 pm, 1 hr 950

11. SPECIAL FEATURES

COLOR

Schedules network color, film, slides, tape and live.
Equipped with high band VTR.

13. CLOSING TIME

Commercial copy, films and slides must be received 72 hours prior to air time. Copy for Saturday, Sunday and Monday due by 5:00 pm Thursday. Copy for first workday following a holiday due 2 days before holiday.

SRDS - Spot TV
Grid or Petry Card

The most recent and growing development in rate card construction is represented in the "Grid," or "Petry" card. (The format is generally credited to Al Massini when he was with the Edward Petry Company, station representatives. The style has been adopted and adapted by numerous stations and reps.)

This is the logical extension of the Prime I, II, III rate concept now applied to the entire broadcast schedule. As shown in the KBAK-TV rate card, it merely quotes 34 prices, ranging from $183 down to $5, without specific designation of what rate applies to any particular time. The station decides periodically which of these rates applies to each of the availabilities on the station.

The mechanics of administering this card are basically simple. The station (usually via the General Manager and the Sales Manager) make a determination of what level of Cost-per-Thousand (CPM) will be viable for this facility in this market. They then proceed to analyze the current audience estimates for their station (NSI or SRB) and price each availability to price out at the pre-determined CPM. For example, let us assume that it is the station's judgment they can profitably and readily sell time at a CPM of $3.25. This being the case, an availability showing 56,000 viewing homes would warrant a Grid 1 rate of $183. An availability showing 31,000 viewing homes would call for a Grid 7 rate of $97, etc.

Not well covered in this rate card is the discount allowed for a pre-emptible position. As a general rule, stations quote a rate 2 Grids lower than the Fixed rate as the Pre-emptible rate. Thus, the 31,000 audience would cost $97 Fixed and $79 Pre-emptible.

A major advantage of this card to the station is that it has control over its offerings. It can offer a large number of spots with a considerable range of audience sizes and still price out to the $3.25 CPM. Under older card forms it was possible for an advertiser to specify a schedule of only the highest rated spots and pick the station clean of any good availabilities for local clients.

At the outside of this type of card, the advertiser was at a disadvantage with the lack of detail since it made it difficult to estimate a budget for the station or market. To offset this many stations using Grid cards, quote "Average Rates for Estimating." Thus, we see that the advertiser wishing to appear only in Prime Time should consider that he will be paying anywhere from Grid 5 ($120) to a Grid 10 ($71), or an average of roughly $94 per spot. This price, divided into his budget, will give him a fair idea of the frequency he can buy.

See second page following.

KBAK-TV

GRID

CARD

KBAK-TV
(Airdate August 10, 1953)

CBS Television Network

NAB

A HarriScope Station

Media Code 6 205 0150 2.00

HarriScope Broadcasting Corp., Box 2929, 2210 Chester Ave., Bakersfield, Calif. 93303. Phone 805-327-7955. TWX 910-327-1109.

1. PERSONNEL

Vice-Pres. & Gen'l Mgr.—Robert Curry.
Operations Manager—Vince Fleming.
Sales Manager—Vern Batterson.

2. REPRESENTATIVES

H-R Television, Inc.

3. FACILITIES

Video 1,720,000 w. max., audio 298,000 w. max. ch 29.
Antenna ht.: 3,730 ft. above average terrain.
Operating schedule: 7-approx 1:30 am Mon thru Fri; 8-approx 1:30 am Sat and Sun PST, DST.

4. AGENCY COMMISSION

15% to recognized agencies on time only; no cash discount.

5. GENERAL ADVERTISING See coded regulations

General: 2a, 2b, 3d, 4a, 5, 6a, 7a, 8.
Rate Protection: 10i, 11i, 12i, 13k, 14i, 16, 17.
Contracts: 20a, 21, 22a, 22c, 23, 24b, 25, 26, 27e, 28, 29, 31a, 31c, 32d, 33, 34.
Basic Rates: 40b, 41a, 41b, 41c, 41d, 43b, 45a, 46, 47a, 51, 52.
Comb.; Cont. Discounts: 60a, 60c, 60d, 60f, 61a, 62b.
Cancellation: 70a, 70j, 71, 72, 73b.
Prod. Services: 80, 82, 83, 84, 85, 86, 87b, 87c.
Affiliated with CBS Television Network.

6. TIME RATES

No. 24 Eff 8/1/72 Rec'd 8/7/72.

7. SPOT ANNOUNCEMENTS

30/20 SECONDS

GRID:	Flat	GRID:	Flat
1	183	18	31
2	165	19	28
3	148	20	25
4	133	21	22
5	120	22	20
6	108	23	18
7	97	24	16
8	87	25	14
9	79	26	13
10	71	27	12
11	64	28	11
12	58	29	10
13	52	30	9
14	47	31	8
15	42	32	7
16	38	33	6
17	34	34	5

60 sec: twice the 30/20 sec.
10 sec: approx 90% of the 30/20 sec.

Average Rates For Estimating

Daytime (17-27)	Early Fringe (11-16)	Prime Time (5-10)	Late Fringe (27-31)

Fixed—Non-preemptible.
Preemptible—2 telecasts notice.
Spots within or following late running network program/movie take original rate.

10. PROGRAM RATES

Sun thru Sat 7:30-11 pm, 1 hr..... 450

11. SPECIAL FEATURES

COLOR

Schedules network color, film, slides, tape and live.
Equipped with high band VTR.

13. CLOSING TIME

48 hours prior film, videotape & artwork; 24 hours slides.

SRDS - Spot TV
Grid Card - Identified Times

WGEM-TV is one of many stations using the Grid concept for flexibility but willing to reveal when the various rates apply. Relatively few Grid Rates are quoted. Actually, the Grid applies only to Prime Time and is here joined with the pre-emptible features of a Section I, II, III card.

It is something of a hybrid.

WGEM-TV
QUINCY, ILL:
(Airdate September 3, 1953)

NBC Television Network

Subscriber to the NAB Television Code

Media Code 6 214 0600 8.00

The Quincy Broadcasting Co., Hotel Quincy, Quincy, Ill. 62301. Phone 217-222-6840. TWX 910-246-8209.

1. PERSONNEL
General Manager—Joe Bonansinga.
Program Director—Fred Colgan.
Sales Manager—Ben Stewart.

2. REPRESENTATIVES
Adam Young, Inc.

3. FACILITIES
Video 316,000 w., audio 31,600 w.; ch 10.
Antenna ht.: 814 ft. above average terrain.
Operating schedule: 6:45 am-midnight Mon thru Fri; 7:00-12:15 am Sat; 8:15 am-midnight Sun. CST, DST.

4. AGENCY COMMISSION
15% to recognized agencies; no cash discount.

5. GENERAL ADVERTISING See coded regulations
General: 1a, 2b, 3a, 3b, 3c, 3d, 4a, 5, 6a, 7b, 8.
Rate Protection: 10f, 11f, 12f, 13f, 14f, 15, 16, 17.
Contracts: 20a, 21, 22a, 22c, 23, 24a, 24b, 25, 27a, 28, 29, 30, 31a, 31b, 31c, 32a.
Basic Rates: 40b, 41a, 41b, 41c, 42, 43a, 43b, 44a, 45a, 46, 48, 49, 50.
Comb.; Cont. Discounts: 60b, 60d, 60e, 60f, 61a, 62b, 61c, 62b.
Cancellation: 70a, 70b, 70e, 71, 72, 73a, 73b.
Prod. Services: 80, 82, 83, 84, 85, 86, 87a, 87b, 87c.
Affiliated with NBC Television Network.

6. TIME RATES
No. 11 Eff 4/1/73—Rec'd 4/13/73.

7. SPOT ANNOUNCEMENTS
AA—Sun thru Sat 6:30-10 pm.
A—Sun thru Sat 6-6:30 pm & 10-10:30 pm.
B—Daily 5-5:30 pm.
C—Daily 1-4:30 pm & 10:30 pm-concl.
D—Sun thru Sat sign-on-1 pm.

GRID:	1			2			3		
	1 ti	3 ti	5 ti	1 ti	3 ti	5 ti	1 ti	3 ti	5 ti
60 sec	160	150	140	140	130	120	120	110	100
30 sec	80	75	70	70	65	60	60	55	50
20 sec	70	65	60	60	55	50	50	45	40
10 sec	40	38	35	35	33	30	30	28	25

GRID:	4		
60 sec	100	90	80
30 sec	50	45	40
20 sec	40	35	30
10 sec	25	23	20

PM:	M	T	W	Th	F	Sa	Su
6:30	2	2	2	2	4	3	2
7:00	2	2	1	2	2	2	1
7:30	3	3	2	2	2	2	1
8:00	2	3	3	2	3	2	2
8:30	2	3	3	1	3	2	2
9:00	2	3	3	2	4	2	2
9:30	2	4	3	2	3	2	2
10:00	2	4	3	2	4	3	2

Section I—Fixed preferred rate. The 1 ti rate on each grid level.
Section II—2 week preemptible.
Section III—Immediately preemptible, 1 level lower.

CLASS A

	Section I	Section II	Section III
60 sec	100	90	80
30/20 sec	50	45	40
10 sec	25	23	20

CLASS B

60 sec	80	70	60
30/20 sec	40	35	30
10 sec	20	18	15

SRDS - Spot TV
Individually Priced Time Availabilities

WMBD-TV is a network affiliate using the essence of a Grid card without so identifying it. All availabilities are quoted in dollars.

Note that the Early and Late News times are quoted on a rotating basis.

WMBD-TV

INDIVIDUALLY PRICED AVAILS

WMBD-TV

(Airdate January 1, 1958)

CBS Television Network

PGW-TV

NAB TvB

Subscriber to the NAB Television Code

Media Code 6 214 0500 0.00

Midwest Television, Inc., 212 S. W. Jefferson Ave., Peoria, Ill. 61602. Phone 309-676-0711. TWX 910-652-0139.

1. PERSONNEL

Vice-Pres. & Gen'l Mgr.—William L. Brown.
General Sales Manager—Gene C. Robinson.
National Sales Manager—Len Davis.

2. REPRESENTATIVES

Peters, Griffin, Woodward, Inc.

3. FACILITIES

Video 1,000,000 w., audio 135,000 w.; ch 31
Antenna ht.: 730 ft. overall ht. above average terrain.
Operating schedule: 6:55 am-sign-off. CST, DST.
Translator: W71AE. LaSalle, Ill.

4. AGENCY COMMISSION

15% to recognized agencies, on net charges for station time and talent-production; no cash discount.

5. GENERAL ADVERTISING See coded regulations

General: 1a, 2a, 2b, 3a, 3c, 3d, 4a, 5, 6a, 8.
Rate Protection: 10k, 13k, 14c, 15.
Contracts: 20a, 21, 22a, 22c, 23, 25, 26, 27c, 31b, 32b, 32c, 32d.
Basic Rates: 40b, 41c, 41d, 43a, 46, 48, 50, 51.
Comb.: Cont. Discounts: 60a, 60f, 61c, 62b.
Cancellation: 70b, 70i, 71, 72, 73b.
Prod. Services 80, 82, 83, 85, 86, 87a, 87b.
Affiliated with CBS Television Network.
When network or local programming delays the News, and announcements, regular rates will apply except in Weather and Sports block (including announcements) or other regularly scheduled 10-10:30 pm programs instances when the start of the News, Weather and Sports block (including announcements) is delayed until after 10:30 pm.

6. TIME RATES

No. 15-F Eff 2/1/71—Rec'd 8/16/73.
Rev. Eff 8/1/73 Rec'd 8/16/73.

7. SPOT ANNOUNCEMENTS

MON THRU FRI:	30 sec	MON THRU FRI:	30 sec
7-8 am	5	5:30 pm	35
8-9 am	10	SAT:	
9:28-11:30 am	20	7 am	7
Noon-12:30 pm	25	7:30-11:30 am	20
12:30 pm	40	Noon-1 pm	10
1 pm	45	1-5 pm	25
1:30 pm	30	5:30 pm	30
2-2:30 pm	26	5:30-6 pm	30
3-5 pm	30	SUN:	
5 pm	30	7 am-noon	10
5-5:30 pm	40		

(60 seconds unless otherwise specified)

PM:	M	T	W	Th	F	Sa	Su
*6-6:30	80	80	80	80	80	.....	.....
30/20 sec	40	40	40	40	40	.....	25
6:30	.....	.....	.....	.....	.....	.....	.....
30/20 sec	45	45	45	45	45	60	40
*6:30-7	.....	.....	.....	.....	.....	.....	.....
30/20 sec	60	60	60	60	60	.....	.....
7:00	.....	.....	.....	.....	.....	.....	.....
30/20 sec	90	90	90	80	60	130	70
7:30	.....	.....	.....	.....	.....	.....	.....
30/20 sec	110	100	110	110	70	130	70
8:00	.....	.....	.....	.....	.....	.....	.....
30/20 sec	90	110	110	110	110	90	70
8:30	.....	.....	.....	.....	.....	.....	.....
30/20 sec	80	100	110	110	110	90	80
9:00	.....	.....	.....	.....	.....	.....	.....
30/20 sec	90	90	110	110	110	90	90
9:30	.....	.....	.....	.....	.....	.....	.....
30/20 sec	80	80	110	100	100	80	80
9:30-10	.....	.....	.....	.....	.....	.....	.....
30/20 sec	110	90	110	110	110	100	80
9:30-10:30	.....	.....	.....	.....	.....	.....	.....
30/20 sec	.....	90	.....	110	110	.....	75
10:00	120	.....	125	.....	.....	125	.....
30/20 sec	75	90	75	110	110	75	75
†10-10:30	120	120	120	120	120	120	.....
30/20 sec	60	60	60	60	60	60	75
†10:30-concl	60	60	60	60	60	60	.....
30/20 sec	.....	30	30	30	30	30	30

Fixed Nights

60 sec..... 70 30 sec..... 35

(*) Rotates Mon thru Fri.
(†) Rotates Mon thru Sat.

60 sec: twice the 30 sec, unless otherwise indicated. ID's—50% of the 30/20 sec to the nearest dollar. Unless otherwise noted, prices shown represent fixed rates. When announcements are assigned two prices, announcements offered at the higher price (fixed rate) may be purchased on a fixed position non-preemptible basis. When purchased at the lower price (preemptible rate) advertisers may be preempted on 2 weeks' notice.

SRDS - Spot TV
Participation Rates

As an Independent, non-affiliated station WPHL-TV quotes its rates in terms of individual programs. Again, we are close to the basic concept of Grid pricing but the rates are laid out in great detail.

Note that some of the programs are available only on a Fixed basis. Also, the most expensive avails on this independent station are for the sports events.

A major selling point of independent stations is their ability to provide 60-second spots throughout Prime Time, whereas network affiliated stations have but a limited number of Prime 60s to offer.

WPHL-TV

Participation

Rates

WPHL-TV
PHILADELPHIA
AVCO
TELEVISION SALES

(Airdate September 17, 1965.)

NAB TvB

Media Code 6 239 0900 9.00
WPHL-TV Inc., 1529 Walnut St., Philadelphia, Pa. 19102. Phone 215-665-8777. Telex 845-400.

1. PERSONNEL
Pres. & Gen'l Mgr.—Ralph M. Calirl.
Vice-Pres. & Gen'l Sales Mgr.—Allen S. Feuer.
National Sales Manager—Robert A. Fishman.

2. REPRESENTATIVES
Avco Television Sales.
Boston, New England—Creed Associates, Inc.

3. FACILITIES
Video 4,300,000 w., audio 645,000 w.; ch 17.
Antenna ht.: 1,080 ft. above average terrain.
Operating schedule: To 1 am daily. EST, DST.

4. AGENCY COMMISSION
15% to recognized agencies; no cash discount.

5. GENERAL ADVERTISING See coded regulations
General: 1a, 1b, 2a, 2b, 3a, 3b, 3c, 3d, 4a, 5, 6a, 7a.
Rate Protection: 10i, 12k, 13i, 14c, 15, 17.
Contracts: 20a, 21, 22d, 24a, 24b, 25, 26, 27a, 28, 29, 30, 31b, 31c, 32b.
Basic Rates: 40b, 41a, 41c, 42, 45c, 46, 47, 50.
Comb.; Cont. Discounts: 60a, 60c, 60d, 60e, 60f, 62b.
Cancellation: 70a, 70g, 71, 72, 73a, 73b.
Prod. Services: 82, 83, 84, 85, 86, 87c.
Affiliated with NBC Television Network on alternate basis.
Contracts accepted 30 days in advance for announcements, 60 days in advance for programs.

Product Protection

Station will endeavor to provide a maximum of 15 minutes separation of directly competitive products. Station reserves the right to schedule commercial announcements with less than 15 minutes separation. Rebates, credits, and mage-goods will not be issued for any product conflict other than those occuring back-to-back.

6. TIME RATES
No. 23-B Eff 9-3-73 Rec'd 8/13/73.

8. PARTICIPATING ANNOUNCEMENT PROGRAMS
Rec'd 8/13/73.
30 SECONDS

	Fixed	Pre-empt
MON THRU FRI:		
Crusader Rabbit/Milton/Casper—noon-12:30 pm. Par	50	.....
Gomer Pyle—12:30-1 pm	60	50
Movies—1-2:30 pm	60	50
Patty Duke—2:30-3 pm	60	50
Bullwinkle—3-3:30 pm	75	.....
Astroboy/Marine Boy/Spiderman/Popeye/Rotation—3:30-5:30 pm	175	.....
Ultraman/Johnny Socko—5:30-6 pm	225	.....
Untouchables—6-7 pm	250	200
Bonanza—7-8 pm	200	150
Olas—8-9 pm	125	100
9 O'Clock Movie—9-11 pm	150	125
Alfred Hitchcock—11-11:30 pm	100	75
Late Show—11:30 pm-concl	75	60
SAT:		
Various—Sign-on-noon	60	50
Western Theatre—noon-1:30 pm	100	75
Gomer Pyle—1:30-2 pm	100	75
Mad Theatre—2-3:30 pm	125	100
Horror Theatre—3:30-5 pm	125	100
Wrestling—5-6 pm	100	75
Hee Haw—6-7 pm	225	175
High Chaparral—7-8 pm	150	125
Olas—8-9 pm	125	100
Movie—9-11 pm	150	125
One Step Beyond—11-11:30 pm	100	75
Horror Classics—11:30 pm-1 am	100	.....
Charlie Chan—1-1:30	60	.....
SUN:		
Virginian—10:30 am-noon	150	.....
Science Fiction Movie—noon-1:30 pm	150	.....
Sunday Matinee—1:30-3 pm	150	.....
Big Movie—3-5 pm	150	.....
Judd—5-6 pm	150	.....
Untouchables—6-7 pm	250	.....
12 O'Clock High—7-8 pm	200	.....
Life Around Us 8-8:30 pm	100	.....
Family Movie—8:30-10:30 pm	150	.....
Alfred Hitchcock—10:30-11 pm	100	.....
Twilight Zone—11-11:30 pm	100	.....
Late Show—11:30 pm-concl	75	.....
NBC Movies—2 pm-concl Mon thru Sat	275	.....

60 sec: twice the 30 sec.
10 sec: 1/2 the 30 sec.

10. PROGRAM RATES
1 hr 700
(plus preemption charges)

11. SPECIAL FEATURES
Big 5 College Basketball, 30 sec 400
Phillies Baseball, 30 sec 950

COLOR

Schedules network color and film.
Equipped with high and low band VTR.

12. SERVICE FACILITIES
Address all film, tape, slides, copy, copy instructions, artwork, props and other commercial materials to:

Operations Desk,
WPHL-TV,
1230 E. Mermaid Lane,
Philadelphia, Pa. 19118

SRDS - Spot TV
Some Concluding Observations

While every station prints and distributes its own rate card, the simple fact of the differences in physical sizes of them make them difficult for the Time Buyer and Media Director to file and refer to.

SRDS is the advertising agency "bible" on station rates. Stations notify SRDS immediately of any changes in their rate cards, making SRDS the most up-to-date single source on rates. Further, it is the best source for information about facilities and personnel in top positions, more current than Broadcasting Yearbook or Television Factbook for these kinds of information.

Bear in mind that the rates shown in SRDS apply to National Spot advertisers. Many stations, particularly among middling to small ones, publish a Local Retail rate card with generally lower rates than those shown for them in SRDS.

Also, should you be buying a network of stations on a One Time Only (OTO) basis for a special show, the rates for the stations of the network will not necessarily agree with rates shown in SRDS Network Rates. In some of the very large markets, the network rate for time will be higher than the National Spot rate. Generally, smaller stations will quote a higher rate for an hour to a national advertiser than he could buy the same time on the station as part of a network.

All students interested in broadcast management and administration would do well to familiarize themselves with the styles of rate cards used by other media. Recent, but not current, issues of other SRDS publications are available in my office for inspection.

UNIONS AND ASSOCIATIONS IN BROADCASTING

UNIONS

Labor unions trace their parentage in part to the medieval guilds. The guilds were of two types - Merchants Guilds and Craft Guilds. The Merchants Guilds (1100-1500) were forerunners of today's trade associations. They were associations to control local trade, usually in only their own towns. Craft Guilds of about the same time comprised all workmen in a particular craft or trade as weavers, shoemakers, gold workers, etc.

The Craft Guilds set up standards of quality for their work. Members were either (a) Apprentices, youths who usually worked for board and keep while learning the trade, (b) Journeymen, who were paid small wages and had proven levels of skills and (c) Masters, who alone had the right to buy materials, sell the finished product and conduct examinations of the lower ranks. Journeymen, realizing there was little room for them at the top, formed their own associations, very clearly resembling today's unions. Hallmarks, symbols representing the guilds, particularly in metal work, soon were developed to indicate a high calibre of workmanship. From these evolved our present day trade marks and emblems of unions.

In this country labor unions appeared late in the 18th century. In Philadelphia the shoemakers organized in 1792, followed by the Federal Society of Journeyman Cordwainers and the Franklin Typographical Society of Journeyman Printers in New York. There were early strikes and the unions were sued by the employers for "conspiring to raise wages". A union-type organization came into being in 1867 comprising farmers who banded together for better prices for their products, more favorable

monetary policies and curbing of discriminatory railroad rates for their products. Originally called the Patrons of Husbandry, today the organization is the National Grange and exerts considerable power on behalf of farmers.

Early unions adhered to the pattern of including only workers in a single trade or craft. These craft unions are called "horizontal" unions, each representing different groups of workers in a single factory - plumbers, boilermakers, machinists, etc. However as early as 1878 "vertical" unions, a single union representing all workers of all types in a company appeared when the Knights of Labor was organized. The Knights lasted only until 1893 and the vertical union did not surface again significantly until 1935 when the Congress of Industrial Organizations (CIO) was formed of several of the members of the American Federation of Labor (AFL) under the leadership of John L. Lewis of the United Mine Workers (UMW). In 1955 the AFL and the CIO merged into a single organization to represent the bulk of American organized labor.

UNIONS IN BROADCASTING

The principal areas of employees affiliated with unions in broadcasting are the technicians and the performers, with a relatively minor representation of unionized white collar workers.

On the performing side two have stemmed from earlier organizations. Among the earliest was Actors Equity, today an umbrella-like organization which includes the American Guild of Variety Artists (AGVA), American Guild of Musical Artists (AGMA), American Federation of Television and Radio Artists (AFTRA).

Oldest of the performing unions is the American Federation of Musicians (AFM). This organization was founded in 1896 after the failure of

several similar groups to survive. The AFM's first demands on radio were made in 1924. The union was well established in movie theatres, hotels, night clubs and legitimate theatres. Following an established practice - a quota system which required each station to hire a specified number of musicians on its permanent staff - the first negotiations were initiated at KSD, St. Louis (Owned by the POST-DISPATCH) in 1926. KSD was operating entirely with network feeds - no local music originations. Aware of its vulnerability as the leading newspaper, fearing a walkout by the newspaper unions in sympathy with the musicians, the owners signed a contract with the union involving a staff of musicians which outnumbered the other employees of the station! Wages were $4 per man per day. One station in an eastern city got by with only three musicians on staff who were billed variously as a concert orchestra, dance band, string group, etc. That took some "doubling".

In 1940 the AFM sued to obtain fees for performance of recorded music by radio stations. The courts ruled that the musicians' rights ended with the sale of the record. AFM president James C. (for Caesar) Petrillo called for an industry wide boycott on recording. Twenty seven months later the union got from the networks payment into a trust fund and royalties for all recordings and transcriptions played. In 1959 the union demanded payment to members of the original recording fee for each re-use of a record. They settled for less but still collect a residual fee. (This does not apply to broadcasting however, excepting movies shown on TV where they receive a 1% fee based on the rental price of the film.)

There have been disputes over "stand-by" musicians - those required to be hired when an outside or traveling music group is performing over the air. However, jurisdictional disputes have been few. Some locals

limit the number of performances by outside groups and set a time limit before which an out-of-town member may be admitted to full membership in the local. This has come about because of the glut of "outside" members thronging to Hollywood and New York particularly.

The earliest performing unions are those embraced in the AAAA. Actors Equity was formed around the turn of the century first to protect actors from unscrupulous managers of theatres. The sign here appeared on

the Call Boards backstage in virtually every vaudeville theatre. It was common practice for an act to be fired at Monday morning rehearsal for a split week run at the whim of the theatre manager (or his wife). Being unpaid and with a "sleeper jump" to the next booking was a serious problem for many entertainers. (One economy move they used was the wearing of a "thousand-miler", a dark blue shirt that didn't show the accumulation of soot that accompanied railroad travel in those pre-air conditioning days.) Equity sought and obtained the "play or pay" contract for its members, guaranteeing payment for every booking.

Radio spawned its own union for its talent. The American Federation of Radio Artists (SFRA) signed its first contract with KMOX, St. Louis, in 1937 as the bargaining agent for the announcers. They were certified as the bargaining agent in a National Labor Relations Board (NLRB) election. Almost immediately AFRA signed contracts with the networks, most stations and advertising agencies covering all talent appearing on radio. Roughly 70% of all live broadcasting (commercial and sustaining) was subject to collective bargaining with AFRA.

A television contract was negotiated in 1950, not with AFRA but with the new Television Authority which included AGMA, AGVA, Actors Equity and Chorus Equity. It had been formed much earlier (1934). In 1941 the

Television Authority voted to merge with AFRA and become today's American Federation of Television and Radio Artists (AFTRA). A contract with the networks was signed in 1954 providing for a network supported pension and welfare plan and an industry supported major medical policy.

The first major strike by AFTRA occured in 1967 against the networks on the issue of pay for newsmen at network Owned and Operated (O&O) stations. They were joined by sixteen other unions and guilds in this walk-out. Later that year AFTRA walked out ("hit the bricks" in early union parlance) in sympathy with the National Association of Broadcast Employees and Technicians (NABET) in that union's dispute with the O&O of ABC.

A jurisdictional squabble arose early with the Screen Actors Guild (SAG). It has been resolved by recognizing the jurisdiction of AFTRA over all production on video tape while SAG has jurisdiction over filmed material. Many artists belong to both unions.

AFTRA's contracts with stations, networks, producers and advertising agencies are written in terms of a schedule of minimum fees for various types of performances. An artist may appear in performances for 30 days before joining the union. After that membership is mandatory. Initiation fee is $300, dues are scaled to the amount earned by each performer. A current goal of AFTRA is to have all who appear in a show or commercial be union members. Example - a commercial shot in a small town with the townspeople on camera, none of them union. Present membership of AFTRA is roughly 30,000.

SAG was founded in 1933 to represent all talent appearing in films. Its original goals were to establish standards for working conditions, hours and wages in the motion picture industry. They were strongly supported by

other unions in the industry. With the advent of television SAG sought and

obtained contracts providing for "residuals", payments to talent for subsequent showings of their work (1952). The union's greatest concern is with "runaway productions" - filming abroad and using lower paid foreign performers. Initiation fees and dues are quite comparable to AFTRA's. Revenue in 1976 was $125 million. Contracts have been updated to include all means of transmission including foreign use, cable and satellites. Current membership is about 35,000. Both SAG and AFTRA are affiliated with the AFL-CIO.

The Writers Guild is a successor to the Authors Guild which in the early 1900's was formed to protect the rights of writers of books, short stories, articles, etc. Soon there was formed the Dramatists Guild to perform the same function for writers for the theatre. As the motion pictures progressed in a few years to the point which warranted an organization to represent writers here, the Screen Writers Guild was formed, soon to join with the Authors Guild. In 1942 a contract was signed with the major studios with the Screen Writers Guild. Soon the Radio Writers Guild was spawned.

Following this series of mutations there emerged in 1954 a coalescing of these several groups into the Writers Guild of America (WGA). This in turn is made up of two groups - Writers Guild-East (WGA-E) and the Writers Guild-West (WGA-W). These groups also include residuals in their contracts. Membership is roughly 4,400.

Also concerned with the production side of broadcasting is the Directors Guild of America (DGA), an outgrowth of the Motion Picture Directors Association (1910-1935). The Radio Directors Guild of America (1935) became the Radio-Television Directors Guild (1960) and a subsequent

merger with the Screen Directors Guild resulted in the present-day Directors Guild of America.

A major concern of the DGA is the matter of the director's creative responsibilities including the right to review each day's shooting, supervision of cutting, consultation on music used and that the director's name in the credits be in letters 30% as large as the film title. In television the Guild is pressing for the right to supervise cuts in feature films to be shown on TV.

On the technical side the earliest union in broadcasting was the International Brotherhood of Electrical Workers (IBEW), founded in 1891. Only a small proportion (about 2%) of the total membership is employed in broadcasting. In St. Louis, at KMOX, the first IBEW contract to represent the engineers and technicians was written (1934). Almost immediately a contract was negotiated with CBS network and to this day the bulk of all CBS affiliates' technicians are represented by IBEW. In short order the union formed a department within its structure exclusively for broadcast personnel.

IBEW contracts are very specific in terms of job descriptions, wages, hours, working conditions. At a station one member is designated Shop Steward, receives all complaints from members and brings them to the attention of management. Failing to reach agreement at this level, an agent of the local is called in to continue the negotiations. New employees have 60 days in which to join the union at a station where IBEW has a contract. Seniority and security are very strong points in IBEW negotiations. Its jurisdiction covers live and tape technicians, broadcast engineers, maintenance electricians, construction electricians and studio lighting crews.

Nearly coincident with the organizing in radio by the IBEW a new union, the National Association of Broadcast Employees and Technicians (NABET) was formed in St. Louis at KSD in 1933. As with IBEW a contract was almost immediately signed with the NBC network, and today NABET is the principal technical union at NBC and ABC stations. Both technical unions are affiliated with the AFL-CIO.

Fairly early in its career NABET made a slight change in its name. Originally the "E" stood for Engineers, today it stands for Employees. This reflects the fact that wherever possible NABET seeks to represent talent - announcers, newsmen, etc. This circumstance obtains to a lesser degree in the case of IBEW. In the instance of a station with no union contracts the technical unions will try to organize as many of the station personnel as possible, regardless of function. This frequently leads to bitterly contested elections as AFTRA may seek a contract for the talent.

NABET negotiates separately with each station. IBEW, in the case of the CBS O&O negotiates in New York simultaneously for all its stations and a uniform contract applies to all. This has the effect of pricing the CBS O&O above the competing stations in the market in some cases.

Picket lines of other unions are frequently respected by NABET locals, but it is a decision made by the individual local. Union membership is required of employees at a station with a NABET contract within 60 days of employment. Initiation fee in San Francisco is $25, annual dues 1 2/3% of wages paid.

The one remaining union of particular significance in broadcasting is the International Alliance of Theatrical Stage Employees (IATSE).

Founded in 1893 it is the union of the "footlight trades", embracing stage-

hands, make-up artists, wardrobe attendants, graphic artists, film editors, electricians, remote lighting crews, cameramen, soundmen, grips, set designers, scenic artists and cartoonists. Originally concerned with the live theatre IATSE quickly established itself as a major force in the movie industry. Historically considered a "feather-bedding" union (specifying more employees than are needed) and severaly damaged by a short era of control by organized crime, the union today is a stable and respected organization.

IATSE was dealt a serious blow in 1927 when talking pictures spelled the virtual death knell of vaudeville. Coupled with the Depression and the sharp drop in theatre attendance the union sought to limit its numbers by severely restricting new memberships. In many instances it gave aid to producers in money or waiving some wage requirements in order to keep theatres from going dark.

With the appearance of television in the late 40's the demand for stage personnel increased sharply - so sharply that IATSE had to start recruiting new members. And many of the old members were of an age not capable of meeting many of the demands of the new medium. The union has stuck doggedly to its policies on jurisdiction and seniority.

If you have threaded your way through NABETAFTRAIATSEIBEWSAG you have a grasp of some of the basics of the unions most likely to be encountered in broadcasting, that is, outside of Hollywood and New York. There you would be faced with the International Brotherhood of Teamsters (IBT), United Scenic Artists (USC), Producers Guild of America (PGA), Composers and Lyricists Guild of America (CLGA), Screen Cartoonists Guild (SCG), to name a few.

Simply classified, the unions fall into two groups - The "above-the-line" unions are concerned primarily with the creative side of the media - AFTRA, SAG, AFM, DGA and WGA-W. Those classified as "below-the-line" unions are those concerned with the physical production in broadcasting. Principal here are NABET, IBEW, IATSE, occasionally IBT. As a crude generalization the "below-the-line" unions represent steady employment at clearly defined wages while the "above-the-line" unions include more creative people with less positive work schedules and more often individually negotiated wages at higher levels than union scale.

A word or two about strikes.

Basically a strike is the withdrawing of their services by workers to force a cessation or interruption of the employer's business with consequent monetary loss to him. Lost wages during a strike are usually compensated for in part by strike benefits paid out of the union treasury.

Labor strife has frequently seen much violence - the Haymarket riots in Chicago (1886), involving strikers for an eight hour day, (a bomb killed 7 police, wounded 88), Homestead, Pa., where a strike at the Carnegie Steel Mills resulted in 7 Pinkerton guards and 11 strikers killed, the Pullman strike in Chicago (1894), ended by President McKinley calling in Federal troops "to keep the mails moving", the coal mine strike in Herrin, Ill. (1921) cost 36 lives.

Broadcasting has seen nothing resembling in any way such tragic events. Both sides - labor and management - are aware of the unique value of <u>time</u>. The billing for the 8:30 pm spot missed because of a strike can never be retrieved. When a strike is settled the workers cannot look forward to overtime and extra shifts to make up for lost wages. This

appreciation of time acts as a brake on any precipitous action by either party. What's more, since labor costs are a lesser item in the cost of running a station, management can increase rates for time by a minor amount - too small to be seriously objected to by advertisers - and recoup some or all of the lost revenue. Broadcasting has never given birth to union organizing songs like - "Which Side Are You On?", "I'm Sticking to the Union", "Solidarity Forever", to say nothing of "It's Better with a Union Man"!

There have been isolated instances of relatively minor vandalism, a very minor bombing, often verbal pressure on station advertisers. Maybe there are just fewer "rednecks" in broadcasting!

ASSOCIATIONS IN BROADCASTING

Turning to the management side of the industry we find a fair number of associations with which the broadcaster must, or is likely to deal.

On the "must" list we find the associations controlling music copyrights in the van. Oldest of the three of any significance is the American Society of Composers, Authors and Publishers (ASCAP). Implementing a law passed in 1897 which provided that commercial users of music must obtain permission of the copyright owner, ASCAP was founded in 1914. Basically, it provides a clearinghouse for the payments for use of music to its composer members. First president was famed American composer-musician Victor Herbert.

While the law requires payment for performances "for profit", broadcasting early took the stance that it was offering a free public service in the music it performed. In 1923 the courts decided otherwise

- radio was not a charitable enterprise. The early fees levied on broadcasters for performing ASCAP-controlled music was $250 a year, a figure soon to rise. By 1939 a blanket license to perform any and all music in the ASCAP catalogue was priced at 2 1/8% of a station's gross revenue from time sales. A sharp increase was in prospect. Failing to reach agreement on terms, all ASCAP music was banned from the networks and stations. Public Domain music was all that could be played and Stephen Foster's "Jeannie With the Light Brown Hair" turned gray from over-performance on the air.

As early as the 20's organized broadcasters had forseen the day when they would have to come to grips with ASCAP's virtual monopoly of music. In 1939 the first halting steps to create competition in the music field were taken with the creation of Broadcast Music Incorporated (BMI). It was a slender reed at first. The controversy with ASCAP was finally settled, with the Mutual Broadcasting System (MBS) signing a contract calling for payment of 3% of time sales, increasing to 3 1/2% in four years. The other networks and stations soon followed suit.

ASCAP's system of compensation to the composers was complicated, and some claimed it discriminated against new composers. This presented an opening wedge for the new competing organization.

BMI opened for business in 1939, financed by purchases of stock by broadcasting stations. When the crunch came in 1941 the composers of the BMI roster were a mere handful and but a single publisher had signed up with the new organization. By offering more attractive compensation to composers BMI increased its membership very rapidly. As of the present time the amount of music controlled by the two organizations is approaching parity. In the current

"playlists" BMI enjoys a lead by virtue of its emphasis on country, soul, R&R, R&B, and other current tastes in music.

Soon BMI began buying back its stock from broadcasters and has emerged as an entirely independent corporation.

Actual enumeration of the number of plays of each selection controlled by the two licensing organizations is an impossible task. A system utilizing intensive analysis of performance in a carefully selected sample of broadcasting stations provides a basis for reasonable estimating of the air exposure of all licensed music. This is used to compute the distribution of royalty fees to the composer members.

Stations are granted "blanket" licenses for the performance of all music controlled by each copyright holding organization. ASCAP is negotiating for a "per-performance" basis in TV but the logistics of such a system are discouraging in prospect. Fees for "blanket" licenses currently are slightly less than 3% by ASCAP and a shade below that for BMI.

A third organization, Society of European Artists and Composers (SEAC) plays a relatively minor role in broadcasting. Much of its library is music of serious (classical) composers which is not too often played on American broadcasting stations. Fees are modest, excepting for "grand rights" to perform complete operas, even recorded.

Membership in voluntary organizations is a different matter. No station can get by without an ASCAP and/or BMI license, but not all need join the major trade association, the National Association of Broadcasters (NAB). Formed in 1923 by a group of broadcasters meeting in Chicago, a first order of business was to react to the demands of ASCAP for permission to perform the music that was already recognized to be the very lifeblood of the emerging industry.

Quickly the organization became the spokesman for the industry. Headquartered in Washington, it soon developed into a powerful lobbying force for broadcasters. As a typical trade organization it undertook a number of functions for the industry. A large Legal department was obvious. Departments devoted to Engineering, Research, Public Relations, Small Markets, Broadcast Management, Community Affairs, are among its divisions today.

NAB is administered by a Board of Directors, all of whom are active broadcasters. The president, Vincent T. Waselewski is an attorney (past presidents have mostly been broadcasters).

Important adjuncts of the NAB are the Code Boards of Good Practices for radio and television. These boards provide guidelines for broadcasters in terms of good and acceptable practices for programming and commercials. They are the self-regulatory bodies for the industry. However, not all stations subscribe to the Codes (they are financed separately from NAB dues), nor do all NAB members subscribe to the Codes, but there is a move afoot to make Code subscription a part of all NAB memberships. Subscribers to the Codes are currently 2,663 radio stations and 468 TV stations.

The annual NAB convention registers an attendance well in excess of 5,000 with the largest display by equipment manufacturers available anywhere. Traditionally the convention is held every 4th (Presidential) year in Washington.

Separate publicity and public relations groups, the Television Information Office (TIO) and the Radio Information Office (RIO) are sponsored by the NAB. These organizations maintain continuing contact with legislators, national and local, educators, clergy and community leaders

apprising them of all favorable information about the media.

Sales development for the media is conducted by the Television Bureau of Advertising (TvB) and the Radio Advertising Bureau (RAB), each financed by membership fees independent of NAB membership. These organizations concentrate on sales helps, presentations and publicity to the trade on behalf of their broadcast members.

These are the principal organizations to which the majority of stations belong. There are several groups with more limited areas of concentration as, the Association of Maximum Service Telecasters (AMST, principally "pre-freeze" stations), the Clear Channel Broadcasting Service (CCBS, primarily holders of Class 1-A AM frequencies), the Association of Independent Television Stations (INTV, unaffiliated with any network), the Institute for Broadcast Financial Management (IBFM), Broadcasters Promotion Association (BPA), Radio and Television News Directors (RTNDA), and so it goes.

In all more than 50 organizations are found, catering to the needs of broadcasters in a wide variety of fields. Few find too many useful, too many, too costly.

And so, we have scoured the alphabet (just about every letter, Q and Z rather sparingly) to give a brief overview of the organizations which broadcasters may join, unions with which they may or must deal. For those interested in treating this subject in greater depth, the following reading is suggested.

Suggested Reading

Koenig, Allen E.	"Broadcasting and Bargaining"
Monthly Labor Review	"Trade Unions in the Performing Arts" (March 1970)
Television Magazine	"Television Unions" October 1967
	"The Above-the-Line Unions" November 1967
	"The Below-the-Line Unions" December 1967
Television/Radio Age	"Current Cost-cutting, A Spur to Non-Union Production" November 27, 1972

AUDIENCES AND REVENUES IN BROADCASTING

Broadcast audiences are the basis for the rates for time charged advertisers and thus directly affect broadcast revenues. Let's consider first the audiences to the senior medium - Radio.

Our earliest data on the number of radio stations on the air indicates there were 30 in 1922. Here is the growth since that time in the number of radio stations allocated.

YEAR	AM STATIONS	FM STATIONS
1927	733	
1937	685	
1947	1,517	918
1957	3,295	554
1967	4,190	1,865
1977	4,555	3,900

These radio stations are located in 230 Metropolitan Areas, plus many unincorporated places. There is virtually no inhabited place in the U.S. without radio service - 98.6% of all U.S. households have one or more radio sets, average 5.7 per home. Additionally, there are 104.4 million automobiles with radios - 95% saturation. In all radio owning homes 71% have radios in a bedroom, a bit more than half (54%) in the kitchen, while the living room is the focus of the radio in less than half (47%). This is in sharp contrast to Radio's early days when the family gathered around the single set in the living room. And 17.5 million battery operated radios can follow their owners wherever they may go. Some idea of the growth of FM audiences can be seen in the fact that in 1960 only 8% of homes could receive FM programming while in 1976 roughly two thirds (65% could receive FM.

Radio delivers the news first in the morning for more than half the adult population (52%) and for 46% it is the primary news source during

the daytime hours. People look to Radio most for News (92%), nearly as many for "relaxation" (88%) and more than half (59%) for "companionship". In a week's time Radio reaches 94.7% of all persons 18 years or older, virtually every teenager (99.5%). Radio sets turned on are more numerous than TV sets in use throughout the daytime until 6:00 pm when TV attracts the larger audiences from that time on (1976).

Radio stations are so numerous - ranging from single station markets to as many as 33 in metropolitan Los Angeles (commercial only), that a great variety of specialized programming for individual segments of the population is possible. This in turn makes Radio a popular medium for a wide range of products and services. Local advertisers account for the vast bulk of all radio time sales. The five leading categories of local radio advertisers are:

1. Financial Institutions (banks, savings and loan associations)
2. Departmental Stores (clothing and general department stores)
3. Automobile Dealers
4. Restaurants
5. Furniture Stores

In terms of listening the largest number of adults is found from 7:00 to 8:00 am (31%), throughout the day never less than one in five (20%) of all adults is found listening to Radio.

Clearly, Radio is a pervasive medium reaching virtually everyone in any week's time.

Television presents a somewhat different picture.

For all practical purposes TV started just after the end of World War II. In 1949 there were already 1.6 million homes equipped with TV and served by 124 TV stations. The number of allocated stations increased.

YEAR	VHF STATIONS	UHF STATIONS
1949	124	
1957	609	244
1967	580	250
1977	618	366

The FCC reports 137 Metropolitan Areas with 3 or more TV stations (1976), while the rating services report on roughly 100 more markets with only 1 or 2 stations. The number of TV services available to U.S. homes has changed markedly.

	1964	1976
Can receive only 1-3 TV stations	22%	4%
Can receive 10 or more TV stations	4%	27%

This increase in number of stations receivable is due in part to the fact that today roughly 14% of all TV homes subscribe to Cable.

The proportion of homes owning TV has increased very rapidly.

YEAR	% OF HH WITH TV
1949	2%
1955	67%
1965	94%
1975	97%
1977	98%

And the number and kinds of TV sets has changed sharply.

	1965	1976
Black & White only	93%	23%
Color TV only	7%	47%
One set only	78%	55%
2 or more sets	22%	45%

So we have virtual saturation of U.S. households by both electronic media. But there is a small offsetting pattern to be found in the declining size of the average household.

YEAR	PERSONS PER HOUSEHOLD
1963	3.23
1973	2.96
1977	2.80

Actual viewing of TV has increased almost uninterruptedly. Here is a comparison of Weekly Hours of TV set use and Total Persons Viewing.

YEAR	HH SET USE	AVERAGE VIEWING PER PERSON
1971-2	41:51	28:02
1976-7	44:21	21:10

Generally heaviest viewing is found in the oldest age groups (55 years or older) where Women in 1976-7 viewed 34:01 hours per week, Men 30:12 hours. Teenagers are the poorest viewers - Females 23:14 and Males 21:56 hours per week.

In the Fall of 1977 we find 23 new TV shows, 51 carryovers from preceding seasons in the evening schedules. Of the "veterans" only 7 had been on the air for 8 or more years.

Principal changes in the numbers of programs of various types in the last five years were:

EVENING	1973	1977
Drama	10	18
Situation Comedy	12	16
Feature Films	16	10
Suspense/Mystery	17	12
Variety	5	3
Other	3	7
	36	31

Of some interest perhaps is this comparison of the 10 evening shows rated highest by Working Women and Non-Working Women.

PROGRAM	W-WOMEN	N-W WOMEN	PROGRAM
Laverne & Shirley	24.4	22.7	NBC Monday Night Movie
Happy Days	24.0	22.1	The Waltons
ABC Monday Night Movie	22.0	21.9	All in the Family
M*A*S*H	21.2	21.8	The Big Event
The Big Event	20.8	21.7	Little House on the Prairie
Charlie's Angels	20.7	21.5	Happy Days
NBC Monday Night Movie	19.3	21.3	ABC Monday Night Movie
Baretta	19.0	20.8	Charlie's Angels
Bionic Woman	19.0	20.5	Laverne & Shirley
One Day at a Time	18.8	20.0	M*A*S*H

So we have 15 different offerings among the Top 10 for these two groups. The top four among Working Women placed no better than sixth among Non-Working Women.

One final look at TV audiences - the differences in viewing between White and Non-White viewers.

At all hours of the day and night the percentage of viewing in Non-White homes exceeds that of White homes. During Prime Time the differences are small - 9-10 pm shows 67.2% viewing in Non White to 66.5% in White homes. Greatest disparity is found 12 midnight - 1 am, Non-Whites 37.8%, Whites 21.3%.

So much for our review of audiences reached by the two broadcast media. Time does not permit detailed examination by Age, Sex, Income and City Size groups. All are available from the Nielsen Television Index reports on the television audience.

Now to the question of Revenues in broadcasting.

It is generally agreed that the first payment for broadcast advertising was $50 for 10 minutes by the Queensborough Corporation on August 28, 1922 to WEAF in New York (later they bought a similar amount of time in the evening for $100). Total revenues of WEAF in 1922 were less than $1,000. By 1937 radio time sales exceeded $100 million, passed the half billion mark in 1957 and in 1977 exceeded $2 billion.

Television got off to a better start. The first year of significant TV billings was 1948 and totalled $8.7 million. Nine years later (1957) TV billings had increased 100 fold (over $900 million). Add nine more years and TV attracted $2 1/2 billion in Time Sales Revenues.

These revenues in the two media have been derived from three sources - Network, National Spot and Local Time Sales. The John Blair

Company, Television and Radio Station Representatives prepare an annual summary of financial data on the media. Here are their data for Radio stations during the most recent years.

Broadcasting Revenues of U.S. Radio Stations

This table indicates the trend in revenues derived by U.S. radio stations from the radio advertising expenditures presented in the preceding table. Note that the revenues indicated for network are low in comparison with spot and local sources of revenue. Advertising expenditures in network radio are normally far less than those in network television.

Year	NUMBER OF STATIONS REPORTING* AM & AM/FM**	AM, AM/FM & Ind. FM	REVENUES (IN MILLIONS) Network	National/ Regional	Local	Total Broadcast Revenue
1965	3,941	4,279	$11.0	$261.3	$ 553.0	$ 792.5
1966	4,019	4,400	12.5	292.6	607.6	872.1
1967	4,076	4,481	11.6	298.3	641.2	907.3
1968	4,161	4,594	10.9	342.2	733.4	1,023.0
1969	4,191	4,815	9.7	349.6	799.9	1,085.8
1970	4,209	4,898	9.1	355.3	852.7	1,136.9
1971	4,252	5,020	10.1	378.0	954.6	1,258.0
1972	4,271	5,136	11.0	384.3	1,098.4	1,407.0
1973	4,357	5,244	11.8	382.3	1,205.4	1,501.9
1974	4,361	5,436	13.1	386.8	1,308.8	1,603.1
1975	4,355	5,535	15.0	416.3	1,403.3	1,725.0

*AM/FM stations filing a combined report are counted as one station.

**Excludes FM stations and FM stations associated with AM stations but reporting separately.

Data for 1975 is based on 4,355 AM & AM/FM stations, 477 FM stations associated with AM stations but reporting separately in 1975, and 703 independent FM stations.

SOURCE: F.C.C. Broadcast Financial Data

Comparable figures for Television reveal that in 1975 (most recent FCC figures available) one sixth as many TV stations as radio stations accounted for time sales 40% greater in dollars than did the older medium.

Broadcasting Revenues of U.S. Television Stations

Year	No. of Stations Reporting	Network Compensation	Non-Network Revenues Total	National/ Regional	Local	Total Broadcast Revenue
			(IN MILLIONS)			
1965	589	$230.3	$1,124.2	$ 795.9	$ 328.3	$1,176.2
1966	611	244.2	1,255.2	882.2	373.0	1,299.2
1967	619	245.9	1,275.3	882.7	392.6	1,322.1
1968	642	247.6	1,491.8	1,009.8	482.0	1,504.5
1969	651	254.1	1,665.9	1,119.1	546.8	1,652.1
1970	659	240.1	1,691.7	1,102.6	589.1	1,663.6
1971	660	229.9	1,688.4	1,022.8	665.6	1,656.2
1972	663	224.5	1,987.5	1,177.4	810.1	1,908.1
1973	666	233.0	2,162.4	1,230.2	932.2	2,059.9
1974	669	248.3	2,351.0	1,337.3	1,013.7	2,230.3
1975	669	258.3	2,565.4	1,449.2	1,116.2	2,420.4

In contrast to the statistics on the opposite table, which indicate the investments made by advertisers in television for network, national/regional and local time, the table above shows the REVENUES received by U.S. Television stations.

National/regional and local non-network sales figures are for time only. Excluded are revenues from programs, talent, materials, facilities and services sold in connection with the sale of time. The figures represent revenues before commissions to agencies, sales representatives and brokers.

Because reporting stations may be inconsistent in their application of the criteria for classification of national/regonal and local time sales, year-to-year comparisons involving these two categories of sales should be made with caution. However, the total broadcast revenue, network and total non-network sales categories would be unaffected by any such reporting inconsistencies.

SOURCE: F.C.C. Broadcast Financial Data

Significant changes have occured in the relative importance of these three types of Time Sales to stations in the two media. Consider first the distribution in Radio in 1934 compared with 1948.

TIME SALES	1934	1948
Network Compensation	50%	34%
National Spot	17	25
Local	33	41
	100%	100%

Radio stations increased in numbers during these years, from 591 to 1,621, a gain of 174%. Obviously many of the newer stations were Independents with no revenues from the networks. The John Blair analysis shows the following for the changing pattern of Radio Time Sales in recent years. Local now represents three of every four dollars of Radio Time Sales.

Distribution of Broadcasting Revenues of U.S. Radio Stations

		Non-Network		
Year	Network	Total	National/ Regional	Local
1965	1.3%	98.7%	31.7%	67.0%
1966	1.4	98.7	32.1	66.6
1967	1.2	98.8	31.4	67.4
1968	1.0	99.0	31.5	67.5
1969	0.8	99.2	30.2	69.0
1970	0.7	99.3	29.2	70.1
1971	0.7	99.3	28.2	71.1
1972	0.7	99.3	25.7	73.6
1973	0.7	99.3	23.8	75.5
1974	0.8	99.2	22.6	76.6
1975	0.8	99.2	22.7	76.5

In 1975, U.S. radio stations derived 99.2% of their operating revenues from non-network time sales which comprised 22.7% in national/regional time sales and 76.5% in local time sales to advertisers. Radio network compensation to affiliates accounted for 0.8% of station revenue.

See page 25 for a description of, and qualifications for, the above data. Pages 26 through 35 include specifics for each individual market.

SOURCE: F.C.C. Broadcast Financial Data

Television has shown a similar decline in the importance of Network compensation for Time Sales and for much the same reasons. From 109 "pre-freeze" stations in 1948 to 1,030 in 1976 the number of affiliated stations has risen sharply. Local Time Sales have shown a considerable increase in TV while Network has been declining in importance.

Distribution of Broadcasting Revenues of U.S. Television Stations

Year	NETWORK COMPENSATION	NON-NETWORK REVENUES		
		Total	National/Regional	Local
1965	17.0%	83.0%	58.8%	24.2%
1966	16.3	83.7	58.8	24.9
1967	16.2	83.8	58.0	25.8
1968	14.2	85.8	58.1	27.7
1969	13.2	86.8	58.3	28.5
1970	12.4	87.6	57.1	30.5
1971	12.0	88.0	53.3	34.7
1972	10.2	89.8	53.2	36.6
1973	9.7	90.3	51.4	38.9
1974	9.6	90.4	51.4	39.0
1975	9.1	90.9	51.3	39.6

In 1975, television stations in the U.S. derived 90.9% of their operating revenues from non-network time sales which comprised 51.3% in national/regional time sales and 39.6% in local time sales to advertisers. Television network compensation to affiliates accounted for 9.1% of station revenues.

Page five contains a description of, and qualifications for the above data. Pages six through nine contain a detailed tabular presentation of revenues for individual television markets based on reports filed with the Federal Communications Commission by the stations operating in those markets.

SOURCE: F.C.C. Broadcast Financial Data

So far we have dealt only with station revenues. Let's consider the overall investments in the media, including talent and production costs - what advertisers actually spend for use of the media. The Blair data here cover a slightly different span of years but the trends are clear.

Radio Advertising Expenditures (IN MILLIONS)

Year	Total	Network	Spot	Local
1962	$ 736	$ 46	$233	$ 457
1963	789	56	243	490
1964	846	59	256	531
1965	917	60	275	582
1966	1,010	63	308	639
1967	1,048	64	314	670
1968	1,190	63	360	767
1969	1,264	59	368	837
1970	1,308	56	371	881
1971	1,445	63	395	982
1972	1,612	74	402	1,136
1973	1,723	68	400	1,255
1974	1,837	69	405	1,363
1975	1,980	83	436	1,461
1976*	2,244	99	495	1,650
1977*	2,449	114	535	1,800

TOTAL RADIO ADVERTISING EXPENDITURES increased 13.3%. Blair Research estimates an increase of 9.1% in 1977.

NETWORK RADIO EXPENDITURES FOR LINE AND REGIONAL/STATE NETWORKS were up 19.3% in 1976. Blair Research estimates an increase of 15.2% in 1977.

NATIONAL AND REGIONAL SPOT RADIO EXPENDITURES were up 13.5% in 1976. Blair Research estimates an 8.1% increase in 1977.

LOCAL RADIO increased 12.9% in 1976. An increase of 9.1% is estimated for 1977.

Data shown above are estimates of Total Advertising Expenditures including time, commercial production and other costs.

SOURCE: McCann-Erickson *Blair Research Estimates

While Radio expenditures roughly tripled from 1962-1977, TV was experiencing nearly quadruple dollars for advertising in the junior medium.

U.S. Television Advertising Expenditures

Year	Total	Network	Non-Network Total	Non-Network National/ Regional	Non-Network Local
			(IN MILLIONS)		
1962	$1,897	$ 976	$ 921	$ 629	$ 292
1963	2,032	1,025	1,007	698	309
1964	2,289	1,132	1,157	806	351
1965	2,515	1,237	1,278	892	386
1966	2,823	1,393	1,430	988	442
1967	2,909	1,455	1,454	988	466
1968	3,231	1,523	1,708	1,131	577
1969	3,585	1,678	1,907	1,253	654
1970	3,596	1,658	1,938	1,234	704
1971	3,534	1,593	1,941	1,145	796
1972	4,091	1,804	2,287	1,318	969
1973	4,460	1,968	2,492	1,377	1,115
1974	4,851	2,145	2,706	1,495	1,211
1975	5,263	2,306	2,957	1,623	1,334
1976*	6,585	2,825	3,760	2,140	1,620
1977*	7,500	3,315	4,185	2,360	1,825

In 1976, Total Television Advertising increased 25.1%. Blair Research estimates an additional increase of 13.9% in 1977.

Network Television Expenditures were up 22.5% in 1976 and an increase of 17.4% is estimated for 1977.

Non-Network Television showed a 27.2% increase in 1976. Blair Research estimates an increase of 11.3% for 1977.

National and Regional Television showed a 31.8% increase in 1976. Blair Research estimates an increase of 10.3% for 1977.

In 1976, Local Television increased 21.4%. Blair Research estimates an additional increase of 12.6% in 1977.

SOURCES: McCann-Erickson *Blair estimate

Not to be overlooked is the youngest of the media - FM. From a start of 55 FM stations in 1948 the number increased to 1,265 in 1965 and 3,729 in 1976. Revenues showed this growth.

Total FM Revenues

Year	Revenues (In Millions)
1965	$ 24.7
1966	32.3
1967	39.8
1968	53.2
1969	67.4
1970	84.9
1971	115.0
1972	151.9
1973	198.3
1974	248.2
1975	308.6
1976	390.0*
1977	485.0*

Data on local and national/regional revenues not available prior to 1974.

SOURCE:
F.C.C. Broadcast Financial Data

*Blair Radio Research estimate

What does this mean - these broadcasting expenditures - to the total economy?

Total Advertising Expenditures (all media) compared with Gross National Product and personal Consumption Expenditures looks like this.

U.S. Advertising Expenditures Related to National Economic Statistics

Gross National Product for 1976 is estimated at $1.695 trillion. This is an increase of 11.8% over 1975. For 1977, a further increase of 12.0% to $1.898 trillion is forecast.

Personal Consumption Expenditures are estimated at $1.080 trillion in 1976, an increase over 1975 of 11.0%. For 1977, we are estimating an 11.9% increase to $1.208 trillion.

Advertising Expenditures in 1976, when finally tallied will be the highest in United States history. Present estimates place the figure at $33.42 billion, an increase over 1975 of 18.4%. For 1977, we are estimating Advertising Expenditures of $36.85 billion, an increase of 10.3%.

Year	Gross National Product	Personal Consumption Expenditures	Advertising Expenditures	Year	Gross National Product	Personal Consumption Expenditures	Advertising Expenditures
	(In Billions)				(In Billions)		
1962	$ 563.8	$ 355.2	$12.4	1970	$ 982.4	$ 618.2	$19.6
1963	594.7	374.6	13.1	1971	1,063.4	668.2	20.7
1964	635.7	400.4	14.2	1972	1,171.1	733.0	23.3
1965	688.1	430.2	15.3	1973	1,306.6	809.9	25.1
1966	753.0	464.8	16.6	1974	1,413.2	887.5	26.8
1967	796.3	490.4	16.9	1975	1,516.3	973.2	28.2
1968	868.5	535.9	18.1	1976*	1,695.0	1,080.0	33.4
1969	935.5	579.7	19.4	1977*	1,898.0	1,208.0	36.9

Gross National Product—Personal Consumption Expenditures for all goods and services, *plus* gross private domestic investment, *plus* net exports of goods and services, *plus* net Government purchases of goods and services.

Personal Consumption Expenditures—Personal expenditures for durable and nondurable goods and services. All personal income from wages, salaries, dividends, interest, insurance, pensions, etc., after taxes and social insurance, and after personal savings.

Advertising Expenditures—Total dollars expended for advertising on all media, national and local.

These figures become more meaningful when we consider Total Advertising Expenditures as a percent of Gross National Product and Personal Consumer Expenditures.

Total Advertising Expenditures As Percentages of Gross National Product and Personal Consumption Expenditures

Advertising expenditures represent nearly 2.0% of the Gross National Product and over 3.0% of Personal Consumption expenditures.

Year	Advertising/ GNP	Advertising/ PCE	Year	Advertising/ GNP	Advertising/ PCE
1962	.02205	.03499	1970	.01990	.03159
1963	.02203	.03497	1971	.01950	.03104
1964	.02226	.03534	1972	.01990	.03179
1965	.02216	.03545	1973	.01923	.03102
1966	.02208	.03578	1974	.01895	.03018
1967	.02119	.03440	1975	.01862	.02900
1968	.02083	.03376	1976*	.01972	.03094
1969	.02076	.03350	1977*	.01942	.03051

SOURCES: Advertising Expenditures: McCann-Erickson/GNP & PCE: U.S. Department of Commerce, Bureau of Economic Analysis.

*Blair Estimate

In the simplest terms, Total Advertising Expenditures represent roughly 3¢ of each dollar we spend for consumer goods and services currently (1977).

Related to Radio and Television we find contributions to these advertising media to be small indeed. As a percent of Personal Consumer Expenditures Radio advertising costs us about 2 mills per dollar spent, unchanged in the last 16 years. TV costs us about 6 mills and has risen only very slightly during these same years.

Television/Radio Expenditures As Percentages of Gross National Product and Personal Consumption Expenditures

Year	Television		Radio	
	GNP	PCE	GNP	PCE
1962	.00336	.00534	.00131	.00207
1963	.00342	.00542	.00133	.00211
1964	.00360	.00572	.00133	.00211
1965	.00365	.00585	.00133	.00213
1966	.00375	.00607	.00134	.00217
1967	.00365	.00593	.00132	.00214
1968	.00372	.00603	.00137	.00222
1969	.00383	.00618	.00135	.00218
1970	.00366	.00581	.00133	.00211
1971	.00332	.00529	.00137	.00218
1972	.00349	.00558	.00138	.00220
1973	.00341	.00551	.00132	.00213
1974	.00343	.00547	.00130	.00207
1975	.00347	.00541	.00131	.00204
1976*	.00389	.00610	.00132	.00208
1977*	.00395	.00621	.00129	.00203

Television Expenditures represent .39% of Gross National Product and over .62 % of Personal Consumption Expenditures. Radio represents roughly .13% of Gross National Product and .20% of Personal Consumption Expenditures.

All of this should be viewed against the widely held belief that a broadcasting station is virtually a license to coin money. In 1975 the FCC reported that 34% of all AM stations, 57% of all FM stations, 15% of all VHF stations and 52% of all UHF stations reported operating at a loss.