

akash bharati

NATIONAL BROADCAST TRUST

X365-2-N7L
LS-2
172917

Report of the Working Group on Autonomy for
AKASHVANI & DOORDARSHAN



akash bharati

NATIONAL BROADCAST TRUST

VOLUME II

**Report of the Working Group on Autonomy for
Akashvani & Doordarshan**

© Ministry of Information and Broadcasting Government of India, New Delhi.
February 1978

Published by the Ministry of Information & Broadcasting, Government of India, Printed at
The Caxton Press (P) Ltd., New Delhi. Cover Design by DAVP.

CONTENTS

APPENDICES

	<i>Pages</i>
A. Indian Broadcasting in Retrospect.	A-2-17
B. Lay Guide to Broadcasting.	A-18-24
C. Notes on other Broadcasting Organisations.	A-25-48
D. Extension Broadcasts Abroad.	.. A-49-58
E. TVNF estimate for self-contained TV Production Facility.	.. A-58 (i)-(ii)
F. Policy Guidelines for Production of Documentary Films for the Films Division.	.. A-59-61
G. Experiments in Slow-Scan Television and Bandwidth Reduction.	.. A-62-66
H. District Level Rural Television System.	.. A-67-69
I. The A.I.R. Code, 1970.	.. A-70
J. Code for Commercial Advertisements on Radio and Television.	.. A-71-88
K. Akashvani stations with transmitter power, commercial channels and programme languages.	.. A-89-98
L. Coverage of Akashvani.	.. A-99-100
M. Doordarshan Kendras and coverage.	.. A-101
N. External Broadcasts.	.. A-102-103
O. Akashvani's Monitoring Service.	.. A-104-105
P. Broadcast Receiver Licences.	.. A-106
Q. Plan outlays on Broadcasting.	.. A-107
R. Akashvani's approved list of Musical Instruments.	.. A-108-110
S. Charcha Mandals.	.. A-111-113
T. School Broadcasts.	.. A-114-117
U. The Working Group's Questionnaire.	.. A-118-123
V. Response to Questionnaire.	.. A-124
W. Meetings and visits of the Working Group.	.. A-125-143
X. Acknowledgements.	.. A-144
Y. Bibliography.	.. A-145-155

Indian Broadcasting in Retrospect

Broadcasting came early to India. Although "All India Radio's" 50th Anniversary was celebrated in 1977, broadcasting had actually commenced not in 1927 with the inauguration of the Indian Broadcasting Company but four years earlier. According to a contemporary newspaper report, F.E. Rosher, Managing Director of the Indian States and Eastern Agency Limited approached the Government of India in 1922 with a view to the establishment of broadcasting services in the country. A few months later, as a result of a Broadcasting Conference held in Delhi, sanction was accorded for the transmission of programmes and the Calcutta Station, operated in conjunction with the Radio Club of Bengal, broadcast its first programme in November 1923 while a similar service was inaugurated in June 1924 on behalf of the Bombay Radio Club, both these on small transmitters loaned by the Marconi Company. Smaller stations were also set up in Madras, Karachi and Rangoon.

Experimental transmission had, however, commenced even earlier. The Times of India in collaboration with the Posts and Telegraphs Department in August 1921 broadcast from its Bombay office a special programme of music "at the request" of the Governor, Sir George Lloyd, who tuned in at Poona.

Some details are available of the Madras Presidency Radio Club which was formed on May 16, 1924 by a group of dedicated amateurs with Viscount Goshen, Governor of Madras as its patron. The "Hindu" reported:

"A representative of the Marconi Company addressed the meeting on the working and progress of the Radio Clubs in England and some of these recently organised in Bombay and Calcutta. He said the object of a Radio Club was to stimulate interest in and foster the study of radio communication and allied matters. The advantages that would be derived by the members would be the use of the club premises with the usual amenities of a social club, facilities for reading leading journals and magazines connected with the radio service, opportunities of attend-

ing lectures and demonstrations on radio topics, of acquiring practical experience in the manipulation of the radio apparatus, of commanding expert advice in using wireless sets and assistance in obtaining licences from the Government. The speaker said that if Madras was prepared to spend nearly a lakh of rupees it was possible to instal a powerful transmitter so as to be of use to the whole of Southern India. Broadcasting had proved a financial success in England. There was no reason why it should not be equally successful in this country."

C.V. Krishnaswamy Chetty thereupon moved the following resolution :
"That a club to be called the Madras Presidency Radio Club be formed in Madras whose primary object will be to stimulate interest in and further the study of Radio Communication and allied arts."

Experimental transmissions commenced immediately, though a formal broadcasting service was inaugurated only on July 31, 1924. The tiny 40-Watt transmitter initially used was assembled from components Krishnaswamy Chetty had brought back from England on completing his studies abroad. This was subsequently replaced by a 200-Watt transmitter and a two-and-half-hour programme of music and talks was broadcast every evening with a special morning transmission on Sundays and holidays. The Club was located in Holloways Garden, Egmore (now occupied by the playing fields of the Don Bosco School).*

The Madras Presidency Radio Club was on the air until 1927 when it was compelled to close down on account of financial difficulties, despite the receipt of proportionate licence fees from the Government of India.

The Club presented its transmitter to the Madras Corporation which resumed a regular service on April 1, 1930 which it continued until 1938 when the station was absorbed in AIR.

The Indian Broadcasting Company was heralded by the publication of the Indian Radio Times on July 15, 1927 announcing the imminent opening of its Bombay Station. This was duly inaugurated on July 23, by the Viceroy, Lord Irwin. The Calcutta Station came on the air five weeks later, being inaugurated in turn by the Bengal Governor, Sir Stanley Jackson. Both the Bombay and Calcutta stations operated on a 1.5 KW medium wave transmitter with an effective range of approximately 48 kms. The broadcast licences in force at the end of the year numbered 3,594.

* Note : Some of the material pertaining to the early history of broadcasting in India has been taken from the special issue of "Akashvani" dated July 24, 1977. The articles quoted include those by S/Shri K.D. Dixit, Nalini Kanta Sarkar, Hiren Basu, and H.R. Luthra and the item entitled "Landmarks in Indian Broadcasting".

The inauguration of IBC's Bombay Station and the London-Bombay "Beam Wireless Service" was reported by the Times of India in a full-page banner headline reading, "Viceroy Inaugurates a Wireless Era for India". Messages of greeting were received from Sir John Reith, newly appointed Director-General of the BBC, and from the Union Internationale Radiophonie (Geneva).

In his welcome address to the gathering at the "Radio House" at Apollo Bunder in Bombay, the IBC Chairman, Sir Ibrahim Rahimtoola said that the Bombay Station "is only the first in a chain of stations which we hope will one day cover the whole of India." His speech has a contemporary ring:

"India cannot be left behind the rest of the world in so great a development, the potentialities of which are only just beginning to be realised. One of the greatest problems in India is that of distance and the consequent difficulty of maintaining efficient communication between her competent parts. It is the recognised merit of broadcasting that it annihilates distance so far as the transmission of sound is concerned. With the advent of efficient broadcasting there is nothing to prevent, in time, the farthest confines of Kashmir, Sikim (sic) or of Travancore simultaneously receiving the latest news of the moment. In other directions broadcasting may well claim to be able to banish the tedium of isolation and provide entertainment and education.

"Although by composition ours is a commercial Company, it is the earnest desire of the Board of Directors to work broadcasting in a spirit of public service. The problem is certainly not an easy one. One of the greatest difficulties in our way is that of language. We have to cater for a population speaking various languages and having a multitude of tastes and we realise that our task will need imagination, first-hand knowledge and hard work. Technically, our equipment both here and in Calcutta is the best that can be had and up-to-date in every respect, but that alone is not sufficient to ensure success. The Board and the Company's Executive Officers are determined to leave nothing undone so far as it lies within their power to make broadcasting in India a success".

The Radio House studio was linked by a P&T line to transmitter at Worli. The studio itself was acoustically treated by hanging coloured drapings, and newspaper reports dwelt at considerable length on the marvel of the microphone which was viewed with considerable awe |

Inaugurating the Calcutta Station of the IBC some weeks later, the Managing Director, Sultan Chinoy, recounted with pride the tremendous impact broadcasting had already made in India. He said:

“We have already received a remarkable proof of the value of a service of broadcasting. As your Excellency (the Governor of Bengal) knows, parts of the Bombay Presidency have of late been visited by disastrous floods involving the complete isolation of large tracts of Gujarat and Kathiawar, and letters have since reached us which say that the only news of the outside world received by those flooded areas for a week was through the Bombay Broadcasting Station. The news was taken down and distributed as widely as possible.”

The Statesman of August 27, 1927 quoted a Rangoon message to the effect that “Every item of the programme in connection with the opening of the broadcasting station at Calcutta was distinctly heard there.”

The Calcutta transmissions were started in the Temple Chamber Buildings facing the High Court but subsequently moved to No. 1, Garstin Place, when formal broadcasting commenced. The Station Director was an Englishman from the BBC by name of C.C. Wallick. He was assisted by Nripendra Nath Majumdar, Producer of Indian Programmes and another Englishman, Chapman. Majumdar, a musician of repute, was assisted by Rai Chand Baral, a well known musician, and Rajendra Nath Sen, who played half-back for the Mohan Bagan Football Club. The programme journal of the IBC's Calcutta Station, *Betar Jagat*, was started in 1929 and still appears.

Both the Bombay and Calcutta stations were strongly culturally oriented and attracted some of the best talent. The Calcutta Station initiated a “Ladies Hour” programme and a Radio Drama Club. A music lesson programme was started in 1930 under the direction of the famous K.C. Dey. This was followed by lessons in Rabindra Sangeet by the well-loved Pankaj Mullick which proved to be immensely popular.

In 1928 a small transmitter was established by the YMCA in Lahore. It was a one-room, one-man effort and remained in business until it closed down in September, 1937, just a few months before AIR opened its fifth station in that city in December that year.

The Indian Broadcasting Company went into liquidation after a short life of three years. It had accumulated a loss of some Rs. 2 lakhs. But by now the taste of broadcasting was firmly established and there was public insistence on its continuance. The IBC service was therefore continued by the liquidator of the Company at the expense of the Government of India. The Inchcape Committee however reported that the broadcasting enterprise had proved a losing proposition and, being unsuitable for India, should be closed. Publication of this report in the Press evoked public protest and the Government decided to take over broadcasting, placing

it under the Department of Industries and Labour on April 1, 1930. The "Indian State Broadcasting Service" as it came to be known, continued on an experimental basis for two years until 1932 when it was finally decided to continue the service under State management.

By the end of 1933 there were 10,872 licences in force. On January 1 the following year, the Indian Wireless Telegraphy Act, 1933 was brought into operation. This Act continues to regulate broadcasting in India.

The constitutional position regarding broadcasting was defined a few years later by the 1935 Government of India Act, Section 129 of which provided:

"(1) The Federal Government shall not unreasonably refuse to entrust to the Government of any Province or the Ruler of any Federated State such functions with respect to broadcasting as may be necessary to enable that Government or Ruler

- (a) to construct and use transmitters in the Province or State
- (b) to regulate, and impose fees in respect of the construction and use of transmitters and use of receiving apparatus in the Province or State :

"Provided that nothing in this sub-section shall be construed as requiring the Federal Government to entrust to any such Government or Ruler any control over the use of transmitters constructed or maintained by the Federal Government or by persons authorised by the Federal Government, or over the use of receiving apparatus by persons so authorised."

"(2) Any functions so entrusted to a Government or Ruler shall be exercised subject to such conditions as may be imposed by the Federal Government, including, notwithstanding anything in this Act, any conditions with respect to finance, but it shall not be lawful for the Federal Government so to impose any conditions regulating the matter broadcast by, or by authority of, the Government or Ruler."

"(3) Nothing in this section shall be construed as restricting the powers conferred on the Governor-General by this Act for the prevention of any grave menace to the peace of tranquillity of India, or as prohibiting the imposition on Governments or Rulers of such conditions regulating matter broadcast as appear to be necessary to enable the Governor-General to discharge his functions in so far as he is by or under this Act required in the exercise thereof to act in his discretion or to exercise his individual judgement."

From 1934, the Broadcasting service steadily expanded. Mr. Lionel Fielden of the BBC became the first Controller of Broadcasting, and the Government allotted a sum of Rs. 20 lakhs for the development of the medium. A 20-KW transmitter was set up in Delhi and went on the air on January 1, 1936 from 18 Alipur Road. The same year, the name of the Indian Broadcasting Service was changed to "All India Radio". Another expert from the BBC, Mr. C.W. Goyder assumed charge as AIR's first Chief Engineer. An advisory council was appointed for the Delhi Station. The News Services Division and a Research Department were established. The "Indian Radio Times" was renamed "The Indian Listener", today's "Akashvani", and some months later another programme journal "Avaz" in Urdu and Hindi commenced publication from Delhi.

The story of how the name "All India Radio" came to be coined is related by Fielden in his autobiography, "The Natural Bent":

"I have never liked the title ISBS (Indian State Broadcasting Service) which to me seemed not only unwieldy but also tainted with officialdom. After a good deal of cogitation—which may seem ridiculous now, but these apparently simple and obvious things do not always appear easily—I had concluded that All India Radio would give me not only protection from the clauses which I most feared in the 1935 Act, but would also have the suitable initials AIR. I worked out a monogram which placed these letters over the map of India, and it is now about the only thing which remains of me in India. But, when I mooted this point, I found that there was immense opposition in the Secretariat to any such change. They wanted ISBS and they thought it fine. I realised that I must employ a little unnatural tact. I cornered Lord Linlithgow after a Viceregal banquet, and said plaintively that I was in a great difficulty and needed his advice. (He usually responded well to such an opening). I said I was sure that he agreed with me that ISBS was a clumsy title. After a slight pause, he nodded his long head wisely. Yes, it was rather a mouthful. I said that perhaps it was a pity to use the word broadcasting at all, since all Indians had to say 'broadcasting'—*broad* was for them an unpronounceable word. But I could not, I said, think of another title: could he help me? 'Indian State', I said, was a term which, as he well knew, hardly fitted into the 1935 Act. It should be something general. He rose beautifully to the bait. 'All India?' I expressed my astonishment and admiration. The very thing. But surely not 'broadcasting'? After some thought he suggested, 'radio?' Splendid, I said—and what beautiful initials! The Viceroy concluded that he had invented it, and there was no more trouble. His pet name must be adopted. Thus All India Radio was born".

"Akashvani", however, was already on the air. Dr. M.V. Gopaldaswamy, Professor of Psychology in Mysore University started experimental transmissions in 1935 using

a 30-Watt transmitter housed at his residence. A 250-Watt transmitter was subsequently imported for better coverage. This station, named "Akashvani", continued regular transmissions with grants from the Mysore Municipality and with private support until 1942 when it was taken over by the Mysore State.

The prospect of war began to influence Indian broadcasting. Fielden writes :

"Among events and trends, the first was the menace of war. Nobody could doubt, in 1935, that the pathway to war was open. Therefore the planning of a radio network for India had, willy-nilly, a strategic note. It was for this reason (to take one example) that I decided to link stations—I had learnt this from Italy—not by telephone cables, as in Britain, but by a system of relay transmitters and receiving stations, which could operate and modify a series of wave lengths, free from any sabotage."

Despite the inauguration of the Indian State Broadcasting Service parallel efforts continued to expand broadcasting in India. The Marconi Company offered the Government of the NWFP the loan of a transmitter and a number of community receivers for rural broadcasting in the Frontier Province—the first studied effort to take broadcasting to the villages of India. That same year the Indian Agriculture Institute at Allahabad started transmitting rural programmes. A year later the Dehra Dun Broadcasting Association commenced broadcasts but had to close down two years later for lack of funds.

The growth of the broadcasting network was not without its critics, Rajaji among them. But, Fielden notes, "even Mr. Rajagopalachari, the Prime Minister of Madras, who had argued with me furiously against any broadcasting in India (and, in my opinion he was and is the wisest man in India) had come round to it".

Meanwhile, the International Frequency Regulation Board had allotted India the call sign "VU". The Colaba Observatory time "pips" were introduced over AIR in 1936, and Walter Kaufman, Director of Western Music Programmes in Bombay, composed AIR's signature tune using the tanpura, violin and viola.

The first AIR Station Directors' Conference was held in Delhi in January 1937. The end of that year saw the inauguration of the country's first short wave transmitter (10 KW) in Delhi. Further short wave transmitters were established in Bombay and Calcutta which greatly extended the range of listening in India together with the inauguration of medium wave stations at Peshawar, Lahore, Lucknow and Madras. Tagore specially wrote a poem entitled "Akashvani" for AIR in 1938 on the occasion of the inauguration of the Calcutta short wave transmission. The poem read:

External Services broadcasts were started at about the same time, the first external broadcast, a Pushto transmission, commencing on October 1, 1939.

Broadcasts for colleges were inaugurated at the Madras Station in November a few days before the Viceroy, Lord Linlithgow went on the air with an address on the constitutional crisis in the provinces following the resignation of the popular Congress Ministries.

Use of the harmonium in Akashvani programmes was banned in March 1940, a prohibition not lifted until November 1972 when it was permitted to be played in the National Programme of Music.

In 1940 the Germans started a series of programmes in Indian languages. Alarmed by this propaganda inroad the authorities fell in with Fielden's idea that the answer lay in opening an Indian Section within the BBC. The question was to find the right man. The choice ultimately fell on Fielden who left India in April 1940.

Fielden was succeeded as Director-General by his deputy Prof. Ahmed Shah Bokhari who, like his younger brother Z.A. Bokhari, Station Director at Delhi and Bombay, later went to Pakistan.

The Department of Information and Broadcasting was set up in 1941 and AIR moved into Broadcasting House, New Delhi, in 1943.

The end of the War witnessed momentous political development in the country. On June 3, 1947, the Viceroy Lord Mountbatten, Nehru and Jinnah spoke over AIR on the proposed partition of India.

The transfer of power to India on the midnight of August 14-15, 1947 was broadcast live over AIR and listeners all over the country heard Jawaharlal Nehru's historic "Tryst With Destiny" speech.

At the time of Independence, there were nine AIR Stations of which six—Delhi, Calcutta, Bombay, Madras, Lucknow and Tiruchi—came to India. The Lahore, Peshawar and Dacca stations went to Pakistan. Sardar Patel became Minister for Information and Broadcasting.

Gandhiji made what was possibly his only broadcast over Akashvani on November 12, 1947. Less than three months later Nehru was to go on the air to tell a stunned nation that "The Light has gone out of our lives. . . . Bapu is no more."

With the integration of the Princely States a number of "native" stations at Hyderabad, Aurangabad, Trivandrum, Baroda and Mysore became part of Akashvani, which launched on an expansion scheme.

If the network was small, its innovative zeal was unbounded. In 1948 Akashvani Bombay arranged to interview the Hollywood star Greer Garson through an inter-continental link arranged by the P&T Department.

The Ministry of Information and Broadcasting drew up an eight-year plan for broadcasting at an estimated cost of about Rs. 364 lakhs as part of the post-war development programme. Pending its implementation, an interim scheme was undertaken for the immediate setting up of pilot stations with low power transmitters. By 1950 the number of stations had risen to 25 and the total output rose from 26,342 hours in 1947 to over 60,000 hours in 1950. The Akashvani network was in a position to serve listeners in all the regional languages and the medium wave service was available to about 21 per cent of the country's population and covered about 12 per cent of the area. New stations were established at State capitals and important cultural centres like Allahabad, Amritsar, Ahmedabad, Kozhikode, Cuttack, Dharwar, Gauhati, Jammu, Jullundur, Nagpur, Patna, Shillong, Srinagar and Vijayawada. A school to train programme and engineering staff was set up about this time. The News Services and External Services were separated in 1948. By 1950 Akashvani was broadcasting to listeners abroad in 11 languages for 116 hours a week.

The Constitution of India which came into force on January 26, 1950 placed broadcasting in the Union List, Entry 31 in the List I of the Seventh Schedule reading: "Posts and Telegraphs, Telephones, Wireless, Broadcasting and other like forms of communication."

The First Five Year Plan provided a sum of Rs. 4.94 crores for the development of broadcasting. New stations were opened at Pune, Rajkot, Indore, Bangalore, Jaipur and Simla and, elsewhere, weaker transmitters were replaced with more powerful ones. Facilities for rural listening were extended and about 14,000 community listening sets were provided. In 1952 the National Programme of Music was inaugurated and the Akashvani orchestra, the Vadya Vrinda, was created under Ravi Shankar. The National Programme of Talks and Discussions was started the following year and also Akashvani's Transcription Service. On October 23, 1953 the first Radio Sangeet Sammelan was broadcast. The Sardar Patel Memorial Lectures and the Radio Newsreel were initiated in 1955.

There were 25 stations serving 31 per cent of the country and 46 per cent of the population by 1956. The total annual hours of programming had risen to about 1,00,000 while the number of radio licences had crossed the million mark.

During the Second Plan period (1956-1961), three new stations were opened at Bhopal, Allahabad and Ranchi. The Vividh Bharati was inaugurated in 1957 to draw

listeners away from Radio Ceylon's light entertainment programme. Another important feature was the introduction of an experimental television service with the inauguration of the Delhi Kendra on September 15, 1959. This service was operated from a small, improvised studio and programmes were telecast twice a week for an hour a day. During the same year a radio service to the Andaman and Nicobar Islands was started from Delhi. A sum of Rs. 5.6 crores was spent on broadcasting during the Second Plan by the end of which 55 per cent of the population and 37 per cent of the country's area were within the reach of medium wave broadcasting. National Programmes of Opera, Plays, Features and Classics were started. With the liberation of Goa, Radio Goa became part of Akashvani in 1962.

Akashvani celebrated its own Silver Jubilee on June 8, 1961. The event was marked by the release of a special postage stamp. Krishnaswamy Chetty was not able to attend the celebrations on account of ill-health but Akashvani presented him a memento in Madras as a pioneer of Indian Broadcasting.

In the Third Plan (1961-1966), auxiliary broadcasting centres were set up with medium power transmitters, but with only limited studio facilities in transmitter buildings, to extend the coverage of existing stations. The programmes to auxiliary centres were supplied mainly as pre-recorded items on tapes from their respective feeder stations, items of topical interest being relayed by local receiving centres. At the end of the Third Plan, the Akashvani network comprised of 34 principal stations, 17 auxiliary centres, 26 Vividh Bharati centres, four studio centres and 49 receiving centres with 82 medium wave and 28 short wave transmitters with an aggregate power of 1991 KW. The programmes covered about 75 per cent of the population and 60 per cent of the country's area. Farm and Home Units were started at 10 selected radio stations. Rural programmes were introduced from all Akashvani stations in 1965. The outlay on broadcasting, during the Third Plan was Rs. 7.64 crores.

The constitution of the Chanda Committee in December 1964 marked the first independent review of broadcasting in India. Its report, presented in 1966, recommended the establishment of autonomous corporations for radio and television. This proposal was formally rejected by the Government in 1970. However, the recommendation advocating commercial broadcasting was accepted and commercial broadcasting was introduced over Akashvani in November, 1967 from Bombay-Nagpur-Pune. The Commercial Service was extended to Delhi, Madras and Tiruchirapalli in 1969.

During the three annual plans immediately following, the medium wave service was further strengthened by commissioning 11 more broadcasting centres. A sum of Rs. 10.08 crores was allocated for broadcasting during this period.

A nine-point "AIR Code" of norms and principles to guide individual broadcasters was introduced in 1969. However, election broadcasting remained out of bounds.

During the Fourth Plan period (1969-74), high-power short wave transmitters were established at Delhi and Aligarh and super-power megawatt transmitters at Calcutta and Rajkot for strengthening the External Services. High-power medium wave transmitters were also installed at Kohima, Jodhpur, and Simla to strengthen border coverage. High altitude radio stations were commissioned at Leh and Tawang. The Civil Construction Wing in Akashvani was established in 1971 and the Vividh Bharati Unit was shifted from Delhi to Bombay.

A sum of Rs. 27.12 crores was invested in broadcasting during the Fourth Plan period, including Rs. 11.45 crores spent on television.

With the availability of cheap transistor sets and the coming into existence of a large number of broadcasting stations the Government decided to discontinue the Community Listening Scheme in 1969 in all parts of the country excluding Jammu & Kashmir.

The production of radio receivers was by now well established in the country, with a high indigenous content. Production of transmitters and other broadcast equipment had also commenced, Bharat Electronics in Bangalore being the principal supplier. An experimental wire broadcasting services in Sewa Nagar, Delhi was tried out for a few years but discontinued.

The expansion of the broadcast network called for innovation and pioneering efforts by Akashvani's engineers. From its very inception Akashvani scrupulously avoided any dependence on foreign assistance in the matter of installation and commissioning of new projects, ranging from the 250-Watt transmitters of the old days to the megawatt transmitting station set up in Calcutta in 1969. Akashvani has also had to operate and maintain a wide range of equipment involving the use of diverse types of transmitting tubes and components. Nevertheless it has been able to retain in service plant and equipment more than 30 years old, a 10-KW transmitter in Bombay in fact having been installed as far back as 1938.

The planning of short wave services calls for a knowledge of ionospheric characteristics in order to process accurate and detailed information about these parameters. Akashvani Research Department developed an Automatic Ionospheric Recorder in the 1950s for the first time in the country. Akashvani is even today the only broadcasting organisation in the world which collects and supplies ionospheric data to several Indian and foreign organisations for planning their broadcast services.

The Research Department was again the first in India to record the "bleep-bleep" signals from the Soviet satellite Sputnik-I in October 1957 at its receiving centre at

Todapur. Likewise the voice of Valentina Tereshkova was recorded from the Soviet spacecraft Vostok VI on June 20, 1963. These recordings were made possible by careful tracking by engineers working at Todapur using equipment specially designed and developed by them for this purpose.

Akshvani's Research Department also developed a simple, precise and reliable radio method of detecting solar flares by systematically recording long wave signals from Radio Tashkent. The data and its subsequent analysis has been useful in establishing that the long wave band can be effectively used for sound broadcasting in India and the Asia-Pacific region within which it is not permitted by international regulations at present.

Even in the face of the gravest calamity, broadcast services have been kept going. Among recent instances are the devastating Patna floods in August 1975 and the killer Andhra cyclone in November 1977 when radio services remained uninterrupted even though almost every other public service in the affected areas had been brought to a standstill.

With the expansion of the Akashvani network it became necessary to decentralise the work of project planning, installation and maintenance. Accordingly four engineering zones were established for the North, South, East and West Regions respectively. It was only in 1976 that the decentralisation of programme administration was initiated with the formation, first, of the Western Region with headquarters in Bombay and, subsequently, of the Eastern Region with headquarters in Calcutta.

Prior to 1973 there used to be Programme Advisory Committee only at stations located at State capitals. These were chaired by the respective State Ministers of Information and included the Leader of the Opposition in the State Assembly, two MLAs, two MPs, 12 subject-matter specialists, and some ex-officio members. These Advisory Committees, however, seldom met and it was subsequently decided to constitute Programme Advisory Committees for every Akashvani Station, each Committee consisting of about 45 persons. The main function of the Programme Advisory Committees is to review the programmes broadcast and to recommend programme plans for the ensuing period.

As of 1977, however, only six out of 83 stations had Programme Advisory Committees, the others having presumably wasted away. These are now being revived.

With a view to reflecting the aspirations of the youth of the country a 'Yuva Vani' service was added in 1973.

Over the years Akashvani has introduced a number of special programmes such as those for the armed forces, border areas, industrial workers, tribal audiences and so on. There are special children's programmes catering to young audiences from the age of six upwards.

A second television centre was inaugurated in Bombay in October, 1972. Television Kendras in Srinagar and Amritsar were opened the next year and in Calcutta, Madras and Lucknow in 1975.

With the proclamation of the Internal Emergency on June 25, 1975 Akashvani too was brought under censorship and the AIR Code was discarded as "obsolete" and not restored until after the general election in March 1977.

On April 1, 1976, television was separated from Akashvani under the name "Doordarshan". That same December Akashvani inaugurated the first of its Rajendra Prasad Memorial Lectures in Hindi.

A unique one-year Satellite Instructional Television Experiment (SITE), a joint Akashvani-ISRO project was launched on August 1, 1975, the broadcasts being beamed from a NASA Satellite, the ATS-6. The inspiration for this had largely come from the late Dr Vikram Sarabhai, Chairman of the Atomic Energy Commission which at that time was also responsible for Space. Nearly 2400 villages in the six States of Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa and Rajasthan were provided television programmes through direct reception from the satellite. The capsule programmes for transmission through the satellite to these villages were produced at three Base Production Centres in Delhi, Cuttack and Hyderabad. Programmes were transmitted to the satellite from the Earth Station at Ahmedabad with the transmitter at Pij. The experiment aroused wide international interest.

Television commercials started to appear from January 1976.

As a follow up to SITE, television transmitting centres were set up in Jaipur, Raipur, Gulbarga and Hyderabad in 1977.

There are at present 84 Akashvani Stations and 13 Doordarshan Kendras. 76.2 per cent of the area and 87.75 per cent of the population are covered by Akashvani. Doordarshan covers eight per cent of the area and 14.9 per cent of the population. The daily radio broadcast output extends over 2,52,743 hours in 25 Indian and foreign languages and 136 dialects. Doordarshan transmissions extend over 38 hours in 12 languages.

As on January 1, 1977 there were 17,359,710 licenced radio sets and 478,026 licensed television sets in the country. Akashvani now brings out eight programme journals.

F.M. (Frequency Modulation) broadcasting was introduced at Akashvani, Madras from July 1977.

Akashvani at present broadcasts 242 news bulletins every day in 37 languages and 34 dialects from Delhi and 34 Regional News Units in the Home and Overseas Services. It has a slow-speed bulletin for small newspapers daily in Hindi, English, and Urdu.

Election broadcasts were introduced for the first time on the eve of the State Assembly elections in May 1977. Political broadcasts had been introduced the previous month when the Leader of the Opposition in the Lok Sabha was invited to make a national broadcast after a similar broadcast by the Prime Minister.

Akashvani has become a major language teacher over the years. Hindi lessons are broadcast from non-Hindi stations whereas lessons in other Indian languages were introduced from various Hindi stations in 1969. For instance the Patna station broadcasts lesson in Tamil, Telugu, Marathi, Malayalam, Bengali and Punjabi, whereas Jaipur has lessons in Kannada, Tamil and Bengali, and Delhi in Gujarati, Oriya, Bengali Tamil and Marathi. Bangalore and Dharwar have started Urdu lessons.

A music competition is held every year to discover and encourage young artists between 16 and 24 years of age. In 1976-77, eighteen musicians were awarded prizes for Karnataka music and 13 artists for Hindustani music.

In the interest of improvement of radio programmes Akashvani instituted in 1975 the Annual Akashvani Awards for plays, features, music, youth and other programmes.

Amateur radio operators or "hams" have been as active in India as anywhere else. Some 24 licences have been granted by the Ministry of Communications, mostly to amateur radio societies under the Indian Wireless Telegraphy (Amateur Service) Rules. 1958.

Doordarshan has undertaken a project to produce television films for children based on stories from the "Panchatantra". In January-February, 1977 it mounted a daily three hour transmission at the site of the Kumbh Mela in Allahabad as an exercise in mass communication.

Both radio and television have played a significant part in promoting sport. The cricket Test match commentaries are probably the most widely followed. But other games like hockey, football and tennis also command devoted audiences. The decision to telecast the Kanpur Cricket Test in November 1976 posed a challenge to Doordarshan engineers. A VHF-cum-microwave link, the first of its kind in the country, was established and the Test was telecast using a 1 KW transmitter and an OB van. Tele-

vision has brought the thrills of lawn tennis and world Olympics to thousands of homes. It has also televised exhibition matches such as those starring the Brazilian and international football star, Pele, when he played in Calcutta in 1977.

A Library of Sound Archives was set up in 1954 and forms part of the Transcription and Programme Exchange Service of Akashvani. The material is preserved on tape and disc recordings and consists of broadcasts of historic events; post-prayer speeches of Mahatma Gandhi and recordings of programmes on Gandhiji by eminent personalities both national and international; speeches of the Presidents and Prime Ministers of India; the music of the great masters; folk music from different parts of the country; and recordings of freedom fighters.

Nirad Choudhuri, the author, was a Talks Officer in Akashvani Delhi for many years. His "Autobiography of an Unknown Indian" made him famous.

It is not only the known celebrities but countless other "unknown Indians" who have nurtured Akashvani and Doordarshan to make Indian broadcasting what it is today.

Lay Guide to Broadcasting

Technical Aspects of Broadcasting : Radio & Television

Broadcast System

Broadcasting is a form of communication employing radio waves as a carrier. Unlike telecommunications, which are point-to-point and private broadcasting, as the very name suggests, is omni-directional and public. The information to be communicated in sound radio is the spoken word or music, while in television a visual image is transmitted in addition to the sound. The broadcast system consists of studio centres, where the programmes are produced and presented in a form suitable for the medium, transmitters and relay centres which radiate the programme, and net-working arrangements which enable the studio centres to feed a set of transmitters distributed over a region or country.

Audio and Video Signals

Speech and music are acoustic waves which travel in air causing vibrations of the air particles. The human ear can hear sound vibrations whose rates vary from 20 cycles per second to 20,000 cycles per second (20 kHz.) (kHz. stands for kilo-Hertz, not kilo-cycles per second, in honour of Heinrich Hertz who discovered the generation of radio waves.) As the waves travel in the air, they are attenuated in strength and become inaudible. In order to reproduce the sound at a distant point, the mechanical vibrations of the air are converted into variations of electrical current by using a microphone. The resultant electrical signal can be sent on wires or radio waves to any remote point and reconverted into sound by headphones or loudspeakers. The audio signal covers a bandwidth of 20 kHz though much lower values can produce satisfactory listening. It is therefore usual to restrict the transmission to a lower bandwidth.

The conversion of video images into electrical signals suitable for transmission is a little more involved. A picture of a scene is a two dimensional representation made up of a very large number of elements, each associated with a certain brightness and colour. If the values of these for each element are to be transmitted on a single pair

of lines or on radio, it can be done so only in succession, element by element, by scanning the picture in the same manner as we read a book, line by line, from left to right, and top to bottom. At the receiving end, the picture can be reconstituted element by element. For sending pictures as in television where motion has also to be conveyed, a number of pictures (50 per second) have to be displayed in succession to produce an illusion of a continuous moving image. Further, the picture has to be resolved into a large number of elements for preserving the detail. Hence, the electrical currents which are generated when a picture is scanned by an electrical camera vary at very rapid rates. The video signal produced has components extending up to 5 MHz (five million cycles per second).

Modulation

Modulation is the process by which the information to be transmitted is impressed on the radio wave, which serves as a carrier. In broadcasting, two forms of modulation are employed—Amplitude Modulation (AM) and Frequency Modulation (FM). In AM the strength or intensity or amplitude of the radio frequency carrier is varied in accordance with the information, while in FM the frequency of the carrier is varied instead of its amplitude. A carrier (single frequency) when modulated becomes a band of frequencies; the bandwidth depends on the type of modulation, AM or FM, and the bandwidth of the modulating signal.

In sound broadcasting, AM was used initially as demodulation at the receiving end is simpler. FM came into use later as it provides a higher quality with noise-free reception over a large dynamic range.

AM sound needs a bandwidth of 20 kHz while high quality FM requires a bandwidth of 180 kHz for transmission.

In television, a modified form of AM—the vestigial sideband modulation—requiring a somewhat lower bandwidth is used for the picture and FM is employed for the accompanying sound. The bandwidth for a television channel for transmitting both sound and picture is 7 MHz in the VHF band and 8 MHz in the UHF band.

Television Standards

As described earlier, a television picture is formed by scanning. The number of scanning lines used in building a picture and the number of pictures transmitted per second are not fixed. Different standards have been adopted in different countries. In India and most parts of Europe and Australia, CCIR Standards System B is in use in which 625 lines and 25 pictures per second are employed.

Radio Waves

Radio waves are used as carriers for communication and form part of the electromagnetic spectrum which includes x-rays, light, and radiant heat. They are produced by high frequency electrical currents flowing in a conductor (aerial), and are propagated as periodic variations of the intensity of electrical and magnetic fields. The frequency of the waves used for communication and broadcasting extends from a few hundred kHz to more than 12 million kHz i.e., 12 GHz (giga-Hertz). As each station occupies a band of frequencies depending on the nature and the type of modulation scheme (20 kHz for AM sound, 180 kHz for FM sound and 8 MHz for TV), a large—though finite—number of channels are available. The frequency spectrum has been allotted to different uses such as, broadcasting, communication and navigation.

The Broadcast Bands

The slots of the frequency spectrum used exclusively for sound and television broadcasting at present are as follows:

Sound Broadcasting

<i>Description</i>	<i>Frequency</i>	<i>Range</i>	<i>Typical Coverage</i>
Low Frequency	LF	150-285 kHz	475 km for a 500 KW Transmitter
Medium-wave	MF	525-1605 kHz	200 km (primary) or 500 KW transmitter
Short-wave	HF	3-30 MHz (slots only)	Very large depending upon power of the transmitter and again of the aerial. (secondary)
Very High Frequency	VHF	87-108 MHz	Line of sight (60-100 km depending on height of aerial)

Television (terrestrial)

<i>Description</i>	<i>Frequency</i>	<i>Range</i>	<i>Typical Coverage</i>
VHF Band—I	VHF	41-68 MHz	Line of sight
VHF Band—III	VHF	170-216 MHz	”
UHF Band—IV	UHF	470-585 MHz	”
UHF Band—V	UHF	610-960 MHz	”
Microwave	SHF	11.7-12.2 GHz	”

In the VHF band, for sound broadcasting, only the frequency range 98 to 102 MHz and 106 to 108 MHz are reserved in India for broadcasting. The band 102 to 104 MHz is shared with other services.

The VHF band for television has only two channels (channels 3 & 4), in Band-I, and 6 channels (channels 5 to 10) in Band-III. The UHF Band is not yet in use.

Broadcast Satellite Service

<i>Range</i>	<i>Allocation</i>	<i>Coverage</i>
2500-2699 MHz	Shared with terrestrial, fixed and mobile service.	Line of sight, proposed for Indian National Satellite (INSAT)
11.7-12.2 GHz	Shared with fixed, mobile and terrestrial broadcasting services	
41-43 GHz	Exclusive	
84-86 GHz	Exclusive	

Coverage by Radio Waves

The reception from a broadcast transmitter can be heard satisfactorily over what is called its service or coverage area. This is limited by—

- (1) Noise
- (2) Mutual interference between transmitters
- (3) Propagation characteristics of the radio waves

These are discussed below.

Noise

At LF, MF & HF, atmospheric disturbances caused by thunderstorm activity form a noisy background. In addition to atmospheric, man-made interferences from automobile electrical machinery, fluorescent tubes, X-Rays, etc., also constitute noise at all frequencies in varying degree. The signals sent by the transmitters have to over ride the noise at the receiving point.

Interference

LF, MF & HF travel long distances cutting across national borders. Hence signals outside the intended service area, though still weak, are sufficient to interfere with reception on the same and adjacent frequencies. It is, therefore, necessary to provide

signals sufficient not only to override noise but also interference. In view of the very large number of transmitters in use the service area of a transmitter now tends to be interference-limited rather than noise-limited.

Propagation Characteristics

The different parts of the radio spectrum are propagated differently. They have different rates of signal attenuation in relation to distance which affect the reliability and quality of the received signal.

Characteristics of Radio waves at different bands

(1) LF

The low frequencies, the longer wavelengths, travel along the ground for a considerable distance, with reduced strength as the distance increases. As the attenuation is not very high and the radio waves are able to hug the spherical surface of the earth, they can be used over long distances. It has been maintained that in tropical areas like India the level of atmospheric noise is too high in this band for setting up an economical broadcasting system. Use of this band is, therefore, not authorised by the International Telecommunications Union (ITU). However, this statement has been recently questioned by Akashvani on the basis of measurements carried out by it. Long waves can also propagate to large distances during day time reflection from the lowermost point of the earth's ionised layer. They, however, travel over a much longer distance by night. There are only 15 channels in this band.

(2) MF (medium wave)

The medium frequencies or the medium waves also behave in similar manner. They are attenuated faster but are useful for transmissions up to about 150 km by the ground wave with reasonable transmitted power. At night, they are reflected by the ionospheric layers which surround the earth, enabling them to travel over fairly large distances. The reflected signal is subject to fading but can be used for providing a second grade service. However, the reflected waves interfere with the ground waves at the fringe of the primary service area where useful ground wave signals are present during day time and the quality of reception deteriorates at night. 120 channels have been provided in the medium wave (531-1605 KHz) in the new ITU plan effective from 23rd November, 1978.

A number of MF transmitters could be operated on a single frequency if they carry the same programme. This mode of operation, called synchronous transmission, however, involves more complicated network management.

(3) HF (short wave)

Transmission on short waves are by ionospheric propagation. The waves are transmitted using directional antennae as a beam, which is reflected by the ionosphere to the desired area, enabling broadcasts with comparatively small powers to large areas. The target area can be isolated from areas where the service is not required.

The ionosphere extends from about 60 km to about 400 km and exists in three distinct layers, the D, E, and F. The layers are formed by the interaction of solar radiation with the atmosphere and hence the reflecting characteristics of these layers vary from hour-to-hour, day-to-day, seasonally and with sun spot cycles.

Ionospheric propagation provides only a second grade service as the received signal is subject to fading (variation in intensity and distortion).

Further, as there is an optimum frequency for each target area at a given time, different frequencies are required to be used at different times of the day, season of the year, and epochs of solar activity. While these can be predicted, the vagaries of the ionosphere necessitate the use of more than one frequency per circuit for reliability. However, in practice because of the uncontrolled interference that exists between shortwave transmissions, five to six frequencies are not uncommon for each circuit.

(4) VHF/UHF—(FM broadcasting and television)

At VHF the radio waves are propagated in the same manner as light waves and can be received only within the line of sight. Wherever possible the transmitters are located on natural elevations to obtain the maximum coverage. When such natural elevations are not available, high towers are needed to extend the range.

Frequency Management

The radio spectrum is a limited natural resource. The demand for frequencies is a continuously increasing one. Since the end of the Second World War and the emergence of a number of new states and economic growth in general, there has been a manifold increase in the number of transmitters. Therefore it becomes necessary to re-use the frequencies over and over again.

At LF, MF and HF where interference can travel from remote areas, therefore, re-use of frequencies can only be done on a planned basis by allocating frequencies and transmitter powers to different countries after studying the likely interference and signals. ITU is the specialised agency of the United Nations which deals with the problems of co-ordination. A new LF/MF plan was prepared in 1975 to meet the

requirements of various countries for the period up to 1989. However, in the case of HF bands, there are no agreed plans. The International Frequency Registration Board instead tries to co-ordinate usage by exchange of information of proposed uses.

At VHF, as the propagation is limited to line-of-sight, the interference by signals beyond the service range is not a serious problem. The frequency management for re-use of frequencies is possible at the national level except at international borders.

The frequency management of the radio spectrum in India is the responsibility of the Department of Wireless Planning & Co-ordination in the Ministry of Communications.

Briefs on other Broadcasting Organisations

A U S T R A L I A

Broadcasting in Australia is controlled by the Broadcasting and TV Act 1942 as amended from time to time.

There is a three-tier broadcasting structure in Australia.

- (i) The Australian Broadcasting Commission (ABC) which is a national network financed directly by the Federal Government.
- (ii) Commercial broadcasting networks which finance themselves entirely from their own resources and advertisements.
- (iii) A public broadcasting sector, which caters to community groups. This sector receives grants from bodies such as the Australian Council.

The ABC and the Commercial Broadcasting Sector make both Radio and TV transmissions— public broadcasting sector does only radio transmissions.

The ABC enjoys absolute independence in its programming. It does not report to any Government department and is responsible only to the Federal Parliament to whom it submits its annual report.

Both the Radio and TV divisions of the ABC are under the overall charge of one General Manager who is under the supervision of a single Commission. Under the General Manager, there are two Assistant General Managers, each in charge of separate Radio and TV divisions.

Commercial stations frequently have a common ownership with a particular company owning Radio and TV networks, besides newspaper chains.

So far as the ABC is concerned, the General Manager and the Commission itself deal with problems which are common to both TV and Radio. For the commercial sector, there are two separate bodies, namely, the Federation of Australian Commercial

Television Stations and the Federation of Australian Commercial Radio Broadcasters, who deal with problems faced by television and radio stations.

Complaints against ABC broadcasts are judged by the ABC itself. The General Manager and in the case of more serious complaints, the Commission itself decides whether there is validity in a complaint and the action which needs to be taken to satisfy anybody aggrieved by a particular broadcast.

The Australian Broadcasting Tribunal, which has recently been set up by an amendment made in December, 1976 to the B & T Act 1942, has broad powers for maintaining the standards of programmes broadcast over commercial networks. Complaints from the general public can be made directly to the Tribunal or referred to it by the Minister in charge of Broadcasting. The Tribunal has the power to recommend to the Minister in charge of Broadcasting that the licence of a particular station be suspended or even cancelled. The Tribunal submits to Parliament an annual report.

Radio Australia, which is the external service broadcast from Australia, is paid for by the Australian Government.

The 11 members of the ABC, drawn as they are from each of the States and from recognised minority groups, are supposed to represent community interests themselves. However, there are Advisory Committees in the different States which report to the ABC.

Up to 1976, there were in existence programme Advisory Committees for commercial broadcasts. With the coming into being of the Broadcasting Tribunal these were dissolved. Proposals are being considered for their revival.

The ABC makes special educational broadcasts, the contents of which it decides in consultation with the Departments of Education of both the Federal and the State Governments. Several universities/tertiary establishments are currently licensed for radio broadcasting and they run their own radio stations.

There is a private company, which conducts research into audience reactions to various programmes and reports on the ratings secured by them. This company follows the diary method for audience reaction research. It carefully selects a representative cross section of the audience and leaves diaries with them in which they fill in their opinion of the programmes viewed/listened to by them.

In April 1976, the Government set up a Committee to report on the structure of the Australian broadcasting system and associated matters. This Committee, commonly called the Green Committee, submitted its report in September 1976.

Following the recommendations of the Green Committee, the Government appointed yet another Committee to recommend on the concept of self-regulation for Australian broadcasters.

The Green Committee proposed :

That the Australian Broadcasting Control Board be disbanded ;

That licensing and broadcasting inquiries be the responsibility of a new statutory body, the Australian Broadcasting Tribunal;

That the planning function be performed either by a new statutory body, the Broadcasting Planning Board, or in the Postal and Telecommunications Department ;

That a body be established to represent broadcasters in both the planning process and the Administration of standards.

BELGIUM

In Belgium, there are two autonomous Radio and TV networks, the BRT broadcasting to Flemish speaking people and the RTB to the French speaking people.

Belgium can be considered a federal state as far as cultural matters, including broadcasting, are concerned. The Central Government is responsible for funding, but the Cultural Chambers allocate the budget. The only source of revenue is the allocation through the Cultural Council. There is no advertising.

BRT (which is mostly typical of the other organisation) publishes an annual report to Parliament. The Minister for Flemish-language Culture is answerable before Parliament and the Cultural Chamber for all problems relating to broadcasting in the Dutch-language part of the country.

Radio and television are functionally independent. From the administrative point of view however, they are under the central Director-General and Board of Governors.

Instructional and educational broadcast come under a single head for radio and television in each organisation. Programmes are made for various age groups, including permanent education for adults.

Common problems are dealt with by a Council made up of the Director-General and the programme directors and officials of equivalent rank in a network.

Complaints are considered by the Director-General, and the Board. In some cases investigations are made by parliamentary committees.

International broadcasts are paid from a general Governmental allocation.

There are advisory councils for regional stations and educational broadcasting.

BRAZIL

Brazil has 1208 Radio stations and 112 TV stations. Some of them are owned by the State and others by private undertakings.

Private bodies have to fulfil several conditions in order to compete for licences. The conditions include proven moral suitability, soundness of technical and financial resources and indication of personal responsibility for the administration (intellectual-orientation). Besides, the Union, the States and the Union Territories, societies, universities and municipalities may also enter the broadcast network.

Where broadcasting is not done by the Government, private bodies are authorised by licence given by public tender. The authorisation for large influential broadcasting stations is given by the President of the country. In other cases it is granted by the Minister of Communications. The authorisation is initially given for 10 years in the case of radio and 15 years in the case of television.

Radio and television are separate entities. Any alteration in the governing bodies, must have the prior approval of the Federal Government. There are radio and television stations exclusively for education and agricultural purposes. They are prohibited from broadcasting any commercials. Three universities have their own television stations, while six others have their own radio stations.

The source of revenue for the private undertakings is commercials. In the case of Government undertakings, they have to submit their accounts to the National Accounts Department.

Several agencies undertake audience research.

The Licensing Division of the Ministry of Communications licences broadcasting and deals with complaints.

CANADA

Canadian Broadcasting is a mixed system of public and private ownership. The Canadian Broadcasting Corporation (CBC), a public owned Corporation, is established by an Act of Parliament. The CBC reports only to Parliament and not to the Government. While the CBC is financed mainly by public funds voted annually by Parliament and obtains additional revenues from commercial advertising (which accounts for about 20 per cent of the total), private stations depend solely on commercial advertising.

There are 815 CBC owned and operated radio and television undertakings. The CTV, the largest among the private owned television networks in the country, has 195 affiliates. There are 422 other independent radio and television undertakings and as many as 475 cable television operators.

Both public and private broadcasting (radio and television) are regulated and supervised by the Canadian Radio-Television and Telecommunications Commission (CRTC), a public authority set up by the Broadcasting Act of 1968, which contains a statement on national broadcasting policy.

The CBC has radio networks in English and French with AM and FM transmissions in each.

In television, while CBC operates nationally in both English and French and covers the whole of Canada, the CTV network operates in English only. There are two private networks one covering French in Quebec Province and the other in English, covering Ontario.

There is no government control or supervision in programming. However, the CRTC has powers to regulate and supervise all aspects of the Canadian broadcasting system with a view to implementing the broadcasting policy.

For purposes of budgeting, policy, accountability, finance and administration, there is a common apex body for radio and television. But for day-to-day operations and in implementing programme policy and production, radio and television are separate departments. Within the same head office structure, the English and French language television or radio networks function independently of each other. There is no interchange of personnel.

The CRTC inquires into public complaints which can also be made direct to the broadcasting organisations or to Members of Parliament.

The federal Government pays for external broadcasting conducted by the CBC.

Though financial accountability is to auditors, fees to artists, salaries of staff, and general expense details are not subject to public disclosures.

Canadian Radio TV and Telecommunications (RTTC) announced the formation of a Committee in 1977 to inquire into the manner in which the CBC is fulfilling its mandate. The Commission in its findings has stated that the present status of the CBC "in which it has autonomy without true accountability, is a far more immediate danger" than that of it becoming a spokesman for the Government or party in power in Ottawa. The Committee has expressed the hope that the CBC would, prior to the 1978 renewal hearing, establish a policy for better achievement of "expressions of diversity and contributions to unity". At present, the Committee says, the CBC is in practice two organisations and there has been an almost total failure to create an integrated organisation.

CHINA

The Central Broadcasting Administration (CBA) in China is under the direct supervision of the Central Committee of the Chinese Communist Party (CPP). Leading office holders are senior members of the Party and are required to reflect the party line correctly. The CBA is headed by a Director, assisted by about ten Deputy Directors.

Radio Peking operates a very powerful external services.

Each of the 29 provinces of China has its own provincial broadcasting network, which is probably under the dual supervision of the provincial Party Committee and the Central Broadcasting Administration. The same is true of the lower county and commune levels. By means of the party chain of command, the Central leadership can transmit the line to be propagated by the broadcasting network (and other media) all over the country. The degree of freedom available to the provinces in deciding their programmes is, as in other matters, governed by the policy of 'democratic centralism' wherein the basic guidelines are laid down by the Centre, while allowing for flexibility in application by the provinces depending on their particular and special local conditions. The problem of language has been considerably simplified with the adoption in the last two decades or so of 'putung hau' or the common man's language as the standard national language.

There are 37 television stations with 123 relay stations scattered all over the country. Colour television was introduced in 1973 and is relayed over microwave lines.

A Television Station is reported to be under construction in Tibet.

News is gathered through the official Hsinhua news agency, which serves all the media.

Audience feedback, perhaps exists informally through Party Committees.

Sets are individually owned but community viewing is widespread.

FRANCE

The French Radio and Television Organisation was till recently known as the ORTF. It was a State monopoly and had grown in size over the years. It had become difficult to manage the huge establishment under unified control. There were growing problems regarding finance, management and relations with the State. A thorough reorganisation was considered necessary and this was done through an Act of Parliament on July 28, 1974.

The centralised system was scrapped to make way for six different and distinct organisations

1. A Public Broadcasting and Telecasting Establishment. This is entrusted with the task of broadcasting radio and television programmes and is required to organise, develop, operate and maintain the broadcast network and installations. It is also assigned the job of research and fixing norms for equipment.

The service is controlled by a Board of Governors, comprising half from the State, two from Parliament, representatives of the Programme Companies and two representatives of the staff elected by the unions.

2. One National Programme Company for radio broadcasting.
3. Three National Programme Companies for television.
4. One Production Company.

The Governing Board for each of the Programme Companies is composed of six members, two from the State, a member of Parliament, a member from the Press, a staff representative and a leading figure from the cultural world.

The resources of the Public Broadcasting Establishment come mainly from payments from the National Programme Companies for broadcast of their programmes and a percentage of the licence fees. The State is the sole shareholder of the National Programme Companies.

The Production Company is entrusted with making expensive film and video productions and marketing them, especially among the Programme Companies. A majority of shares of the company are publicly held.

The Government can at any time have any statements or communications programmed and broadcast. Such broadcasts shall be announced as emanating from the Government. The National Companies are under an obligation to produce programme material pertaining to election campaigns. The debates of the Parliamentary Assemblies shall be broadcast whether on radio or television under the control of the Bureaux of the representative Assemblies. Equal broadcasting time shall be granted to the Parliamentary groups of the majority and opposition.

Every year Parliament authorises calculation of the radio and television licence fee. Parliament also approves the distribution of proceeds of the fee between the Public Establishment and the National Companies.

The length and distribution of advertising broadcasts are regulated. The proportion of revenue from brand advertising may not exceed 25 per cent of the total resources of the organisations specified in the Act.

FEDERAL REPUBLIC OF GERMANY

Freedom of expression and press and broadcasting freedom are guaranteed under Article 555 of the Basic law of the Federal Republic of Germany. The Article *inter alia* says: "Censorship shall not take place."

Broadcasting is organised on a federal basis. The constitution makes it the concern of the States. State Parliaments have established broadcasting institutions, excepting two radio stations, one mainly for Europe and the other for general overseas broadcasting (Deutsche Welle). Nine regional broadcasting stations are on the air every day.

Independent Broadcasting Councils are constituted with members elected from different sections of society. In turn, the Broadcasting Council elects the Director-General and jointly controls the budget and appointments.

Financing is done chiefly on the basis of licence fees which is approved by the regional Parliaments. Commercial advertisement on Radio and TV has been permitted. However, there is a limit on the amount of time for commercial advertising. Revenue from it averages one-fourth to one-third of total broadcasting revenue.

An Association of public broadcasting corporations was established to act as a working co-operative and solve mutual problems among stations. Its management is carried out on a rotating basis, with the Chairmanship changing every two years.

The first channel TV is produced chiefly by the nine regional stations. In 1961, the Second German TV Service started. It was also established as a Corporation, with a board of 66 members comprising delegates of the States, the federation, the main

political parties and the main associations in the country. This organ elects the Director-General. An Administrative Council oversees the finance and approves the budget. The second TV channel began broadcasting in 1964. It was stipulated that the programmes of the first and second TV service should have a different content.

The broadcasting units incorporated into the Association of Public Broadcasting Corporations also produce "Third Channels" alongside their respective regional programmes and these are transmitted regionally. The dominant topics in the third channel are education, information and the arts.

There is no private broadcasting in the country.

The law also provides for three local organs for the management and control of broadcasting stations. They are Broadcasting and Administrative Boards as control organs and the Director-General as the Executive Organ. The Director-General is elected for a limited period. The internal structure is based on the principle of delegation of powers and responsibilities. The interests of the employees are represented by democratically elected representatives and by means of several councils and other associations.

With a view to ensuring that the print media do not lose much revenue to TV by way of advertisements, it was stipulated by a State agreement to restrict the daily proportion of advertising time on TV to 20 minutes for 'hard commercials' (spots without programme). Advertising is not allowed after 8 p.m.,

All Radio and TV stations have departments dealing with complaints from the public. A special group in each organisation co-operates with private opinion poll bodies on evaluating the results.

GHANA

Broadcasting was established in Ghana in 1935 and the Ghana Broadcasting Corporation was formally incorporated in March 1968 under a National Liberation Council Decree.

The Governing Body of the Corporation is a Board of Directors made up of a Chairman and seven other Members. The Director-General and the Principal Secretary in the Ministry of Information are ex-officio members. The Director-General is responsible to the Commissioner for Information who is accountable to the Government.

The Ghana Broadcasting Corporation is financially supported by the Government. Its other sources of revenue are commercial broadcasts and radio and television licence fees.

The Ghana Broadcasting Corporation is centralised and controlled by the Central Government.

Radio and television are two separate Divisions controlled by Directors under one common Director-General.

There is a Listeners' Research Department under the Director of Common Services. Questionnaires are sent to all parts of the country for feedback.

The Government pays wholly for the external broadcasts in English, French, Arabic, Swahili, Portuguese and Hausa.

The Corporation has advisory committees on religious broadcasts, music and programmes.

IRAN

The National Iranian Radio and Television is a Government-owned and controlled organisation. Only 10 per cent of the revenue comes from commercials and the rest is provided by the Government. Both radio and television have three channels each, two in Farsi and one in English. Both radio and television have a common apex organisation.

Educational Radio and Television of Iran (ERTI) was established in 1973. It broadcasts programmes up to the intermediate school level (Grades 6-8) and vocational and continuing education programmes.

Plans are afoot to switch over from black and white to colour TV. There is national coverage on two channels. Experiments are in progress with balloon systems for TV transmissions.

ITALY

The overall policy, supervision and control of the Radio and Television Company (RAI) in Italy rests with a Joint Parliamentary Commission consisting of 40 members drawn from both houses of Parliament. The political parties in Parliament are represented roughly in proportion to their strength. The majority of the shares of this company are held by the Institution for the Reconstruction of Industries (IRI), a public sector holding company.

The Act (1975) governing radio and television broadcasting in Italy provides that broadcasting and television are a public service and that independence, objectivity and receptivity to diverse political, social and cultural tendencies are fundamental principles, as guaranteed by the Italian constitution.

The Parliamentary Commission lays down the general policy for the balanced diffusion of programmes and broadcasting time. It gives general guidelines for the formulation of a national plan of expenditure and investment, analyses the content of programmes, and submits an annual report to Parliament.

The Board of Directors consists of 16 members, 10 of whom are elected by the Parliamentary Commission and six by the shareholders i.e. mainly IRI. Four members are from the regional councils. The President of the Board of Directors is appointed by the Board itself from among its members. The term of office of the Board of Directors is three years. The Board of Directors is responsible for the execution of the programme and management of the company under the provisions of the Parliamentary Commission. There are 20 regional committees in Italy appointed by the regional legislators who advise on the radio and television programmes. However, these bodies are purely advisory and have no executive or financial powers.

The Director-General, appointed by the Board of Directors, also appoints three Deputy Directors-General, one in charge of the radio, another of television and the third for the Technical Support Organisation.

There are five organisations: two channels for television and three for radio. Each is headed by a Director who is in theory appointed by the Board of Directors but in actual effect is selected by the political parties represented in Parliament. He is independent in the sense of the editor of a newspaper in selecting and presenting news items. Administratively he is responsible only to the Director-General.

There is a special programme called Telescuola, which organises educational programmes. It produces its own programmes and if necessary consults the relevant academic institutions.

The main source of revenue are advertising and television and radio taxes paid by the listeners. There is no contribution from the Government. However, IRI makes up any deficit.

Advertising time is limited to a maximum of five per cent of the total broadcasting and telecasting programme time.

There are external programmes, expenditure for which is shared by the company and the Government.

JAPAN

Under the Broadcast Law of 1950, the Japan Broadcasting Corporation (NHK) operates in the public sector alongside a large number of commercial broadcasters in the private sector.

The NHK network covers the entire nation.

The NHK is a unique Corporation and more independent of the Government than all other public enterprises. It is exempt from income-tax and corporation-tax and also from the application of the Land Expropriation Law. It is a special juridical person protected by law so as to be independent of all political authority. NHK has been termed a people-owned Corporation as distinct from a State-owned Corporation.

The NHK Board of Governors consists of 12 persons who are selected from various fields and regions. Their appointments are made by the Prime Minister with the consent of both Houses of the National Diet. One of the Governors is elected Chairman. Representatives of the Government, and of political parties and those associated with broadcast equipment manufacture or distribution, trade unions or the media are excluded from membership of the Board. The term of office of Governors is three years. The Board of Governors appoints the President of NHK, its executive head, who in turn appoints seven to ten Directors with the consent of the Board of Governors.

NHK's budget and project schedule for each year are reviewed and adopted by the Diet. The business report and a statement of account is also submitted annually to the Parliament.

NHK receives no funds from the Government. Its entire expenses are met by receiver fees. NHK collects the receiver fees on its own.

The financial independence of the NHK is reinforced by its ability to issue broadcast bonds up to a value of three times its net property. These bonds may be issued for the purpose of installing and repairing broadcast facilities.

In case NHK desires to establish a broadcasting station it is required to submit to the Minister of Communications a licence application for each station. The application is remitted by the Ministry of Communications to a five-man Radio Regulatory Council.

The Broadcast Act requires that "freedom of expression in broadcasting must be secured by guaranteeing the impartiality, truth and autonomy of broadcasting". In order to ensure this NHK has set up a 15-member Central Broadcast Programme Council and Local Broadcast Programme Councils in each area as well as for overseas broadcasts. It has also set up programme standards for domestic and overseas broadcasts.

The Government has no power to order the NHK to broadcast any announcement or to cancel any programme in its domestic transmissions. It is only in overseas broadcasting that the Minister of Communications can issue a direct order.

Regular meetings are held with representatives of the public at various places supplemented by studies of the Public Opinion Research Institute to evaluate the programmes.

NEW ZEALAND

In New Zealand, a Broadcasting Corporation was established under an Act of Parliament in 1976, following the findings of a broadcast review committee.

The Corporation shall consist of not less than seven and not more than nine members appointed by the Governor-General on the recommendations of the Minister.

The Corporation can appoint three standing committees of its members with responsibility to the Corporation for Radio New Zealand, TV-1 and TV-2 respectively. The Corporation may invite any person with expert knowledge to attend its meetings. The Corporation shall have regard to the general policies of the Government in relation to broadcasting and shall comply with any direction given by the Minister to the Corporation by notice in writing. It will not, however, authorise the Minister to give such a notice in respect of a particular programme or a complaint. The Corporation, can in its discretion, publicly announce or refrain from announcing that such a notice has been given by the Minister. The Minister shall publish in the gazette and later lay before Parliament a copy of every such notice. The Corporation sends a report every year to the Minister and a copy of it, along with accounts, is laid before Parliament.

The Corporation can run several services. At present it maintains Radio New Zealand, TV-1 which operates from Wellington and Dunedin, and TV-2 which operates principally from Auckland and Christchurch.

The Corporation is committed to balanced presentation of various views, impartial gathering and presenting of news, maintenance of law and order and privacy of the individual.

The Corporation appoints a Director-General for each service.

A Broadcasting Tribunal has been established under the Act consisting of three members, appointed by the Governor-General on the recommendation of the Minister. It is required to consider and adjudicate upon applications for warrants to establish and operate broadcasting stations and to receive and determine complaints and advise the Minister in respect such of matters relating to broadcasting as may be referred to it.

The Corporation can advise the Government from time to time as to the rates of fees that should be payable for broadcasting receiving licences. All such fees accrue

to the Corporation. The Corporation may borrow money and the Minister of Finance can also advance it funds.

There is provision to appoint a Committee of Private Broadcasters. It consists of a Chairman, appointed by the Minister and two members appointed by the Minister on the nomination of the Association. It will investigate allegations made to it of breaches by private broadcast stations of warrants. The Committee can be given directions by the Tribunal.

NIGERIA

The broadcasting network in Nigeria consists of the Nigerian Television Authority and the Nigerian Broadcasting Corporation. Until April 1977 television was part of the NBC.

Nigeria is a federation with 19 States. Of these 12 have their own Broadcasting Centres. The State Governments exercise a certain amount of administrative control over the units in their province; but the Centres are ultimately responsible to the Federal Government.

According to the Federal Government policy statement, there will be 19 television stations to serve each of the 19 States and these will be set up in the capitals. The stations, including NTV-Lagos, will be grouped together to form six zones for the purpose of feeding zonal programmes into the national network.

NTV-Lagos broadcasts ten hours of educational programmes to primary school children every week. Some other stations transmit programmes to both primary and secondary school children. These educational programmes are the joint effort of various Education Ministries and the television organisations.

Commercial television was initiated in 1962. Colour television has been introduced.

PHILIPPINES

There are some 230 radio stations operating throughout the Philippines. The State-owned broadcast network is operated by the Department of Public Information through its Bureau of Broadcasts. Other networks and independent radio stations are privately owned and operate on a commercial basis.

Based on the policy of self-regulation, supervision of the broadcast industry is undertaken by the Broadcast Media Council. The Council is a body composed of men from the broadcast industry and funded entirely by it. However, technical administration such as frequency allocations and engineering standards are supervised by the

Government's Telecommunications Control Bureau. There is a close coordination between the BMC and TCB in the matter of operations. Complaints on content or operation may be filed with these organisations.

It is a general practice of the major organisations to operate both radio and television under one apex body.

Radio and television are supportive of each other in most cases.

Educational and agricultural programmes are organised by the different departments of Government, with the Bureau of Broadcasting of the Departments of Public Information as the base of these programmes.

There is no subsidy from the government for either the local or external service. Their main revenue is from advertisements. Some private universities operate their own local stations for educational and instructional purposes as part of graduate work for students. They use advertising as a source of revenue.

SOUTH KOREA

There are three main broadcasting radio-television stations in the Republic of Korea, the KBS, MBC and TBC. There are also four commercial FM broadcasting stations and some smaller stations.

The Korean Broadcasting System (KBS), the biggest, enjoys official patronage. It is financed through a television licence fee. The capital expenditure is subject to approval by the National Assembly. KBS has four medium wave and two short wave channels. One channel specialises in broadcasting educational programmes for target audiences such as students, farmers and fishermen. KBS's overseas service is known as Radio Korea.

All other stations including MBC and TBC are private commercial organisations. Their revenue comes from advertisements charges. MBC and TBC also own newspapers and magazines.

In the KBS-TV service, educational programming accounts for 50 per cent of the total broadcast hours.

Each major university in Korea operates its own broadcasting station.

The Korea Broadcasting Ethics Committee is supported by all the broadcasting organisations. The Committee consists of a number of prominent figures selected from various fields and committees. KBS has appointed a Committee of Programme

Screening from among academic notables. The Screening Committee routinely undertakes programme monitoring so that the results of programme evaluation may be reflected in future programmes.

A Broadcasting Consultation Committee appointed by the KBS President functions as an advisory organ on all aspects of broadcasting and management.

KBS conducts at least two opinion polls each year at both local and national levels to assess the audience's opinion of KBS programmes, broadcasting hours, etc. in order to determine the most viable basis for programming.

THE SOVIET UNION

Radio and television in the Soviet Union function directly and completely under the control of Soviet Government. There is a State Committee for Radio and Television in the Council of Ministers of USSR which is the apex organisation for both radio and television. This organisation is fully responsible for the Radio and TV network.

Television and radio are widely used for propagating the State's achievements in all fields. They are also used as an important vehicle for propagating the idea of building a Communist society.

Radio and television stations in all Republics are part and parcel of the Soviet committee for Radio and Television. Excepting local cultural programmes, all other programmes are broadcast under the direct supervision of the Central Committee.

Tass supplies news for broadcast over radio and television.

One television channel is reserved in all Republics for Russian broadcasts from Moscow.

Radio listeners and television viewers write letters to radio and television Stations. These are answered and their requests and viewpoints are taken into consideration.

SRI LANKA

The Sri Lanka Broadcasting Corporation (SLBC) is overseen by a Committee appointed by the Minister of Information and Broadcasting. The Committee consists of a Chairman and four members. The members, one of whom is a Buddhist monk, are from different walks of life.

Actual programming and administration are looked after by the Director-General and supporting staff.

SLBC is a semi-autonomous body created by an Act of Parliament (1967). Though SLBC is not a department of the Government, it is answerable to the Minister of Information and Broadcasting who, in turn, is accountable to Parliament. Until the last general election in 1977 the post of Chairman and Director-General of SLBC was held by the Secretary to the Ministry of Information and Broadcasting. After the election, the position changed.

SLBC draws its revenue from radio licences, commercial broadcasts and a Government subsidy. The subsidy is voted by Parliament every year depending on the budgetary deficit of the SLBC.

SLBC has services in English, Sinhala, Tamil, Malayalam, Kannada, Telugu and Hindi. It also has commercial services in Sinhala (local), English, Tamil and Hindi, which are beamed towards India.

There are no regional stations but there are seven regional transmitters which relay medium wave broadcasts from Colombo.

The SLBC has educational programmes once or twice a week. There are however daily programmes in Tamil and Sinhala for agriculturists.

Complaints from the public are handled by the Director-General who puts them up to the Committee.

The Act requires the Corporation to comply with the general policy of the Government with respect to broadcasting and with any general or special directions given by the Minister. It also empowers the Minister to remove from office any member of the Corporation without stating reasons. The Minister may also make regulations for establishing one or more consultative committees to advise the Corporation. He may, after consulting the Corporation, issue to any person a licence for establishing and maintaining any private broadcasting station in the country.

There is no television in Sri Lanka.

TANZANIA

Broadcasting in Tanzania is directly under the Minister of Information and Broadcasting. The Zanzibar television and radio organisation enjoys complete autonomy.

There is no television in mainland Tanzania.

The Schools and Adult Education Wing of Radio Tanzania looks after instructional broadcasts.

The Government meets the full expenditure of Radio Tanzania, including external broadcasts.

Whenever audience research is required to be undertaken, the work is entrusted to some private consultancy firm.

There is no licence fee for radio.

SWEDEN

The Government of Sweden has vested Sveriges Radio (the Swedish Broadcasting Corporation) with the sole and exclusive right to radio and television broadcasting as defined by law. The status of the Corporation is that of a non-profit making public corporation.

Three groups of owners hold shares in the Corporation : (1) the "popular movements" (60%), (2) newspapers and press organisations (20%), and (3) organisations representing the business community.

The Board of Governors of Sveriges Radio consists of a Chairman and twelve regular members, plus twelve alternates. The annual shareholders meeting, also appoints five members and five alternates. The remaining two members and two alternates are appointed by the employees acting through the staff union.

In 1975 an independent subsidy to Sveriges Radio was funded to initiate local radio broadcasting in 24 local districts throughout Sweden.

Parliament has also decided that a special subsidiary company shall be formed to handle the production and broadcasting of educational programmes. This is expected to start broadcasting during 1978.

A basic assumption in the regulation of broadcasting in Sweden has from the outset been that programmes shall be produced and broadcast in forms that guarantee independence from government authorities as well as from various commercial and political interest groups.

Various regulations governing freedoms and liabilities in the Swedish broadcasting system are set forth in two Acts of Parliament (the Radio Act and the Broadcasting Liability Act, both of 1966), as well as in a special agreement between the Government of Sweden and Sveriges Radio.

The Radio Act prohibits examination or censorship of programmes prior to broadcast. It also provides that a special Radio Council shall be delegated to examine programmes which have been broadcast with respect to their compliance

with the Radio Act and the agreement between Sveriges Radio and the Government. The Council may examine programmes—*post facto*—either in response to complaints filed against them or on its initiative. Thus, the Council functions both as an agent of control on the part of the Government and as a body to which the public may turn with complaints concerning programme content. The Radio Council lacks the power to levy fines, award damages or otherwise impose penalties, but its findings in specific cases greatly influence how the provisions of the law and the Agreement are interpreted.

There is a programme supervisor for each radio and television programme and this person alone may be held liable for possible infringements of the regulations governing freedom of expression in the programmes. The programme supervisors are appointed by the Director-General of Sveriges Radio and there are currently about 50 within the Corporation.

Sveriges Radio assumes responsibility for producing and broadcasting radio and television programmes, while the State, through the Swedish Telecommunications administration, assumes responsibility for the distribution (transmission) of programmes as well as for the collection of receiver fees.

SWITZERLAND

The Swiss Broadcasting Corporation (SBC) is a single independent authority operating under a licence granted by the Swiss Federal Government in 1964. Basically this is a licence enabling the SBC to use the electrical and radio installations of the Department of Posts, Telephone & Telecommunications of the Federal Government. Apart from setting out directives for the utilisation of these facilities it also contains certain broad principles for the programmes and publicity by SBC. Attempts to give it a legal basis through a law have twice been presented in a referendum to the Swiss people and have been turned down because the voters did not apparently approve of the terms of the draft law submitted.

The SBC is an autonomous body functioning on commercial lines. Control over it can be exercised by the Federal Government by virtue of the licence. In actual fact no occasion has so far arisen for any major intervention by the Federal Government in the operation of the SBC. In theory of course, the Department of Transport, Communications and Energy is responsible for the programmes and questions can always be asked in Parliament.

The Governmental set-up in Switzerland is federal. The SBC being an independent organisation set up under Federal licence, the Cantonal (State) Governments

have no direct control or authority on the Corporation except through the regional associations. Even the Federal Government has no authority over the administration of the Corporation excepting in the supervision of their finance.

The Radio and TV network is decentralised on a linguistic basis and not on a Cantonal (State) basis as Switzerland has three official languages, namely, German, French and Italian, while Romansch is also recognised for some purposes. The Director-General, the supreme administrative and programme body, has its Headquarters in Berne. German (and Romansch) radio and television is headquartered in Zurich, the French speaking programmes in Lausanne, and the Italian speaking programmes in Lugano. There is a separate Department for the short wave service with headquarters in Berne.

Both radio and television are parts of the same organisation under a single Directorate-General.

The Regional Directors in the first instance and the Director-General in the last instance are responsible for the programmes. Complaints and suggestions from the public are dealt with by the Audience Research Department. The Directorate-General has issued from time to time directives regulating the manner in which complaints are dealt with.

The sources of revenues for broadcasting are radio and television licence fees (70 per cent) supplemented by ad hoc grants from the Federal Government.

UNITED KINGDOM

The British Broadcasting Corporation (1927) operates under a Royal Charter and a Licence and Agreement between itself and the Post Master General. Both are renewed every 10 years. The Charter and Licence and Agreement give the Government full powers over the BBC including those to require the broadcast or withdrawing the broadcast of matter by written directives which the BBC may publish. But these have remained virtually unused and the BBC has enjoyed almost absolute independence in the day-to-day conduct of its business.

The BBC has a Chairman, a Vice-Chairman, national Governors for Scotland, Wales and Northern Ireland and other Governors appointed by the Government for five years. As a corporate body the Governors are responsible for the conduct of the whole broadcasting operation, including the content and presentation of programmes over radio and television, and the provision and working of the necessary installations and equipment.

The BBC is advised by a General Advisory Council of 60 members; various regional advisory councils; and a number of functional councils and committees.

A three-member Programme Commission considers complaints of unfair treatment. The Chief Executive is the Director-General, who is appointed by the Governors and with whom they discuss all major matters of policy and finance. Under the Director-General are the general managing directors for television, radio and external broadcasting and the directors of television programmes, public affairs, engineering, personnel and finance, who, with the Director-General, constitute the BBC's Board of Management.

The Governors take care not to usurp the functions of the executive. They are concerned with broad issues of policy, including financial, and expect the executive to put that policy into practice. There is a constant dialogue between Governors and management.

The radio and television services of the BBC are financed from (a) an annual sum voted by Parliament for the domestic services, equal to the revenue derived from the sale of television broadcasting receiving licences after deducting the cost of administering the licensing system; (b) an annual grant voted by Parliament for the external services; (c) profits from BBC publications and (d) income from BBC Television and Radio Enterprises. No commercials are allowed. The BBC runs a very successful and pioneering Open University over both television and sound channels.

The Independent Broadcasting Authority (1955) consists of a Chairman, a Deputy Chairman and nine ordinary members (three of whom have special responsibility for Scotland, Wales and Northern Ireland severally), appointed by the Minister of Posts and Telecommunications. The IBA is charged with the duty of providing broadcasting services additional to those of the BBC. It is a commercial service and transmits programmes produced by a number of independent television and radio programme production companies.

The IBA is advised by a General Advisory Council and by three statutory committees on educational broadcasting, religious broadcasting and advertising. A specialist panel advises on medical and allied advertisements. Further advice is given by the Scottish, Welsh, Northern Ireland and appeals committees. In 1971 the authority set up a Complaints Review Board. The Chief Executive Officer is the Director-General. A common news service is provided by Independent Television News Ltd. (ITN), a non-profit-making company in which all the programme companies are shareholders.

It is financed solely by the sale of advertising time by the programme companies and receives no income from licence fees or public funds.

A Committee on the future of broadcasting under Lord Annan reported in March 1977.

THE UNITED STATES

The broadcasting network in the United States is essentially commercial and privately owned. A large number of private stations are linked by three major national networks the CBS, NBC and ABC. In addition there is a fast growing Public Broadcasting Service primarily educational and public service in character which is funded by Congress, the State Governments and Universities and Foundations.

The responsibility for programming rests with individual station owners who tailor their programmes according to local and regional needs and also in response to public demand.

The Federal Communications Commission regulates issue of licences, and allotment of frequencies. The FCC has no control over the programming of various networks but oversees what has come of to be known as the Fairness Doctrine.

In addition, there are radio and TV codes administered by the National Organisation of Broadcasting for the guidance of and voluntary compliance by stations which subscribe to them. The codes govern programming and advertising practices.

Both the U. S. Senate and the House of Representatives have committees which have the power to examine the functioning of TV and radio organisations. They have the power to subpoena any official and allow any member of the public to testify.

External broadcasting is confined mainly to the Voice of America which is an organ of the United States Government and a part of the U. S. Information Agency. Radio Free Europe and Radio Liberty are funded by the Board for International Broadcasting, a body set up by the U. S. Congress in 1973.

The radio and television departments generally have separate independent organisations except at the very top where they have one common President. So far as the news department is concerned, the head of the department may be common both for radio and television but the departments themselves would be completely separate from each other. There is very little interchange of personnel between the two.

While no Government contributions are made under the 1967 Public Broadcasting Act, a statutory body, namely, the Corporation for Public Broadcasting was set up to distribute Federal Government funds in support of non-commercial television and radio through the Public Broadcasting Service. The Government contributions are based on a matching formula under which the PBS must raise \$2.50 from other sources for every dollar it receives from the Government appropriation.

The U. S. Government is introducing a Bill in Congress to shield public broadcasting from Government interference in its programme content. It is proposed that four Board members of the Corporation for Public Broadcasting be appointed by the industry, two by the membership of the PBS and two by the membership of National Public Radio. The representatives of industry are expected to function as a watchdog group.

Out of 728 commercial TV stations, about 100 are owned by firms which publish dailies.

There are approximately 7400 AM and FM commercial radio stations, more than 300 of which are owned by newspaper publishing firms. There are no short wave stations.

YUGOSLAVIA

In 1971 broadcasting was transferred from the Federal Government to the six Republics and two Autonomous Provinces. The general laws governing radio and television are :

1. The right to correct distorted or wrong information, a right guaranteed to Yugoslav citizens by the Constitution.
2. The obligation of all Radio Stations to observe all international agreements signed by Yugoslavia.

Every broadcasting organisation must have a "Founder". In some Republics, the Founder is the Social Alliance of the Working People of Yugoslavia while in others it is the Parliament of the Republic or the Province. Each broadcasting organisation has a Workers Self-management body and an Organ of Social Management.

Every broadcasting organisation has either a Social Council or an Assembly. The Social body ensures that the rights of the Founder are carried out in practice. These rights are transferred by the Founder to the social body though it retains the right to formal approval. This is common to all Republics. The social body

exercises control over development policy in broadcasting on behalf of the Society. All social bodies are organised on the principle of representation from all vital sectors of life. The Territorial representation is also observed. In some Republics these social bodies have Programme Councils.

Whenever there is disagreement between the departments of the council, then the Council of the whole Broadcasting Organisation or the Assembly of the Broadcasting Organisation is responsible for its solution.

The Yugoslav Radio and Television has the Assembly as its supreme organ. And each broadcasting organisation of the Republics and two Autonomous Provinces send five delegates to that Assembly. Out of these five, three are those who work in their respective radio and television organisations; and two represent social organs of management of their respective organisations which means that the Assembly has a two chamber system—representatives of the Worker's Council and representatives of social influence.

The Executive Board has eight members i.e. each Republic and each Autonomous Province sends one delegate. This Executive Board is entrusted with all issues concerning cooperation. In addition to this, there are four Boards for radio programmes, for television programmes, for technical matters, and international cooperation.

Radio and television revenues come from licence fees which are decided by the Founder; advertisements up to five to nine per cent of the total programme time; the production and marketing of records and cassettes; sale of journals; and technical services.

Summary Studies in Extension Broadcasting

There have been numerous attempts around the world to utilise radio and television for imparting education, both formal and informal and to promote social and economic development.

Advanced nations like the United States, Australia, the Federal Republic of Germany, Japan, France, Sweden, the German Democratic Republic and Poland have relied on these media, sometimes for decades. Italy's "Telescuola" or television school was used to promote literacy in the backward regions of Southern Italy and Sicily some 20 years ago with notable success. Britain's "Open University" is another success story. The United States and Canada continue to use radio and television for learning, extension, and even health care in such isolated and sparsely populated areas of Alaska and the Northern Territories.

The developing nations too are experimenting with the use of these media for distance learning. There have been a number of interesting experiments in Senegal (to promote a Government-people dialogue), Tanzania (for adult and social education), Nicaragua (for teaching mathematics in primary schools), Brazil (for conscientization of the peasantry), Ecuador (for health education), Iran (for family planning), the Philippines (for promoting agriculture), and Tobago (for functional education of women).

Some of these experiments are briefly summarised in this note. The information is acknowledged to :

1. **Communication and Rural Development by Juan E Diaz Bordenave, UNESCO, 1977.**
2. **Radio for Education and Development : Case Studies Volumes I& II, World Bank Staff Working Paper, No. 266 (May 1977).**

BRAZIL

Creating Awareness of Social Change

Following the experience in Colombia some radio-schools were started in Brazil in 1959. The experiment succeeded and the National Bishops' Conference became interested in extending the system since the Catholic Church already owned 200 of the 1000 broadcasting stations in the country. In 1960 the Brazilian President granted funds through the Ministry of Education for the project.

Known as Movimento de Educacao de Base (MEB) it caters to about 20 million people in the north-eastern region of Brazil. The movement began with the Colombian method of imparting literacy but soon developed different goals, the main objective being to bring about an awareness of social change.

The project was designed by mass media experts working with philosophers, sociologists and anthropologists. Radio time is purchased from several stations for broadcasting the message of the movement.

At present, MEB is operating in three Brazilian regions. The movement operated as many as 5,000 radio-schools until the change of Government in 1964 since when the number of radio-schools has decreased.

COLOMBIA

Radio School for Literacy

Accion Cultural Popular (ACPO): Radio Sutatenza (Colombia), started, in 1947, is Colombia's largest network serving over 20,000 radio schools and hundreds of thousands of students all over the country. It has on its staff several communication specialists. It is an autonomous institution and broadcasts 19 hours a day.

It provides a basic course primarily for teaching literacy, a two-year progressive course intended for farm families who are literate but have not completed primary school, and a three-year complementary course aimed at preparing students to take the School Leaving Examination.

ACPO stations also provide news and entertainment and educational programmes directed to adults outside the radio-schools.

It publishes the most widely read weekly paper, written in a style suitable for neo-literates.

MEXICO

Rural Teaching in Remote Areas

Mexico's Sierra Tara Humara, (40,000 square kms) is a remote region characterised by broken mountain ranges and severe winter cold. Though poor in agriculture, the area is rich in forests, minerals and grazing lands. In 1955 radio schools were started by missionaries as an extension of the Jesuit Boarding Schools.

In March 1973, discussion of the educational problems of the area revealed that formal schooling did little to better the communities from which the students were drawn. After much deliberation, it was decided to revise the system of teaching. The radio schools accordingly ceased to operate in 1974. A community research study was proposed to chalk out a new system of informal education and to examine the problems facing radio-schools.

Radio Primaria Project

Another Mexican experiment, called the Radio Primaria Project began in 1970 in and around the city of San Luis Potosi, about 400 kms north-west of Mexico City. On an average, 90 minutes were taken up for radio lessons in a five-hour school day. 80 per cent of these lessons were for all three grades. The project attempts to stretch the efficiency of the rural teacher by means of the radio so that more children can be offered the full six grades of primary education with the same number of teachers.

Radio Primaria Project is reportedly making halting progress. The reasons are stated to be many, ranging from the attitude of the teachers to the indifferent quality of reception. New formats are proposed to make the lessons less abstract, encourage student participation, and dramatise lessons with teachers and students acting out concrete learning situations over the air.

EQUADOR

Health Education Through Advertisements

In Equador, a novel method was used to popularise health schemes through radio advertising techniques. A New York advertising firm was employed to assist in the project. Nutritional 'spots' were repeated 10 to 15 times a day for over a year on popular radio stations in two provinces. Each of the minute-long 'spots' was designed to discuss a specific nutritional problem and to offer a realistic and economical solution. The subjects covered included malnutrition, breast-feeding, drinking water, iodized salt, and intestinal problems. Several of the messages were reported successful at the levels of awareness, knowledge and attitude.

A more ambitious attempt aimed at changing behaviour patterns on nutrition was made in Nicaragua. Nationally broadcast advertisements motivated mothers of infants with diarrhoea to prepare and administer at home large quantities of fluid, an idea previously unknown to them. The recipe was heard and memorised.

In sharp contrast to the highly professional advertising approach was a programme produced by rural people for rural people in Tabacundo, Ecuador. Since 1972, 40 radio-school centres have generated programmes to reach mass audiences through broadcast. These broadcasts are reported to have drawn bigger audiences than any of the entertainment programming available to listeners in the area. The programme is done with the help of unpaid non-professionals from the local communities who act as teaching assistants in the centres, using audio cassette recorders. The programme is not aimed at organised listening groups at the radio-schools but at a general open-broadcast audience.

HONDURAS

Community Building and Adult Education

Radio communication and rural organisations have been combined to overcome geographical and social barriers to development in Honduras. The strategies adopted included those tried in Columbia, Brazil and Chile with a view to integrating adult basic education through radio with a system of leadership training and community organisation.

From 1960 to 1975, a popular promotion movement was organised. Radio-schools were introduced and they formed the base for a network of grassroot organisations like cooperatives. The strategy was enlarged eventually to provide a complete range of rural service. By 1975, more than 100,000 rural families in Honduras, about a fourth of the rural population, were taking advantage of one or other of the services offered. One evaluation report, however, suggests that the programme ran into blind alleys as a result of "acceptance of decisions made unilaterally by urban-based mentors who have conceived of the rural areas as a cultural vacuum."

NICARAGUA

Radio Mathematics Project

A project to teach mathematics by radio was taken up in Nicaragua from 1975. Known as the Radio Mathematics Project, it assumes responsibility for all of the mathematics instruction received by children. A daily lesson consists of a 20-minute radio presentation followed by teacher-directed activities for another 20 minutes. No text books are used and printed material is limited to a one page worksheet for each

child each day. All instruction is given in Spanish. During each radio lesson the children are asked to respond orally, physically and in writing and they do so 40 to 50 times during each 20-minute lesson. After the radio transmission the teacher continues the lesson in accordance with certain directions.

An evaluation report suggests that children are most attentive to radio lessons when they respond actively and when they learn new topics. It is reported that the experience was encouraging and that mathematics could be taught by radio to first grade children. The project workers have learnt how to impart clear and unambiguous instruction suited to radio presentation.

TOBAGO

Group Resources for Women

The occasion of International Women's Year provided the impetus for a multi-media educational pilot project for women, "GROW (Group Resources for Women) with Tobago". Tobago, part of Trinidad, is a small island with a population of around 41,000 with a low rate of female literacy.

The programme was launched in 1974 and continued until 1976 with UNESCO assistance with the object of using communication for community development with special reference to functional education and the role of women in society.

Media development was slow in the absence of adequate dissemination of the projected weekly radio programme. Video tapes were, however, used for group work and a weekly community newsletter became a permanent feature.

DOMINICAN REPUBLIC

Formal Schooling by Radio

In the Dominican Republic, as in many other Third World countries, educational opportunities are notably lacking for rural lower-status groups. In this Caribbean country of approximately 4,000,000 inhabitants, 60 per cent of whom are rural, 50.5 per cent of the rural population, 25 years of age or older has had no formal education, and 89.7 per cent of this age group has not completed four years of primary education.

In 1964 Radio Santa Maria, which operates a 10 kilowatt cultural-education station under the sponsorship of the Catholic Church in the north-central part of the Dominican Republic, began a literacy programme. Over a period of six years 25,459 adults received literacy certificates. In conjunction with the radio-

phonic schools, programmes of community development, small farmer agricultural associations, and cooperatives were promoted within the listening area of the radio station, which encompasses a population of approximately 1,500,000.

In 1970, Radio Santa Maria reevaluated the potential of its various programmes for rural development in the Dominican Republic. This analysis indicated a widespread desire among young adults for more advanced formal education and suggested that unstructured cultural programmes and literacy campaigns no longer sufficed in the context of quickening modernisation in both rural and urban areas.

KENYA

Rural Education and Teacher Training

Radio is used in Kenya both to provide secondary level schooling in rural areas and to provide in-service training for teachers. As in Tanzania, the project in Kenya uses both radio and correspondence courses to provide instruction.

The radio/correspondence courses are expected to increase the percentage of the eligible age group that can obtain a secondary education from three per cent to 13 per cent. In addition to school-leavers, unqualified primary school teachers are a prime target of radio correspondence education.

The result thus far indicate that the radio students do as well or better than those in teacher training colleges and better than those who try to study on their own.

TANZANIA

Successful Adult and Social Education Campaign

Tanzania has conducted a campaign of adult education by radio.

The campaign started in 1970 brought about an average 20 per cent increase in knowledge of vital health practices among two million citizens. As part of health education, the campaign resulted in a vast increase in the building and use of latrines all over the country. An evaluation report stated that the campaign has offered a direct alternative to the traditional student-teacher relationship. The campaign method was noted for its flexibility.

Starting with political education, the programmes covered health, nutrition, food production and child care. The total per capita cost showed considerable economy as compared to the classroom method. The campaign promoted interaction between various institutions in achieving common goals. Despite several diffi-

culties like reaching books to the people listening to the radio programmes, the campaign was a success largely due to a favourable climate of official and political opinion towards adult education.

In the absence of a teacher, the radio forum, says an evaluation report, encouraged equal and democratic participation by group members in the learning process.

SENEGAL

Rural Parliament via Rural Radio

Senegal has been using radio and television for communication with peasants in an interesting project. Senegal volunteered to host the project and introduce a television service exclusively devoted to educational purposes, which would cover the city of Dakar and its environs. The experiment began in 1965.

Three years later, a rural educational radio (RER) programme went on the air.

The principal difficulty was in co-ordinating the efforts of various Ministries and services involved in the project. President Leopold Senghor himself gave a boost to the project by creating a new Ministry of Rural Development and an inter-ministerial committee for educational radio.

The letters that came from the countryside in response to the programmes were circulated to all Government officials, despite the criticism of official policies. RER was able to resist attempts at veiled censorship thanks to the encouragement of President Senghor. The radio has provided an interactive means of communication between the peasants and officials. Even though the peasants have radios at home, they come together to listen to programmes and discuss them. The radio (RER) is non-partisan and focuses attention on specific issues of concern to the rural population and the authorities.

The programme, now called Radio Educative, has spread far beyond the original groundnut growing basin in Senegal. It continues to give the peasants and fishermen a voice that is heard directly at the seat of Government and throughout the land.

IRAN

Promoting Family Planning

A mass media project for family planning was tried in Iran in 1970 and 1971. Known as the Esfahan communication project for family planning, it aimed at in-

creasing the acceptance and use of family planning methods and studied the effect of an all-media campaign in promoting family planning.

During the first three months of the mass media project, only radio was used with spot announcements at periodic intervals. Later all available media were used. It was reported that radio had the greatest impact in developing awareness and increasing acceptance of the project's idea. Nevertheless during the campaign 82 per cent women going to the clinics said that they had heard about contraceptives from friends and neighbours.

PHILIPPINES

A co-operative development programme was started in the Philippines to help improve the quality of life for the farmer. The underlying objective was even more basic, namely, to change attitudes.

Radio and printed materials were used to support the co-operative development programme. About 250 stations, both Government-owned and private, broadcast radio communications including jingles, spot announcements, slogans and discussions. Some of the programmes were recorded in eight languages. Printed pamphlets were also distributed later.

An evaluation study stated that the mass media significantly improved the effectiveness of field workers, even though the stated impact of radio was much less than expected in a region where 74 per cent of respondents had radio sets.

JAPAN

Radio for Modernising Education :

Another country that makes widespread use of instructional radio is Japan. In 1936, NHK began a small programme of radio broadcasts to schools.

After World War II a decision was taken to modernize the Japanese educational system completely both in terms of curriculum and teaching techniques. Radio played an important role in this modernisation, both in compensating for the many textbooks lost during the war and in allowing rapid dissemination of the new methods of instruction.

A survey done in 1958 by the Broadcasting Culture Research Institute of the NHK reported that 45 per cent of the primary schools, 37 per cent of the lower secondary schools and 27 per cent of the upper secondary schools made regular use of radio broadcasts. In Japan, it is possible to receive secondary level diploma without spending any time in a classroom through a combined programme of correspondence courses and radio lessons.

ALASKA

Health Care by Radio

More than half of the 60,000 native Alaskans live in small communities scattered in the 600,000 square miles of continental Alaska and the Aleutian Islands. They are settled in 181 communities (average population : 1976), most of which are severely influenced by geographical isolation and the rigours of the environment.

In 1971, the National Library of Medicine's Lister Hill National Centre for Biomedical Communications funded a project for overcoming communication problems by using a satellite link, ATS-1, the first NASA Applied Technology Satellite.

The network of ground stations in Tanana (one of the seven clusters of villages grouped in Public Health Services Units, each having its own hospital) was constituted by ten villages initially and later expanded to fourteen villages. Among the original stations were one at the Tanana Hospital and another at a nurse-operated clinic. These stations were also connected to the station at the Alaska Native Medical Centre (ANMC) in Anchorage and with those in a few communities outside the unit.

The primary use of the ATS-1 network has been for a daily "doctor-call" between a doctor at the hospital and the health aide in the village. Every day, a doctor calls each health aide. The health aides, who are sufficiently fluent in English present their cases, ask for advice, and check their diagnoses and patient management plans. If the seriousness of the case requires that the patient be evacuated to the hospital, appropriate plans are made. Similarly, the radio is frequently used for emergency calls when immediate help is required.

The capacity of this network for group two-way communication facilitates educational experiences related to general education and to health-care education.

The evaluation reports show that health aides can consult a doctor on most days when there is a patient in need of medical attention and that the number of cases treated by Public Health Service doctors has significantly increased. Also doctors and health aides, responding to a questionnaire, all said that they were convinced that the quality of health care had improved.

Additional data and analyses now reinforce the conclusion advanced that health care has improved as a result of satellite radio communication. There has been an increase in supervision; health-aide records show that health aides discussed two out of three of their cases with the doctor, including the most complex or important ones. These resulted in increased professionalism in the diagnoses and treatment,

as well as significant changes in the management plan of the patient by the doctor consulted.

Among successful experiments has been a coronary care course in nursing over radio in 1973-74. Encouraged by the successful use of interactive radio, it is now believed that mental health care, family-to-patient-at-hospital communication, and patient awareness and control are areas in which interactive radio operation can be proposed.

CANADA

Ending Isolation through Community Radio

The North of Canada beyond reliable communication and transportation services is an area as large as Western Europe, but with only 250,000 inhabitants. Native people (Indians and Eskimos or Inuit) in this vast territory number about 150,000. Most live in villages accessible only by boat or plane. Living in an isolated and very harsh environment (temperatures frequently drop to 40° C in winter), Northerners are very much aware of the importance of communications.

In recent years, native people in the North have recognized the importance of communication as an organisational tool. Broadcast radio can be used to communicate with people in their own language to increase their knowledge of the world outside their own community and to build an awareness of a shared identity and common problems. Two-way communication can be used to organise meetings and political strategies and keep leaders in touch with each other and the outside world.

One Indian and one Inuit settlement were selected to receive assistance in starting small community radio stations. Residents in both settlements had expressed interest in using radio for local entertainment and information.

Generally the radio stations seemed to have increased the awareness of activities and events going on in Baker Lake for both Inuit and Kabloona. For Inuit, it has also become the chief information source about the Keewatin and other parts of the North and, to some extent, about the rest of the country (the South).

TVNF Estimate for Self-Contained TV Production Facilities

According to the Television News Features, New Delhi the cost of equipment and machinery for a self-contained programme production unit capable of producing finished film TV programmes of two to four hours per month on one working shift basis would be as follows :

		(in Rupees)
1.	Film processing plant—one (Indian)	*75,000.00
2.	Film printer—one (Indian)	*50,000.00
3.	Film viewing table—imported-cum-Indian	5,000.00
4.	Film editing viewer of Acmodo Picsyne type	cost **15,000.00
		customs duty 18,000.00
5.	Film projector—(Indian)	7,500.00
6.	Two cameras	cost 1,00,000.00
		customs duty 1,00,000.00
7.	Two tape recorders	cost 40,000.00
		customs duty 30,000.00

*This expenditure need not be incurred at the initial stage in Bombay/Calcutta/Madras and even in Delhi today as outside film laboratory facilities are available in these cities.

**An excellent editing table is being developed by Akashvani engineers and that table as and when marketed can be used as the second main table. The imported cost of a table like the one developed by Akashvani is roughly Rs. 80,000 plus duty.

8. Auditorium amplifier etc. (Indian)		7,500.00
9. Rewinder and other minor accessories		5,000.00
10. Transport—one car		35,000.00
11. Office equipment		15,000.00
	Total :	<u>5,03,000.00</u>
12. Working capital and development expenditure to prepare at least two pilot programme		75,000.00
	Grand Total :	Rs. <u>5,78,000.00</u>

Policy Guidelines for Production of Documentary Films for the Films Division

For the purpose of assigning films for production through Outside Producers on contract, the Films Division will maintain a panel of Outside Producers duly approved by the Government which is generally valid for the financial year. Any addition to or deletion from the approved panel should have the prior approval of the Government.

The Panel of Outside Producers will be reviewed every year with a view to eliminating producers whose performance has not been found satisfactory and for adding new producers if considered necessary. The revision of the panel will be done by the Ministry of Information and Broadcasting on the recommendations of a committee to be set up by the Films Division every year. The Committee will consist of the Chief Producer, one eminent person each connected with films from the three major film production centres viz., Bombay, Calcutta and Madras and the Additional Chief Producer of the Films Division. The eminent persons from the three centres will be selected by the Chief Producer of the Films Division and they will serve on the committee for only one year, different persons being selected every year subject to the condition that no person so selected can be re-selected before the expiry of three years from his last selection. The committee will review the performance of the producers already included in the panel as also consider new applications received for inclusion in the panel and make its recommendations.

The panel of Outside Producers maintained by the Films Division should be treated as 'classified' information and should not be made available to private agencies or individuals. This list of Outside Producers included in the Division's approved

panel may be supplied to the Central Government Departments and the State Governments on demand. It should, however, be made clear to them that the panel is to be treated as confidential.

Procedure for assignment of films to Outside Producers

The following procedure should be observed in the assignment of films to Outside Producers :

- (i) Tenders for the production of films will be invited from producers included in the panel of approved producers maintained for the purpose and/or from outside according to the discretion of the Chief Producer. If a tender enquiry is proposed to be issued to a limited number of producers or if a subject is proposed to be assigned on a negotiated basis, the Chief Producer will record reasons for it.
- (ii) In the examination and acceptance of tenders for production of films the Chief Producer will be assisted by the Government from time to time.
- (iii) The Chief Producer shall have the power to ignore a lower tender offer and to accept a higher one in the public interest. He will also have power to reject tenders containing quotations which, in his opinion, are likely to result in the production of sub-standard films. He shall record reasons for accepting higher tendered rates and ignoring the lower offers.
- (iv) For subjects which do not require specialised handling, tenders will be invited from all producers on the panel.
- (v) For subjects which are intricate and require specialised handling, tenders will be invited from a few selected producers in the panel. (Not less than five and not more than 10 except in the case of animation films where the minimum would be lower.)
- (vi) In special circumstances films may be assigned judicially on a negotiated basis to a selected producer whether in the panel or not, keeping in view his aptitude, standing, etc.

Contract for production of films through Outside Producers

In accordance with para XI (5) (E) of the notification for "Execution of contracts and assurances of property" issued by the Ministry of Law, the Chief Producer is authorised to enter into contracts with Private Producers for and on behalf of the President of India for the production of films for the Government of India.

Security Deposits

The Private Producers to whom films are assigned for production in contract should be required to deposit a sum of Rs. 500 as security deposit towards due fulfilment of the terms and conditions of the agreement. The security deposit will be refunded to the producer on successful completion of the film and delivery of the final materials of film.

Arbitration in case of disputes

The contracts entered into by the Films Division with Private Producers of production of films should invariably include an arbitration clause as given below :—

“All disputes and differences arising out of or in any way touching or concerning this agreement whatsoever shall be referred to the sole arbitration of any person appointed by the Secretary to the Ministry of the Government of India administratively dealing with the contract at the time of such appointment or if there be no Secretary, the administrative head of such Ministry at the time of such appointment. It will be no objection to any such appointment that the person appointed is a Government servant, that he had dealt with the matters to which the agreement relates, and that in the course of his duties as such Government servant, he has expressed views on all or any of the matters in dispute or difference. The award of such Arbitrator shall be final and binding on the parties to this agreement. It is a term of this agreement that in the event of such Arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, such Secretary or administrative head as aforesaid at the time of such transfer, vacation of office or inability to act, shall appoint another person to act as Arbitrator in accordance with the terms of this agreement. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor. It is also a term of this agreement that no person other than a person appointed by the Secretary or administrative head of the Ministry as aforesaid will act as Arbitrator and if for any reason that is not possible, the matter is not to be referred to arbitration at all. The arbitrator may, from time to time, with the consent of the parties, enlarge the time for making and publishing the award.

Subject to as aforesaid, the Arbitration Act, 1940, shall apply to the arbitration proceedings under this clause”.

Experiment in Slow-Scan Television and Bandwidth Reduction

An interesting possibility for India on which the Space Applications Centre is working lies in the development of what are known as slow-scan television systems which can be exploited for educational applications. This system entails use of very narrow bandwidths to transmit low resolution pictures including pictorial slides, charts and diagrams. The importance here again is that these "slow-scan" television pictures can be transmitted over a radio transmitter though they can only be received on normal television sets or equivalent "electronic blackboards". Thus, educational and extension programmes could be pictorialised and transmitted from radio stations. Although reception would still require a television set or "electronic blackboard", transmission costs could be reduced greatly through this use of appropriate technology, intermediate between conventional radio and conventional television.

Another project in progress relates to video bandwidth reduction systems using analogue and digital methods. Recent experiments conducted at SAC have demonstrated the feasibility of bandwidth reduction to transmit two video signals simultaneously while maintaining acceptable audio and visual quality.

Only 75 per cent of a television signal is used for purposes of carrying useful pictorial information. The rest is used for synchronisation of signals plus special intervals which allow the television receiver to return the electron beam of the CRT (cathode ray tube) to its starting position after completion of the horizontal and vertical scan. Much effort and ingenuity has been expended round the world in exploiting the "horizontal blanking interval" and the "vertical (field blanking) interval" so that the so-called waste of space or "empty" lines in the television signal are used for various purposes.

Among the purposes to which these blanking intervals can be put are for transmitting :

- (a) Special test signals for evaluating transmission parameters.

- (b) Digital signals for transmission of data such as station or source identification, network time signals, or the transmission of instructions and information.
- (c) Coded written information to digital signals during the vertical interval period in the course of normal television transmissions. These can be decoded by a special gadget and displayed on ordinary television receivers. This system, known as teletext, is becoming operational abroad.
- (d) Still pictures and graphics simultaneously with normal television transmissions during the vertical interval period. This in effect opens up the possibility of devising "electronic (television) blackboards" which can be used to transmit educational information to schools, etc.
- (e) Certain high quality sound signals during the horizontal blanking interval.
- (f) Two video signals on alternate lines. In this method the resolution of the television picture is effectively reduced from 625 lines to 313 lines while still providing a picture quality that is acceptable for several applications. Variants of this application have been used to develop video-phone systems.

The importance of these developments lies in the possibility of using a single television transmitter/transmission to send out two programmes simultaneously. This naturally implies considerable cost-saving and could afford viewers a choice in programmes and/or uses with reference to the same television receiver, though a special decoder may need to be used for teletext.

SAC has developed a number of items of low cost equipment for television programme production for use in the studios or for outdoor recording. Among them is a Digital Time Base Corrector which is necessary to stabilise transmissions from half-inch video tape recorders. SAC has entered into an agreement to transfer this know-how to Gujarat Communication and Electronics Ltd., a State Government undertaking.

The launching of ISRO's synchronous satellite, APPLE, in 1980 affords opportunity for experimenting with certain bandwidth reduction uses through the establishment of low cost ground terminals. The NBT might discuss the possibility of sharing APPLE experimentally for some of these futuristic uses so as to estimate their technical, economic and systems viability. This should at this stage properly be regarded as a systems research programme and no more, though early decisions would be required in order to match ISRO's planning and launch schedule.

SAC has also been experimenting with the design, fabrication, and operation of tethered balloons for a variety of applications including radio and television broadcasting, communication relays, remote sensing, oceanography, and micro-meteorology. Polythene balloons of 250 cubic metre size have been flown up to heights of 1.5 kms. A new series of flights are planned during April-June 1978 at Ahmedabad and a larger 350 cubic metre balloon is planned to be completed and flown during September-December, 1978. Various experiments are planned with these balloons to demonstrate their broadcast and communication capability. Tethered balloons can fly up to an altitude of three to five kms and could be cost-effective systems for communication and broadcast applications similar to satellites in certain circumstances.

One young engineer who appeared before us suggested the possibility of setting up a number of rural radio programme production centres at a cost of less than Rs. 20,000. In his opinion these could be battery operated facilities, the batteries being automatically charged by solar energy through solar-cell arrays. He himself is already using low-priced reject NASA solar-cell arrays to operate transistors in Delhi. These centres in his judgement could be compact, self-contained units installed in small rooms with a floor area of no more than 150 square feet and manned by perhaps two creative production staff assisted by a maintenance technician who could be shared with similar centres. Each centre will have technical production capabilities similar to those of "mother" stations. They will be equipped for field recording of interviews, music and sound effects and mixing from various sources such as tape, record player, radio tuner, and announcer or commentator's microphone. They will also have a tape duplicating facility. The cost breakdown of such a rural radio programme production centre is given below :

Rural Radio Programme Production Centres

Each production centre will be equipped with the following :

Equipment	Quantity	Cost in Rs.
Solar cell array (126 Nos. silicon cells 2x4 cm each, 0.4 volts @ 150 mA each)	1 set	1157
Lead acid battery 6 volts, 12/AH	1 no.	155
Charge regulator 1 amp	1 no.	90
Instrumentation (ammeter, voltmeter & switch)	1 set	178
Portable cassette recorders, Sony TC 110 B or equivalent, with internal microphones	2 nos.	1602

Electret condenser microphones	2 nos.	267
Master cassette recording deck with Dolby noise reduction, servo-controlled capstan motor and VU meter	1 no.	1780
2-speed gramophone with ceramic pickup	1 no.	356
Gooseneck announcer's microphone, super-cardioid pattern	1 no.	356
Audio-mixer 5 × high level & 1 × micro-phone channel	1 no.	890
Radio tuner, medium wave	1 no.	178
Monitor amplifier & speaker, 5 watts peak	1 set	500
Headphones	1 no.	178
Furniture, hardware & wiring	—	2000
TOTAL :		Rs. <u>9,687</u>

Comparison of costs (estimated) between Rural Production Centre and programme production studio of conventional design.

A. Capital Costs

	Conventional Description	Amount (Rs.)	Rural Description	Amount (Rs.)
Building	Minimum 1500 sq. ft. @ Rs. 50	75,000	Nil	—
Plant	Furniture, fittings, studio treatment, electrical installation, air conditioning	80,000	Power supply, solar panel, furniture etc.	3,580
Recording reel to reel Tape machines (3 nos.)	studio Equipment	1,00,000	Cassette recorders (3 nos.)	3,382
Audio-Equipment	Turntable, mixer micro- phones, monitors etc.	50,000	Turntable, mixer microphones, tuner, monitor	2,725
TOTAL :		<u>3,05,000</u>		<u>9,687</u>

B. Annual Operating Costs

Staff	2 producers, 2 recordists, technicians, assistants, librarian, secretarial and administrative staff	90,000	2 Producers, 1 part- time technician	27,000
Rent	Nil	—	1 room 150 sq. ft.	1,200
Electricity	23,000 KWH @ 25 per KWH	5,750	1 new battery	155
Consumables	Tape, records, etc.	10,000	Cassettes, etc.	4,000
Travel & Transport		10,000		2,500
Depreciation on equipment		15,250		9,687
Maintenance, Building and Equipment 5%		15,250		484
Interest on Capital @ 5%		15,250		484
	TOTAL :	<u>1,69,250</u>		<u>45,510</u>

(Submitted by Robert Tyabji, New Delhi).

District Level Rural Television System

The Space-Applications Centre, Ahmedabad has been experimenting with low cost programme production and transmission facilities some of which have been brought into operation in its television centre at Ahmedabad. The focus here is on rural programming with a development orientation.

A spokesman of the Space Applications Centre told the Working Group that it would be notionally possible to set up a simple rural television system with studio costs ranging from Rs. 5 lakhs to Rs. 15 lakhs and the transmitter cost similarly ranging from Rs. 5 lakhs to Rs. 15 lakhs (inclusive of the cost of a small transmitter, building, land, power, air-conditioning and inter-connection to satellite). Such a facility would need to be manned by about 10 producers, 10 engineers, six researchers and six script writers. The running expenses might be of the order of Rs. 15 lakhs per annum including Rs. 10 lakhs for 200 hours of programme production, Rs. 2 lakhs for spares, and Rs. 3 lakhs for social research and other costs.

A short description of some of the existing SAC facilities and those proposed is outlined below :

1. Ahmedabad Studio

The building has two studios (each 9m x 12m x 9m), though only one was fully equipped during SITE. However, the equipment had to take care of two transmissions simultaneously (Pij & Satellite), so that there had to be basically two sets of all consoles, transmission equipment and VTR's. The studio used one inch VTR, 2 Plumbicon & 1 Video camera, 1 telecine chain, and other associated audio/video and control equipment. The approximate cost was about Rs. 70 lakhs. During SITE, the total operating expenditure for one year was Rs. 24 lakhs, and 154 hours of programmes were produced.

2. Pij TV Transmitter

This is a 1 KW transmitter, imported from Japan. The transmitting antenna is mounted on the 100 m. high microwave tower. This saved the cost of putting up

a separate tower, but involved a special design for the antenna and the fabrication of certain special fixtures. This development was carried out by SAC, and the antenna is helping to provide wider coverage than the originally planned 30 km. radius. The approximate costs including building and civil works (Rs. 3.50 lakhs) and transmitter and equipment (Rs. 18.50 lakhs excluding duty), antenna, diesel generator (Rs. 2 lakhs), spares, etc. (Rs. 2 lakhs) totalled Rs. 26 lakhs. In addition the cable-cum-microwave link from SAC to Pij cost Rs. 37 lakhs (including the tower) while the annual operating cost was Rs. 3 lakhs.

3. Bombay SITE Studio

The Bombay SITE Studio (BSS) was set up by SAC for the production of science-education programmes for SITE. The studio was housed in space provided by the Bombay Municipal Corporation, and was probably one of the smallest studios anywhere (with effective dimensions of 7m x 6m x 4m). It was equipped with only one one-inch VTR, 2 camera chains (Plumbicon), 1 telecine chain, and a minimal amount of other studio equipment. This was, however, sufficient for the production of about 150 science education programmes (10-12 minutes duration each) and a considerable amount of Gujarati programmes for Pij. The science programmes were produced in Hindi and then dubbed into Oriya at BSS itself. The equipment and installation cost totalled Rs. 15.50 lakhs. While the production staff varied with time, the peak staff of 34 included 7 producers, 2 scriptwriters, 5 production assistants, 3 cameramen, 2 sound recordists, 1 film editor, 8 engineering staff, 2 social researchers and 4 administration and support staff. Programmes were made in "team mode" involving a producer, scriptwriter, social researcher and a content expert. This intensive mode of work required more producers than would be required in a normal production mode. Graphic artists, carpenters, etc., were used on a "job basis" and were not a part of the regular staff.

4. District-Level TV Transmitter

This could be a 1-KW transmitter using an antenna mounted on a 100m tower. Costs would be similar to those for the Pij transmitter. Since the studio and transmitter could be co-located the microwave link will not be necessary. For smaller districts/lower coverage, it is possible to use the 100-Watt solid state transmitter developed by SAC, and this would be much cheaper.

Manpower requirements for manning the transmitter would be the same as those for the Pij transmitter, viz., one engineer, three technical assistants and two administrative supports.

5. District-Level TV Studio Programme Requirement

If one assumes that the programmes are to be basically participative and developmental in character, then considerable emphasis will have to be placed on recording outdoors in the field, in people's homes and at their work places. This can best be done naturally and with minimum obtrusion by using small, portable half-inch VTR's. Thus, the studio would have to be geared to receiving, editing and finally putting together a great deal of half inch material.

The studio itself need not be very large, but should be capable of handling discussions, plays, and demonstrations even though its main function would be to serve as a continuity source for material recorded outdoors.

While live transmission from the studio should be possible, it is not necessary to assume simultaneous programme recording and transmission.

6. District-Level TV Studio : Education Equipment & Capital Cost

The approximate capital cost with 2 Plumbicon and 1 Vidicon Cameras, 2 Video Cassette Recorders 3/4 inch, 4 Portable 1/2 inch VTR systems with cameras, a Digital time base corrector (TBC), a Telecine chain (16 mm film & 35mm slides), Video switcher, Other studio audio, test equipment, lighting, acoustical treatment, cyclorama, air conditioning, electrical and miscellaneous items would be of the order of Rs. 12.15 lakhs. This excludes customs duty, freight, etc. However, most of the items (except the VTR's and cameras) have been developed indigenously now, and their cost of production may be lower than the foreign cost.

In fact, even simpler and cheaper studios can be conceived if some of the equipment (e.g., the digital time base corrector) can be provided at some central facility. Also, much work can be done by using an outdoor recording (OB) van, the equipment for which will cost less than Rs. 5 lakhs. This can produce in the field a complete programme. It will only be necessary to put the programme through a digital time base corrector while transmitting it. Such a van, a mobile mini-studio, is already operational.

A.I.R. Code

Broadcasts on All India Radio by individuals will not permit :—

1. criticism of friendly countries ;
2. attack on religion or communities;
3. anything obscene; or defamatory ;
4. incitement to violence or anything against maintenance of law and order;
5. anything amounting to contempt of Court;
6. aspersions against the integrity of the President, Governors and Judiciary;
7. attack on a political party by name;
8. hostile criticism of any State or the Centre; or
9. anything showing disrespect to the Constitution or advocating change in the Constitution by violence; but advocating changes in a constitutional way should not be debarred.

This Code applies to criticism in the nature of personal tirade, either of a friendly Government or of a political party or of the Central Government or any State Government. But it does not debar reference to and/or dispassionate discussion of policies pursued by any of them.

(i) If a Station Director finds that the above Code has not been respected in any particular or particulars by an intending broadcaster, he will draw the latter's attention to the passage objected to. If the intending broadcaster refuses to accept the Station Director's suggestions and modify his script accordingly, the Station Director will be justified in refusing his or her broadcast.

(ii) Cases of unresolved differences of opinion between a Minister of a State Government and the Station Director about the interpretation of the code with respect to a talk to be broadcast by the former will be referred to the Minister of Information and Broadcasting, Government of India, who will decide finally whether or not any change in the text of the talk was necessary in order to avoid violation of the Code.

The Commercial Broadcasting Service

Code for Commercial Advertising over Radio and Television

Definition :— In this Code, unless the context otherwise requires :

- (i) The term “Sponsored Programme” means any programme material which is planned, produced and/or paid for by an organisation or individual, to be called ‘the sponsor’ for the purpose of being broadcast/telecast over sound radio or television in India.
- (ii) ‘Director General’ means, the Director General, All India Radio/Director General Doordarshan (DG AIR/DD) or any officer duly authorised by him on his behalf and includes the Director, Television Centre.
- (iii) ‘Sponsor’ means any individual or organisation including a commercial concern who has offered a programme for broadcast/telecast over the radio or television.
- (iv) ‘Spot Advertisement’ means any direct advertisement/mentioning products, their merits, prices and other related details.
- (v) ‘Advertiser’ means any individual or organisation including a commercial concern which has offered an advertisement for broadcast/telecast over the radio or television.
- (vi) ‘Advertisement’ includes any item of publicity inserted in the programmes broadcast by the competent authority in consideration of payment to All India Radio/Doordarshan (AIR/DD).

Scope :- (a) A sponsored programme shall constitute a substantive broadcast/telecast programme, as distinct from material which directly advertises any specific wares or goods or products. The names of the sponsor shall be broadcast immediately before and after the sponsored programme.

(b) The DG AIR/DD shall be the sole judge of the suitability or otherwise of a sponsored programme or spot advertisement for broadcast/telecast and his decision in this regard shall be final.

(c) Broadcast/TV time shall be sold to the sponsor at the sole discretion of the DG AIR/DD according to the prescribed rates.

(d) To ensure acceptable programme and technical quality of the sponsored programme, the DG AIR/DD may require the sponsor to undertake an adequate number of rehearsals of the said material in the studios of AIR/DD to the satisfaction of the DG or his representative. The time so utilised by the sponsor shall be paid for by him separately, according to rates prescribed for the purpose.

(e) Advertising must be clearly distinguishable from news content in news programmes.

(f) The word 'guarantee' in respect of the advertised goods should be used with caution and sparingly and only in relation to some specific description or quality and the detailed terms of any such guarantee must be available for inspection by AIR. Where the guarantee is associated with an offer to return the purchase price, it must be made quite clear to what it applies and in what way it protects the purchaser.

(for AIR only).

(f) No advertisement may contain the words 'Guarantee' or 'Guaranteed', etc., unless the full terms of the guarantee are available for inspection by the TV authorities and are clearly set out in the advertisement or are made available to the purchaser in writing at the point of sale or with the goods. In all cases terms must include details of the remedial action available to the purchaser. No advertisement may contain a direct or implied reference to any guarantee which purports to take away or diminish the legal right of a purchaser.

(for DD only).

(g) The advertisement should be clearly distinguishable from the programme being sponsored in order to avoid the message of the programme getting mixed up with the message and images of the advertisement.

(for DD only).

(h) The picture and the audible matter of the advertisement should not be excessively 'loud' in order to ensure that between the programme and the advertisement there is a smooth change over avoiding jerkiness or shock to the viewers.

(for DD only).

I—INTRODUCTION

Advertising is an important and legitimate means for the seller to awaken interest in his goods and services. The success of advertising depends on public confidence; hence no practice should be permitted which tends to impair this confidence.

The standards laid down here should be taken as minimum standards of acceptability which would be liable to be reviewed from time to time in relation to the prevailing norm of viewers' susceptibilities. (for DD only).

The following standards of conduct are laid down in order to counteract the misuse of advertising and to promote further development of the sense of responsibility on the part of advertisers to the consumer.

Responsibility for the observance of these rules rests with :

- (a) The advertiser on whose account the advertisement is issued.
- (b) The advertiser or the advertising agent who has created the advertisement.

All those engaged in advertising are strongly recommended to familiarise themselves with the legislation affecting advertising in this country, particularly the following Acts and the rules framed under them :

- (1) Drugs and Cosmetics Act, 1940.
- (2) Drugs Control Act, 1950.
- (3) Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954.
- (4) Copyright Act, 1957.
- (5) Trade and Merchandise Marks Act, 1958.
- (6) Prevention of Food Adulteration Act, 1954.
- (7) Pharmacy Act, 1948.
- (8) Prize Competition Act, 1955.
- (9) Emblems and Names (Prevention of Improper Use) Act, 1950.

THE CODE

II—GENERAL RULES OF CONDUCT IN ADVERTISING

1. Advertising should be so designed as to conform to the laws of the country and should not offend against morality, decency and religious susceptibilities of the people.

2. No advertisement should be permitted :

- (i) which derides any race, caste, colour, creed, nationality except wherein such usage would be for the specific purpose of effective dramatisation, such as combating prejudice;
- (ii) which is against any of the objectives, principles, or provisions of the Constitution of India;
- (iii) which will tend to incite people to crime or to promote disorder, violence or breach of law;
- (iv) which presents criminality as desirable or furnish details of crime or imitation thereof :
- (v) which would adversely affect friendly relations with foreign States;
- (vi) which exploits the national emblems, or any part of the Constitution, or the person or personality or national leader or state dignitary;
- * (vii) on cigarettes and tobacco products.
- * (viii) No advertisement shall be permitted the objects whereof are wholly or mainly of a religious or political nature; advertisements must not be directed towards any religious or political end or have any relation to any industrial dispute.
- * (ix) Advertisement for services concerned with the following are not acceptable : (a) Money lenders; (b) Chit Funds and saving schemes other than those conducted by nationalised or recognised banks; (c) Matrimonial agencies; (d) Unlicensed employment services; (e) Fortune-tellers or sooth-sayers etc., and those with the claims of hypnotism would be excluded from advertising on T.V.
- * (x) Betting tips and guide books etc., relating to horse racing or other games of chance shall not be accepted.
- * (xi) No advertisement shall contain references which are likely to lead the public to infer that the product advertised or any of its ingredients has some special property or quality which is incapable of being established, e.g. cure for baldness.
- * (xii) Scientific or statistical excerpts from technical literature etc., must be used only with a proper sense of responsibility to the ordinary viewer. Irrelevant data and scientific jargon must not be used to make claims appear to have

a scientific basis they do not possess. Statistics of limited validity should not be presented in such a way as to make it appear that they are universally true.

- *(xiii) Advertisers or their agents must be prepared to produce evidence to substantiate any claims or illustrations.
- *(xiv) Advertisements should not contain disparaging reference to another product or service.
- *(xv) Imitation likely to mislead viewers even though it may not be of such a kind as to give room for legal action or be deemed as breach of copyright must be avoided.
- *(xvi) Visual and verbal representation of actual and comparative prices and costs must be accurate and should not mislead on account of undue emphasis or distortion.
- *(xvii) Testimonials must be genuine and must not be used in a manner likely to mislead the viewers. Advertisers or the agencies must be prepared to produce evidence in support of any testimonial and any claims it may contain.

NOTE : (*) Indicate (Doordarshan only)

3. In all other respects, the DG AIR/DD be guided for purposes of commercial broadcasting and telecasting in AIR/DD by the Code of Ethics for Advertising in India issued by the Advertising Council of India (relevant excerpts appended), as modified from time to time.
4. Notwithstanding anything contained herein, this Code is subject to such modifications/directions as may be made/issued by the Government of India from time to time.

IIA—ADVERTISING AND CHILDREN (Doordarshan only)

(Please also see chapter on “Standards of practice for TV advertising”).

- (i) No advertisement for a commercial product or service is allowed if it contains any appeal to children which may suggest in any way that unless the children themselves buy or encourage other people to buy the products or services, they will be failing in their duty or lacking in loyalty to

somebody or any organisation whether that person or organisation is the one making the appeal or not.

- (ii) No advertisement is allowed which leads children to believe that if they do not own the product advertised they will be inferior in some way to other children or that they are liable to be condemned or ridiculed for not owning it.
- (iii) Any advertisement which would endanger the safety of the children or create in them any interest in unhealthy practices would not be allowed, e.g. playing in middle of the road, leaning dangerously out of a window, playing with match boxes and such other goods which can cause accidents. Children seen in any advertisement should be shown to be well-mannered and well-behaved.
- (iv) Children be should not be shown as begging or in any such undignified, squalid or indecent situation.

III—PROCEDURE FOR THE ENFORCEMENT OF THE CODE

- (a) All complaints or reports on contraventions of the Code, received by All India Radio/DD shall be in the first instance referred by DG AIR/DD, to the Advertisers' Association(s) concerned, who should be requested to take suitable action.
- (b) Members of member associations having complaints under the Code against members of other member association(s) should, in the first instance, address their complaint to the member association(s) concerned.
- (c) If complaints under the Code cannot be satisfactorily resolved at member association(s) level, they should be reported to AIR/DD which will consider suitable action.
- (d) For any complaints under the Code received by AIR/DD, concerning an offending party outside the purview of the various member association(s), AIR/DD itself will draw attention of the offending party to the contravention and consider suitable action.
- (e) The sponsor shall undertake to indemnify AIR/DD against any legal claim that may be brought against it as a result of the broadcast/telecast of a sponsored programme advertisement or any portion thereof.

EXCERPTS FROM THE CODE OF ETHICS FOR ADVERTISING IN INDIA ISSUED BY THE ADVERTISING COUNCIL OF INDIA

Introduction

Along with the development of a very complex distribution system, the requirements of a market economy, faced with the need for ensuring a regular flow of mass-production, have given rise to the development of new techniques of sales promotion.

Of these, advertising has proved itself to be of inestimable value for producers and distributors as well as for consumers. It enables the former to maintain contact with customers who are widely scattered and often unknown, and it assists the latter in choosing those goods and services that are the best suited to their particular requirements.

Recognising that the legitimate function of advertising is the advocacy of the merits of particular products or services this code is intended to be applied in the spirit as well as in the letter and should be taken to set out the minimum standards to be observed by the parties concerned. This Code does override all ethical standards in advertising laid down by individual organisations, but it does not supersede the standards of practice laid down by individual organisations as incumbent upon their own members and applying to their own particular trade or industry.

General Rules of Conduct in Advertising

1. Advertising should be so designed as to conform not only to the laws but also to the moral, aesthetic and religious sentiments of the country in which it is published.
2. No advertisement likely to bring advertising into contempt or disrepute should be permitted. Advertising should not take advantage of the superstition or ignorance of the general public.
3. No advertisements of talismans, charms and character reading from photographs or such other matter as will trade on the superstition of general public shall be permitted.
4. Advertising should be truthful, avoid distorting facts and misleading the public by means of implications and omissions. For instance, it should not mislead the consumer by false statements as to :
 - (a) the character of the merchandise, i.e., its utility, materials, ingredients, origin etc.;

- (b) the price of the merchandise, its value, its suitability of terms of purchase;
 - (c) the services accompanying purchase, including delivery, exchange, return, repair, unkeep, etc.;
 - (d) personal recommendations of the article or service. Testimonials which are fictitious and/or fraudulent or the originals of which can not be produced must not be used. Anyone using testimonials in advertisements, is as responsible for the statements made in them as he would be if he had made them himself;
 - (e) the quality of the value of competing goods of the trustworthiness of statements made by others.
5. No advertisement should be permitted to contain any claim so exaggerated as to lead inevitably to disappointment in the mind of the public. Special care is called for the following cases :
- (a) Advertisement addressed to those suffering from illness. (In this respect the Code of Standards of Advertising in relation to medicine must be adhered to).
 - (b) Advertisements inviting the public to invest money. Such advertisements should not contain statements which may mislead the public in respect of the security offered, rates of return, or terms of amortisation.
 - (c) Advertisements inviting the public to take part in lotteries or competitions such as are permitted by law or which hold out the prospects of gifts. Such advertisements should state clearly all the conditions for the lottery or competition or the conditions for the distribution of the gifts.
 - (d) The publication of employment notices requiring fees for application forms, prospects, etc., and security deposits should be forbidden except when such advertisements emanate from Governmental or quasi-Governmental sources.
6. Methods of advertising designed to create confusion in the mind of the consumer as between goods by one maker and another maker are unfair and should not be used. Such methods may consist in :
- (a) the imitation of the trademark or name of competitor or the packaging or labelling of goods ; or

- (b) the imitations of advertising devices, copy, layouts or slogans.
7. Advertising should endeavour to gain the goodwill of the public on the basis of the merits of the goods or services advertised. Direct comparison with competing goods or firms and disparaging references are in no circumstances permitted.
 8. Indecent, vulgar, suggestive, repulsive or offensive themes or treatment should be avoided in all advertisements.

This also applies to such advertisements which in themselves are not objectionable as defined above, but which advertise objectionable books, photographs or other matter and thereby lead to their sale and circulation.

9. No advertisements should offer to refund money paid.
10. The use of National Emblems is prohibited by law in advertisements, trademarks, etc., except by Governmental agencies. Also the use of the picture of Mahatma Gandhi, the President, the Vice-President and the Prime Minister of India is forbidden in such advertisements, trademarks, etc., except by previous permission. This rule does not apply to advertising of books, films or other items in which these personages form the chief subject.

CODE OF STANDARDS IN RELATION TO THE ADVERTISING OF MEDICINES AND TREATMENTS

This Code has been drafted for the guidance of advertisers, manufacturers, distributors, advertising agents, publishers and suppliers of various advertising media. The harm to the individual that may result from exaggerated, misleading or unwarranted claims justifies the adoption of a very high standard and the inclusion of considerable detail in a Code to guide those who are concerned with this form of advertising. Newspaper and other advertising media are urged not to accept advertisements in respect of any product or treatment from any advertiser or advertising agent who disregards the provisions of this Code in any form of advertising or publicity relating to that product or treatment. The provisions of this Code do not apply to an advertisement published by or under the authority of a Government, Ministry or Department, nor to an advertisement published only in journals circulated to Registered Medical Practitioners, Registered Dentists, Registered Pharmacists or Registered Nurses.

Section 1

General Principles :

1. *Cure* : No advertisement should contain a claim to cure any ailment or symptoms of ill-health, nor should an advertisement contain a word of expression used in such a form or context as to mean in the positive sense the extirpation of any ailment, illness or disease.
2. *Illness etc., properly requiring medical attention* : No advertisement should contain any matter which can be regarded as an offer of medicine or product for, or advice relating to, the treatment of serious diseases, complaints, conditions, indications or symptoms which should rightly receive the attention of a registered medical practitioner. (See Sec. 2).
3. *Misleading or exaggerated claims* : No advertisement should contain any matter which directly or by implication misleads or departs from the truth as to the composition, character or action of the medicine or treatment advertised or as to its suitability for the purpose for which it is recommended.
4. *Appeals to fear* : No advertisement should be calculated to induce fear on the part of the reader that he is suffering, or may without treatment suffer from an ailment, illness or disease.
5. *Diagnosis or treatment by correspondence* : No advertisement should offer to diagnose by correspondence diseases, conditions or any symptoms of ill-health in a human being or request from any person or a statement of his or any other person's symptoms of ill-health with a view to advertising as to or providing for treatment of such conditions of ill-health by correspondence. Nor should any advertisement offer to treat by correspondence any ailment, illness, disease, or symptoms thereof in a human being.
6. *Disparaging references* : No advertisement should directly or by implication disparage the products, medicines or treatments of another advertiser or manufacturer or registered medical practitioner or the medical profession.
7. *College, clinic, institute, laboratory* : No advertisement should contain these or similar terms unless an establishment corresponding with the description used does in fact exist.

8. *Doctors, hospitals, etc.* : No advertisement should contain any reference to doctors or hospitals, whether Indian or foreign, unless [such reference can be substantiated by independent evidence and can properly be used in the manner proposed.
9. *Products offered particularly to women* : No advertisement of products, medicines or treatments of disorders or irregularities peculiar to women should contain expressions which may imply that the product, medicine or treatment advertised can be effective in inducing miscarriage.
10. *Family Planning* : Advertisements for measures or apparatus concerning family planning would be permissible in so far as they conform to the generally accepted national policy in this behalf.
11. *Illustrations* : No advertisement should contain any illustration which by itself or in combination with words used in connection therewith is likely to convey a misleading impression, or if the reasonable inference to be drawn from such advertisement infringes any of the provisions of this Code.
12. *Exaggerated copy* : No advertisement should contain copy which is exaggerated by reason of improper use of words, phrases or methods of presentation, e.g., the use of the word "magic, magical, miracle, miraculous".
13. *Natural remedies* : No advertisement should claim or suggest contrary to the fact, that the article advertised is in the form in which it occurs in nature or that its value lies in its being a "natural" product.
14. *Special claims* : No advertisement should contain any reference which is calculated to lead the public to assume that the article, product, medicine or treatment advertised has some special property or quality which is in fact unknown or unrecognised.
15. *Sexual weakness, premature ageing, loss of virility* : No advertisement should claim that the product, medicine, or treatment advertised will promote sexual virility or be effective in treating sexual weakness or habits associated with sexual excess or indulgence or any ailment, illness or disease associated with those habits. In particular, such terms as "premature ageing", "loss of virility" will be regarded as conditions for which medicines, products, appliances or treatment may not be advertised.

16. *Slimming, weight reduction or limitation or figure control* : No advertisement should offer any medical product for the purpose of slimming, weight reduction or limitation or figure control. Medical products intended to reduce appetite will usually be regarded as being for slimming purposes.
17. *Tonics* : The use of this expression in advertisements should not imply that the product or medicine can be used in the treatment of sexual weakness.
18. *Hypnosis* : No advertisement should contain any offer to diagnose or treat complaints or conditions by hypnosis.
19. *Materials to students* : Materials meant for distribution in educational institutions must not carry advertisements of things other than those of value to students.

Section 2

Restrictions imposed by Statute on Advertising of Medicines and Treatments :

Rule 106 of the Drug Rules, 1945, provides that :—

1. No drug may purport or claim to prevent or cure or may convey to the intending user thereof any idea that it may prevent or cure, one or more of the diseases or ailments specified in Schedule "J".

Schedule "J"

Blindness	Bright's disease	Cancer
Cataract	Deafness	Delayed Menstruation
Diabetes	Epilepsy	Hydrocele
Infantile Paralysis	Leprosy	Leucoderma
Lockjaw	Locomotor Ataxia	Insanity
Tuberculosis	Tumours	Venereal diseases (in general)
Female Diseases (in general)	Fevers (in general)	Fits
Glaucoma	Goitre	Gonorrhoea
	Soft Cancer	Syphillis
Heart Disease	High Blood Pressure	Lupus
Obesity	Paralysis	Plague
Rupture	Sexual Impotence	Small pox.

2. No drug may purport or claim to procure or assist to procure, or may convey to the intending user thereof any idea that it may procure or assist to procure miscarriage in women.

Definition :

“Drug” includes for internal or external use for human beings or animals and all substances intended to be used for or in the treatment, mitigation or prevention of disease in human beings or animals, other than medicines and substances exclusively used or prepared for use in accordance with the Ayurvedic or Unani systems of medicines.

**STANDARDS OF PRACTICE FOR RADIO ADVERTISING/TV
ADVERTISING**

1. Because of the obligation of the broadcasting stations/television stations to their audience, it is necessary that meticulous supervision should be exercised over all programmes or sessions.

The following rules should apply to all broadcasts/telecasts but particularly to broadcasts/telecasts addressed to children :

- a. All scripts must be carefully written having in mind the particular audience for which they are intended.
- b. (i) People should be encouraged in the art of correct gesture besides correct speech and pronunciation. The use of slang and incorrect language should be discouraged.

(ii) The advertisers will ensure that the images in spots conform to good taste accepted for family viewing. Such images, gestures, movements or equipment used for illustration shall not cause any embarrassment or offence on the grounds of indecency. The spots will be subject to approval on this account by the TV authorities (for DD only).
- c. All stories must reflect respect for law and order, adult authority, good morals and clean living.
- d. Adventure stories may be accepted subject to the following prohibitions :
No torture or suggestion of torture.
No horror—present or impending.

No use of supernatural or of superstition likely to arouse fear.

No profanity or vulgarity.

In order that people will not be emotionally upset, no programme or episode shall end with an incident which will create in their minds morbid suspense or hysteria.

- e. The themes of stories broadcast/telecast in all sessions should reflect fair play and considerate behaviour for one's fellow being. In particular, they should not undermine parental authority or the authority of teachers.
 - f. As distinct from the collective aspects of children's programmes, it is suggested that sessions calculated to develop the tastes of individual children be arranged e.g. broadcast/telecast devoted to particular hobbies.
 - g. No appeal should be made to the audience to help characters in the story by sending in box tops or wrappers, nor may any actor remain in character and, in the commercial copy, address the individual urging him to purchase the product in order to keep the programme on the air, or make similar, appeals.
2. Commercial stations/TV stations are bound not to accept any script continuity or programme matter for broadcasting/telecasting recorded or otherwise, which introduces or incorporates :
- a. Obscene and off-colour jokes or songs, oaths, sacrilegious expressions, anything of doubtful propriety.
 - b. Statements or suggestions that may be considered offensive or religious views, racial traits and the like.
 - c. Any statement that comments upon, ridicules or incorporates the name of any person in a derogatory manner or in relation to advertising.
 - d. Matters of such nature as would destroy or tend to destroy public confidence or create any feeling of insecurity in the community.
3. Any such effects which might startle the listening/viewing public or in any manner is objectionable must not be incorporated in commercial announcements/commercials.

For example, and without limiting the scope, the use of the following sound effects will not be permitted in commercial announcements/commercials :

Rapid gunfire or rifle shots	Screams
Sirens	Raucous laughter and the like; Fire engines;
Bombardments	Ambulance and Explosives.

4. Any pretence in advertising copy must be avoided and such copy shall not be accepted by commercial stations/TV stations.

× × ×

“Dramatized testimonials” should not be incorporated in commercial announcements/commercial.

“The simulation” of voices of a personality in connection with advertisements for commercial products is also prohibited unless bonafide evidence is available that such personality has given permission for the simulation of his or her voice and it is clearly understood that stations broadcasting/telecasting such announcements are indemnified by the advertiser or advertising agency against any possible legal action.

5. No advertisement shall contain any matter which could be regarded as holding out for the prevention, cure or relief of serious diseases which should rightly be under the care of a medical practitioner.
6. No broadcasting/telecasting for any product will be permitted which describes graphically or repellently any internal bodily functions or matters which are generally not considered acceptable topics of conversation in social groups.
7. Special attention shall be paid to advertisements, relating to laxatives and other medicines with a view to exclusion of any distasteful statements. Comments as to the effects of medicine or medical treatment on specific organs of the body or in relation to the ailment or disease are also forbidden.

STANDARDS OF PRACTICE FOR ADVERTISING AGENCIES :

(As approved by the Advertising Agencies' Association of India, Bombay).

1. Every member of the Association shall carry on his profession and business in such a manner as to uphold the dignity and interests of the Association.
2. Every member shall refrain from canvassing Advertisers or prospective Advertisers in such a way as to reflect detrimentally upon Advertising Agents as a whole or this Association or any Advertising Agent in particular.

3. Canvassing is permitted subject to the condition that a member may make known to the client of another member its own capabilities as an Advertising Agency but may not submit a specific report or detailed recommendations concerning the client's advertising unless so requested by him in writing.
4. No member shall pay or undertake to pay or allow to an advertiser or his agent or representative, the whole or any portion of the standard rate of commission resulting or to result to such member from any advertising medium nor promise or procure or undertake to procure advertising space or facilities free of charge, to any advertiser, or at a reduced rate, nor supply free or partly free to any advertiser, any advertising material, including finished drawings, or other art work, photography, blocks, stereos, matrices or the like, type-setting or printing nor defray on whole or in part the salary of an employee of an advertiser, nor grant any allowance, discount or the like nor render any service having the effect of rebating the commission allowed by an advertising medium. The sharing of commission with a member of overseas agency, or with another advertising agent recognised as an advertising agent by this Association shall, however, be permitted.
5. The practice of submitting speculative campaigns is unhealthy to the growth of the advertising services and that no speculative campaign shall be submitted by any member of the Advertising Agencies Association of India.

By speculative campaign, it is meant, producing a campaign unsolicited by an advertiser and equally producing a campaign where the advertiser had requested one or more advertising agencies to do so, unaccompanied by a firm offer of business. That members shall notify the Secretary of the Association if any such queries were made by prospective advertiser, and that such information shall be circulated by the Secretary to all members.

6. Any member relinquishing an Account on the ground of slow payment, doubtful credit or incurring a bad debt, shall immediately notify the Secretary of the Association and such information shall be circulated in strictest confidence for information and protection of other members.
7. No business shall be accepted which is conditional upon the payment of commission or fee or reward to a third party not a full-time employee of the member either for introducing the business or for services in connection with the account thereafter. This rule, however, shall not preclude a member from employing copy-writer or production men at fees commensurate with the values of their work.

Obligations to Clients :

1. Member Agencies must continue to render full agency service in reasonable conformity to the Association's Agency Service Standards.
2. Members shall retain either commission granted by media owners or charge the clients a service fee which shall never be less than 15% of the client's gross expenditure. Nor shall they supply material for advertising on any basis that can be considered as direct or indirect or secret rebating. Where no commission is allowed by the Media owner, the member will charge his clients a minimum of 15% on the gross cost.
3. Members will not accept discounts or commissions, other than the regular agency commission allowed by publishers without the client's knowledge and consent.
4. Members shall at all times use their best efforts to obtain for their clients the lowest rates to which such clients are entitled.

Obligations to Suppliers :

Members shall take all steps to assure themselves as to the financial soundness of their clients.

Obligations to Fellow Agencies :

1. Members are required to use fair methods of competition; not to offer the services enumerated above or services in addition to them without adequate remuneration or extensions of credit facilities or banking services.
2. Members shall neither prepare nor place any advertisement in any medium, which :—
 - (a) is knowingly a copy or a plagiarism of any other advertisement of any kind whatsoever ;
 - (b) makes attacks of a personal character, or makes uncalled for reflections on competitors or competitive goods ;
 - (c) is indecent, vulgar, suggestive, repulsive or offensive either in theme or treatment;
 - (d) is objectionable medical advertising and an offer of free medical treatment;

advertising that makes remedial relief or curative claims, either directly or by interference, not justified by the facts of common experience;

- (e) concerns a product, known to the member to contain habit-forming or dangerous drugs.

Or any advertisement which may cause money loss to the reader, or injury in health or morals or loss of confidence in reputable advertising and honourable business or which is regarded by the Executive Committee of the Advertising Agencies Association of India, as unworthy.

In the event of a member proving to the satisfaction of the Executive Committee that a client has withdrawn his Account on the grounds of the Member's refusal to undertake unethical advertising (as described above) no other Member shall accept any business whatever from the said client.

Akashvani Stations : Transmitter Power, Channels, and Languages Used

S. No.	Station	Power of Transmitter	Vividh Bharati/ Commercial Service, if any	Principal Language	Other Languages/ Dialects
1	2	3	4	5	6
1.	Agartala	20 KW MW	No	Bengali	Hindi English Tripuri Sanskrit
2.	Ahmedabad	i. 50 KW MW ii. 1 KW MW	Yes VB/ CBS	Gujarati	Hindi Sanskrit English Sindhi
3.	Aizawl	10 KW MW	No	Mizo	Hindi English Pawi Hmera
4.	Ajmer	20 KW MW	No	Hindi	Rajasthani Sindhi Hindi English Sanskrit
5.	Aligarh	2×250 KW SW	No	Mainly External Services. Home Services (News bulletins).	
6.	Alleppy	100 KW MW	No	Malayalam	Hindi English Sanskrit Tamil

1	2	3	4	6
7.	Allahabad	1 KW MW (2 nos.)	Yes VB/CBS	Hindi Urdu English Sanskrit Avadhi Bhojpuri Bundel- khandi
8.	Ambikapur	20 KW MW	No	Hindi English Sanskrit Sarguja
9.	Aurangabad	1 KW MW	No	Marathi Urdu English Hindi
10.	Bangalore	i. 50 KW MW ii. 1 KW MW	Yes VB/CBS	Kannada English Hindi Urdu Sanskrit Tamil Telugu Malayalam
11.	Bhadravati	20 KW MW	No	Kannada Hindi English Urdu Sanskrit
12.	Bhagalpur	10 KW MW	No	Hindi Angika Sanskrit Urdu English
13.	Bhopal	i. 10 KW SW ii. 1 KW MW (2 nos.)	Yes VB/CBS	Hindi Urdu English Sindhi Sanskrit Bundel- khandi Bagheli
14.	Bhuj	10 KW MW	No	Gujarati Hindi English Sanskrit Kutchi Sindhi

1	2	3	4	5	6
15.	Bikaner	10 KW MW	No	Hindi Rajasthani	English Urdu Sindhi
16.	Bombay	i. 100 KW SW ii. 50 KW MW iii. 20 KW MW (2 nos.) iv. 10 KW SW	Yes VB/CBS	Marathi Gujarati English	Kannada Sindhi Hindi Urdu Sanskrit Konkani
17.	Calcutta	i. 1000 KW MW ii. 100 KW MW iii. 50 KW MW iv. 20 KW MW v. 10 KW SW vi. 2.5 KW MW	Yes VB/CBS	Bengali Hindi English Sanskrit	Santhali Urdu
18.	Calicut	i. 10 KW MW ii. 1 KW MW	Yes VB/CBS	Malayalam	Mahl Hindi Sanskrit English
19.	Chandigarh	1 KW MW	Yes VB/CBS	Hindi Punjabi	—
20.	Chhatarpur	20 KW MW	No	Hindi English Urdu	Bundeli
21.	Coimbatore	10 KW MW	No	Tamil	English
22.	Cuddapah	20 KW MW	No	Telugu	Hindi English Sanskrit Urdu (News only)
23.	Cuttack	i. 100 KW MW ii. 1 KW MW	Yes VB/CBS	Hindi Oriya	English
24.	Darbhangha	10 KW MW	No	Hindi	Sanskrit Maithili English Urdu Bhojpuri

1	2	3	4	5	6
25.	Delhi	i. 100 KW MW ii. 100 KW SW (5 nos.) iii. 50 KW SW (2 nos.) iv. 20 KW MW. v. 20 KW SW (4 nos.) vi. 10 KW SW (2 nos.) vii. 10 KW SW (2 nos.) viii. 7.5 KW SW	Yes VB/CBS	Hindi English Urdu Punjabi	Braj Haryanvi
26.	Dharwar	i. 10 KW MW ii. 1 KW MW	Yes VB/CBS	Kannada	Hindi Sanskrit English Urdu Konkani
27.	Dibrugarh	100 KW MW	No	Assamese	Hindi English Sanskrit Idu Tanoga Nocte Wangchoo Adi Nishi Apatani
28.	Gauhati	i. 50 KW MW ii. 10 KW MW iii. 10 KW SW (2 nos.)	No	Assamese English Hindi	Sanskrit Nepali Sodo Karoj Tibetan Garo Khasi Jaintia Mizo
29.	Gorakhpur	100 KW MW	No	Hindi Urdu	Bhojpuri English
30.	Gulbarga	10 KW MW	No	Kannada	Hindi Urdu English Sanskrit

1	2	3	4	5	6
31.	Gwalior	10 KW MW	No	Hindi	Urdu Bundel- khandi Gwaliori
32.	Hyderabad	i. 50 KW MW ii. 10 KW MW iii. 10 KW SW iv. 1 KW MW	Yes VB/CBS	Telugu	Sanskrit English Hindi Urdu Kannada Marathi
33.	Imphal	50 KW MW	No	Manipuri	Hindi Urdu Sanskrit
34.	Indore	i. 100 KW MW ii. 1 KW MW	Yes VB/CBS	Hindi	Hindi English Urdu Malvi Nirvari
35.	Jabalpur	20 KW MW	No	Hindi	Urdu Sanskrit English Bundeli Gondwana
36.	Jagdalpur	20 KW MW	No	Hindi	English Halbi Bhatri Gondi
37.	Jaipur	1 KW MW (2 nos.)	Yes VB/CBS	Hindi	Rajasthani Urdu Sindhi English
38.	Jaigaon	20 KW MW	No	Marathi Hindi	Ahirani English
39.	Jammu	i. 50 KW MW ii. 1 KW MW iii. 1 KW SW	No	Urdu	Dogri Hindi Punjabi English Kashmiri Bhadrawahi Gojri

1	2	3	4	5	6
40.	Jeypore (Orissa)	20 KW MW	No	Oriya	Hindi English Sanskrit Gadba Koya Paraja Banda Saura Kalha
41.	Jodhpur	i. 100 KW MW ii. 1 KW MW	Yes VB/CBS	Hindi	Rajasthani English Sindhi Sanskrit
42.	Jullundur	i. 100 KW MW ii. 50 KW MW iii. 1 KW MW	Yes VB/CBS	Punjabi	Hindi English Sanskrit Urdu
43.	Kanpur	1 KW MW	Yes VB/CBS	Hindi	—
44.	Kohima	i. 50 KW MW ii. 2 KW SW	No	English Nagamese	Hindi Ao Sema Lotha Rengma Chakhasanga Angami Sangtma Yimchunger Konyale Phom Chang Zeilang Kuki
45.	Kurseong	20 KW SW	No	Nepali	Hindi Bengali English Tibetan Sikkimese Bhutanese Lepcha

1	2	3	4	5	6
46.	Leh	10 KW MW	No	Ladakhi Hindi	Urdu English
47.	Lucknow	i. 50 KW MW ii. 10 KW SW iii. 1 KW MW	Yes VB/CBS	Hindi Urdu English Sanskrit	Avadhi Bhojpuri Kumaoni Garhwali
48.	Madras	i. 100 KW SW ii. 20 KW MW iii. 10 KW SW iv. 2.5 KW MW v. 1 KW MW	Yes VB/CBS	Tamil	Telugu Malyalam Kannada English Hindi Sanskrit
49.	Mangalore	i. 20 KW MW ii. 1 KW MW	No	Kannada	Konkani English Tulu Sanskrit
50.	Mathura	1 KW MW	No	Hindi	English Urdu Braj Bhasha
51.	Mysore	1 KW MW	No	Kannada	Hindi English Sanskrit Urdu Tamil Malayalam Telugu
52.	Nagpur	i. 100 KW MW ii. 1 KW MW	Yes VB/CBS	Marathi	Hindi English
53.	Najibabad	100 KW MW	No	Hindi	Garhwali Kumaoni English
54.	Panaji	i. 10 KW MW ii. 5 KW MW	Yes VB (No commercials)	Konkani Marathi	Portuguese English
55.	Parbhani	10 KW MW	No	Marathi	English Hindi Urdu

1	2	3	4	5	6
56.	Pasighat	250 KW MW	No	Simple Assamese	Adi Bengali Assamese Hindi English
57.	Patna	i. 20 KW MW ii. 1 KW MW	Yes VB/CBS	Hindi Urdu	English Sanskrit Bhojpuri Maithili Bengali
58.	Pondicherry	1 KW MW	No	Tamil	French Hindi Sanskrit English
59.	Pune	i. 20 KW MW ii. 1 KW MW	Yes VB/CBS	Marathi	English Hindi Sanskrit
60.	Port Blair	20 KW MW	No	Hindi	Bengali Telugu Tamil Malyalam English Nicobarese
61.	Raipur	20 KW MW	No	Hindi	Chhatisgarbi English Urdu
62.	Rajkot	i. 1000 KW MW ii. 20 KW MW iii. 1 KW MW	Yes VB/CBS	Gujarati	Hindi English Sanskrit
63.	Rampur	10 KW MW	No	Hindi	Urdu
64.	Ranchi	i. 10 KW MW ii. 2 KW SW iii. 1 KW MW	Yes VB/CBS	Hindi	English Santali Mundari Oraon Nagpuri Khortta Panchpar- gania

1	2	3	4	5	6
65.	Ratnagiri	20 KW MW	No	Marathi	Hindi English Sanskrit Urdu
66.	Rewa	20 KW MW	No	Hindi	Bagtli English
67.	Rohtak	20 KW MW	No	Hindi	English Haryanvi Punjabi Urdu
68.	Sambalpur	20 KW MW	No	Oriya	English Sambalpuri
69.	Sangli	20 KW MW	No	Marathi	English Sanskrit Urdu
70.	Silchar	10 KW MW	No	Bengali	Hindi English Dimasa
71.	Siliguri	20 KW MW	No	Bengali	English Hindi Nepali Rajbanshi
72.	Simla	i. 100 KW MW ii. 2.5 KW SW	No	Hindi	Urdu English Sanskrit Lahaul-Spiti Kinnari Pangwali Bilaspuri Sirmauri Kangri Kullvi Chambiali Mahasvi Mandiali
73.	Shillong	1 KW MW	No	Khasi English	Jaintia Garo Mizo Hindi Bengali Assamese

1	2	3	4	5	6
74.	Srinagar	i. 20 KW MW ii. 7.5 KW SW iii. 1 KW MW (2 nos.)	Yes VB/CBS	Kashmiri Urdu	Gojri Punjabi Dogri Ladakhi English Hindi
75.	Tawang	500 Watt MW	No	Hindi Monpa	—
76.	Tezu	250 Watt MW	No	Simple Assamese	Khampti Digaru Mishmi Hindi English
77.	Tiruchirapalli	i. 50 KW MW ii. 1 KW MW	Yes VB/CBS	Tamil	English Hindi
78.	Tirunelveli	10 KW MW	No	Tamil	English Hindi
79.	Trichur	20 KW MW	No	Malayalam	English Hindi Tamil Sanskrit
80.	Trivandrum	i. 10 KW MW ii. 1 KW MW	Yes VB/CBS	Malayalam	English Hindi Tamil Sanskrit
81.	Udaipur	10 KW MW	No	Hindi	Urdu Sindhi Rajasthani
82.	Varanasi	10 KW MW	No	Hindi	English Bhojpuri
83.	Vijayawada	i. 20 KW MW ii. 1 KW MW	Yes VB/CBS	Telugu	Hindi Sanskrit Urdu English Kannada Tamil Malayalam
84.	Visakhapatnam	100 KW MW	No	Telugu	English Hindi Sanskrit

State-wise Primary Service Medium Wave Coverage (1971 Census).

No.	State	Coverage as on 24.3.77		After the completion of the projects in hand	
		Area	Population	Area	Population
		%	%	%	%
1.	Andhra Pradesh	85	90	85	90
2.	Assam	73	73	86	84
3.	Bihar	85	91	85	91
4.	Gujarat	98	98	98	98
5.	Haryana	96	97	96	97
6.	Himachal Pradesh	45	75	45	75
7.	Jammu & Kashmir	19	75	30	85
8.	Kerala	90	85	90	85
9.	Madhya Pradesh	85	86	85	86
10.	Maharashtra	76	79	76	79
11.	Manipur	99	99	99	99
12.	Meghalaya	40	40	78	75
13.	Karnataka	73	79	73	79
14.	Nagaland	99	99	99	99
15.	Orissa	75	81	77	83
16.	Punjab	97	97	97	97
17.	Rajasthan	71.5	73.5	77	78
18.	Tamil Nadu	94	94	94	94
19.	Tripura	82	86	95	96
20.	Uttar Pradesh	86	95	86	95
21.	West Bengal	91	94	91	94

UNION TERRITORIES

	%	%	%	%
1. Andaman & Nicobar Islands	80	80	80	80
2. Arunachal Pradesh	75	75	98	98
3. Chandigarh	99	99	99	99
4. Dadra & Nagar Haveli	99	99	99	99
5. Delhi	99	99	99	99
6. Goa, Daman & Diu	99	99	99	99
7. Lakshadweep & Minicoy	99	99	99	99
8. Mizoram	65	65	82	82
9. Pondicherry	99	99	99	99

NATIONAL COVERAGE (as on 16-2-78)

Area	77.63%
Population	89.35%

Chart Showing Coverage of Doordarshan Centres

S. No.	Name of Centre	Power of Trans. in K.W.	Band/Channel of operation	Ht. of Tower/Mast in Metre	Service Range in Kms.	Area covered Sq. Kms.	Population covered in lakhs			No. of Villages covered
							Urban	Rural	Total	
A. EXISTING CENTRES										
1.	Delhi	10	I/CH.4	100	68	14,300	67.5	25.5	93	2523
2.	Bombay	10	I/CH.4	300	70 to 100	10,000	65	20	85	2500
3.	Poona	0.6	III/CH.5	100	52 to 90	15,000	14	26	40	1400
4.	Srinagar	10	I/CH.4	122	30 to 70	4,000	5	20	25	2600
5.	Amritsar	10	III/CH.7	100	65	8,400	6	14	20	1600
6.	Calcutta-Interim set-up	10	I/CH.4	100	50	7,900	63	52	115	3000
7.	Madras	10	I/CH.4	175	80	12,000	36	25	61	2100
8.	Lucknow									
	(Interim set-up)	10	I/CH.4	100	60	11,300	9	46	55	5000
9.	Ahmedabad-Pij	1	III/CH.7	100	40	5,000	2.9	13.7	16.6	700
B. Permanent Tower (At Existing Centres)										
1.	Calcutta	10	I/CH.4	175	75	17,000	73	87	160	7500
2.	Lucknow	10	I/CH.4	175	75	17,700	11	61	72	7500
3.	Delhi	2×10	I/CH.4	200	90	25,400	69	60	129	5180
C. NEW CENTRE (UNDER INSTALLATION)										
1.	Mussoorie	10	III/CH.10	91	165	29,200	19	93	112	9700
					(in Plains of U. P. and Haryana)					
2.	Jullundur	10	III/CH.9	200	80	14,000	13	42	55	4600
3.	Kanpur	10	III/CH.5	150	75	9,500	13	27	40	2700
D. CONTINUITY TRANSMITTERS										
1.	Jaipur	10	III/CH.5	100	90	25,400	8.3	26.7	35	4400
2.	Hyderabad	10	I/CH.4	150	75	17,000	19	19	38	1600
3.	Raipur	1	III/CH.5	100	40	5,000	5.0	6.5	11.5	400
4.	Sambalpur	1	III/CH.7	100	40	5,000	1.3	4.2	5.5	650
5.	Muzaffarpur	1	III/CH.6	100	40	5,000	1.8	17.2	19.0	1600
6.	Gulbarga	1	III/CH.7	100	40	5,000	2	4	6	300
Grand Total						2,63,000	501.8	689.8	1193.6	66853

External Services

At present, External Services are broadcast in the following 24 Languages—16 foreign (including English) and 8 Indian :

S. No.	Language	Target Country	Remarks
1.	General Overseas Service	North/East, and South East Asia, Australia & Newzealand, U.K. & West Europe, East Africa, North & West Africa.	
2.	Burmese	Burma	Also heard in SEA
3.	Cantonese	China	Also heard in SEA
4.	Kuoyu		
5.	Indonesian	Indonesia	Also heard in SEA
6.	Sinhala	Sri Lanka	Also heard in SEA
7.	Nepali	Nepal and Nepali speaking areas of India.	
8.	Tibetan	Tibet, Sikkim, Bhutan and Tibetan speaking areas of India.	
9.	Arabic	Egypt, Syria, Jordan, Iraq, UAE, Qattar, Oman, Yemen, Behrain, Kuwait, Morrocco, Lybia, Saudi Arabia, Tunisia, Algeria, Mauritania, Nigeria, Sudan and Lebanon.	
10.	Persian	Iran	
11.	Dari	Afghanistan	
12.	Pushtu	Afghanistan	
13.	Swahili	East Africa (Tanzania, Kenya & Uganda)	
14.	Russian	USSR	Also heard in some West European countries.
15.	French	South East Asia, North & West Africa	
16.	Urdu	Pakistan & Indo-Pak sub-continent.	

1	2	3	4
17.	Baluchi	Pakistan (Baluchistan)	
18.	Sindhi	Pakistan and some other areas of sub-continent.	
19.	Punjabi	Pakistan	Broadcast from Jullundur
20.	Bengali	Bangla Desh	Broadcast from Calcutta
21.	Hindi	South East Asia and East Africa	
22.	Tamil	South East Asia	Morning x-mission from Delhi & evening x-mission from Madras
23.	Gujarati	East Africa	Morning News from Delhi & night x-mission from Bombay
24.	Konkani		Broadcast from Bombay

Monitoring

The countries whose broadcasts are monitored are given below in the case of both Simla and New Delhi.

SIMLA

	Country	No. of Broadcasts covered	Total Duration
1.	U.K. (BBC)	21	5 hrs. 25 mts.
2.	USA (VOA)	18	4 hrs. 30 mts.
3.	Pakistan	21	5 hrs.
4.	Bangla desh	12	2 hrs. 40 mts.
5.	Nepal	5	50 mts.
6.	Sri Lanka	4	1 hr. 5 mts.
7.	Burma (Rangoon)	3	1 hr.
8.	Afghanistan	6	1 hr. 45 mts.
9.	China (Peking)	18	5 hrs. 25 mts.
10.	USSR (Moscow)	14	3 hrs. 30 mts.
	Tashkent	2	30 mts.
	Peace and Progress	7	2 hrs. 30 mts.
11.	Australia	10	2 hrs. 30 mts.
12.	Malaysia	1	15 mts.
13.	Japan (Tokyo)	5	1 hr. 10 mts.
14.	Switzerland	2	25 mts.*
15.	Jerusalem (Israel)	1	15 mts.
16.	France (Paris)	2	30 mts.
17.	Seychelles	1	15 mts.
18.	Czechoslovakia (Prague)	1	10 mts.
19.	Germany	3	15 mts.
20.	Iran (Teheran)	10	2 hrs. 7 mts.
21.	Azad Kashmir	7	2 hrs. 40 mts.
22.	Netherlands (Hilversum)	1	15 mts.
23.	Philippines (Manila)	2	30 mts.
24.	South Africa (Johannesburg)	1	30 mts.
25.	Egypt (Cairo)	1	15 mts.
26.	Kuwait	1	15 mts.
TOTAL :		180	46 hrs. 27 mts.

The Monitoring Service, Simla, monitors broadcasts in 14 languages—English, Hindi, Urdu, Punjabi, Bengali, Kashmiri, Nepali, Pushtu, Persian, Russian, Chinese, Burmese, French and Tibetan.

NEW DELHI

Country	No. of Broadcasts covered	Duration
1. U.K. (BBC)	16 (including three newsreels at 0530, 1730 & 2030 hrs.)	175 mts. (This includes 13 news bulletins of 10 mts. duration each and 3 newsreels of 15 mts. duration each).
2. Australia	8	80 mts.
3. USA (VOA)	4	120 mts. (This includes news and in-depth reports).
4. USSR (Moscow)	4	60 mts.
5. Pakistan	9 (This includes 3 Eng. news bulletins and 7 Urdu news bulletins).	85 mts.
6. Afghanistan	1	10 mts.
7. Bangladesh	3	30 mts.
8. Japan		15 mts. (This includes news and comments).
TOTAL :	46	9 hrs. 35 mts.

Number of Broadcasting Receiver Licences

(Figures in Thousands)

S.No.	Circle	Y E A R						
		1947 (Radio)	1950 (Radio)	1960 (Radio)	(Radio)	1970 (TV)	(Radio)	1976 (TV)
1.	Andhra Pradesh	10.4	29.7	130.4	1119.25	—	1285.11	0.95
2.	Bihar	7.9	20.9	85.9	373.94	—	605.19	—
3.	Delhi	19.0	28.1	128.1	474.31	22.87	630.84	155.76
4.	Gujarat	28.3	52.3	164.1	954.37	—	1473.58	2.96
5.	J & K	—	—	—	139.69	0.01	146.72	4.64
6.	Kerala	7.0	9.7	54.6	358.44	—	910.87	0.03
7.	Karnataka	9.1	16.7	115.6	697.76	—	1661.01	—
8.	Maharashtra	45.4	98.0	308.1	1671.93	0.36	2411.43	202.07
9.	Madhya Pradesh	7.9	18.2	93.7	444.46	—	834.35	—
10.	North East India	2.8	5.8	30.1	173.79	—	215.75	—
11.	North West India	12.3 (J&K)	39.6 (J&K)	207.6 (J&K)	1178.65	0.83	1576.61	49.39
12.	Orissa	1.1	2.4	26.3	209.38	—	204.44	—
13.	Rajasthan	4.4	10.8	81.5	364.73	—	684.76	0.50
14.	Tamil Nadu	43.3	68.1	242.2	1173.54	—	1791.23	18.54
15.	Uttar Pradesh	28.7	63.5	195.3	1246.78	0.75	1468.39	20.01
16.	West Bengal	48.3	82.4	279.2	1172.70	0.01	1427.59	24.70
17.	Army Postal Service	—	—	—	82.84	—	91.89	0.77
TOTAL		275.9	546.2	2128.7	11836.65	24.83	17359.71	479.02

Plan Figures on Broadcasting

(Rs. in lakhs)

	Allocation	Expenditure
Pre-Plan (1948-51)	364.00	—
First Plan (1951-56)	494.00	219.00
Second Plan (1956-61)	800.00	567.00
Third Plan (1961-66)	1400.00	764.00
Three Annual Plans (1.4.66 to 31.3.69)	1467.00	1008.00
Fourth Plan (1969-74)	6801.16* (4510.20 for Sound 2290.96 for TV)	2712.00 (1567.00 for Sound 1145.00 for TV)
Fifth Plan (1974-79)	8938.00 (3840.00 for Sound 5098.00 for TV)	

* Ceiling of Expenditure fixed at Rs. 4000 lakhs.

Approved Musical Instruments

Permitted for use in Akashvani's classical and light classical music programmes:
May 17, 1969.

(i) *For solo and accompaniment*

1. Veena (South).
2. Veena (Rudra Veena North) Been.
3. Gottuvadyam.
4. Vichitra Veena.
5. Sitar.
6. Sarod.
7. Surbahar.
8. Rabab.
9. Sursinger.
10. Tabla.
11. Pakhawaj.
12. Kanjira.
13. Balkokilam.
14. Tarshahnai.
15. Mukha Veena.
16. Violin.
17. Sarangi.
18. Esraj.
19. Dilruba.
20. Flute.
21. Clarionet.
22. Shahnai.

23. Sundari.
24. Mridangam.
25. Ghatam.
26. Hawaiian Guitar.
27. Sursagar.
28. Mandra Bahar.
29. Viola.
30. Electric Guitar.
31. Santoor.

(ii) *For solo only*

1. Nagaswaram.
2. Jaltarang.
3. Nakkara.
4. Dholak.

(iii) *For accompaniment only*

1. Morsing.
2. Taval.

(iv) *For drone only*

1. Tanpura.
2. Swarmandal.
3. Surpali.

(v) *Allowed for Jammu and Srinagar Stations only*

1. Sofiana Musiqi.
2. Saz-e-Kashmir.
3. Sitar Kashmiri.

For Light Music

All instruments, whether Indian or foreign, except those with a tempered scale, which are capable of faithfully reproducing the fundamental characteristics of Indian music may be allowed.

2. There is no ban as such on solo instrumental performance in Light Music but care should be taken that items are carefully rehearsed and no item which is either hybrid or too long is permitted.

Folk Music

It is left to the discretion of the Heads of Stations to allow the use of such folk instruments that are typical of their regions and as are considered useful for Folk Music programmes. There is no ban as such on solo instrumental folk music and where considered necessary solo performance on such folk music instrument may be allowed in the rural programme only.

Charcha Mandals

(Information of March 1977)

Andhra Pradesh

1. Rajendranagar (Hyderabad).
2. Srikalahasti (Chittoor).
3. Gopannaplam (W. Godavari)
4. Nandyal (Kurnool).
5. Suryapet (Nalgonda).
6. Bapatla (Cuntur).
7. Karimnagar.
8. Hannakanda (Warrangal).
9. Anakapalli (Vishakaptnam).

Arunachal Pradesh

10. Pasighat (Siang).

Assam

11. Khanapara (Gauhati).
12. Jorhat.
13. Arunachal (Cachar).

Bihar

14. Arrah (Shahabad).
15. Purnea.
16. Pusa (Darbhanga).
17. Ranchi.
18. Piprakothi (Champaran).
19. Dumka (Santhal Pargana).

Delhi

20. Delhi (Alipur).
21. GOA—(Ela).

Gujarat

22. Jamanagar.
23. Navsari (Bulsar).
24. Thasra (Kaira).
25. Junegarh.
26. Vijapur (Mehsana).
27. Bhuj (Kutch).

Haryana

28. Rohtak.
29. Gurgoan.
30. Hansi (Hissar).
31. Ambala.
32. Karnal.

Himachal Pradesh

33. Sundarnagar (Mandi).

Jammu and Kashmir

34. R.S. Pura.

Karnataka

35. Gangavati (Raichur).
36. Bangalore.

37. Kudige (Coorg).
38. Arbhavi (Belgaum).
39. Bhadravathi (Shimoga).
40. Chikkanahalli (Tumkur).
41. Bijapur.

Kerala

42. Kunnukuzhi (Trivandrum).
43. Manuthy (Trichur).
44. Cannanore.
45. Pattambi (Palghat).

Madhya Pradesh

46. Gwalior.
47. Chandkhuri (Raipur).
48. Indore.
49. Jabalpure.
50. Powerkheda (Hoshangabad).
51. Kumharvand (Bastar).
52. Kuthulia (Rewa).

Maharashtra

53. Akola.
54. Buldhana.
55. Jalna (Aurangabad).
56. Karjat (Kolaba).
57. Kolhapur.
58. Sindewahi (Chandrapur).
59. Mohol (Sholapur).
60. Jalgaon.
61. Amravati.
62. Kosbad Hill (Thana).
63. Rahuri (Ahmednagar).

Meghalaya

64. Khasi Hills (Upper Shillong).

Nagaland

65. Ghaspani.

Orissa

66. Gambharipalli (Sambalpur).
67. Bhubaneswar.
68. Pangailund (Ganjam).
69. Balia Farm (Balasore).

Pondicherry

70. Pondicherry.

Punjab

71. Ludhiana.
72. Amritsar.
73. Patiala.
74. Jullundur.
75. Hoshiarpur.
76. Bhatinda.
77. Gurdaspur.

Rajasthan

78. Durgapura (Jaipur).
79. Udaipur.
80. Kotah.
81. Bharatpur.
82. Banswara.
83. Alwar.

Tamil Nadu

84. Coimbatore.
85. Navlock (N.A.).
86. Adathurai (Thanjavur).
87. Kovilpatti (Tirunelveli).
88. Madurai.
89. Tindivanam (S. Arcot).
90. Lalgudi (Tiruchi).
91. Kancheepuram (Chengalpattu).

Tripura

92. Lembucherra.

Uttar Pradesh

93. Bakshi-Ka-Talab (Lucknow).
94. Bichpuri (Agra).
95. Ghazipur.
96. Satoon (Rae-Bareli).
97. Bakewar (Etawah).
98. Faizabad.
99. Dohrighat (Azamgarh).
100. Kanpur.
101. Hardwar.
102. Pratapgarh.
103. Rudrapur (Nainital).
104. Pauri Garhwal (Garhwal).

105. Asafpur (Badaun).
106. Hawalbagh (Almora).
107. Chirgaon (Jhansi).
108. Rajghat (Varanasi).

West Bengal

109. Suri (Birbhum).
110. Burdwan.
111. Tufanganj (Cooch Behar).
112. Chhatna (Bankura).
113. Manmathanagore (24-Pargana).
114. Berhampur (Murshidabad).
115. Midnapur.

Broadcast for Schools

(as on 4.1.1978)

S. No.	Station	Schools with radio sets	Programmes for		No. of teachers involved
			Students	Teachers	
1	2	3	4	5	6
1.	<i>Assam</i> Gauhati Dibrugarh (R)	600 approx.	174 per annum	Pri. 160 for the year Sec. —	80
2.	<i>Bihar</i> Patna	about 1000	Pri. 4 per week Sec. 4 per week 226 for the year.	1 per week 40 for the year	329
3.	<i>Maharashtra</i> Bombay City (A) (Hindi, Gujarati & English medium Schools)	240 (latest)	10 per week (English, Gujarati and Hindi medium Schools)	— — Also relayed 1 per week 36 for the year	450
	Bombay 'B' Pune Nagpur Sangli (R) Jalgaon (R) Parbhani (R) Aurangabad (R)	5650	L & U Marathi medium Schools. L & U Pri. 8 per week Sec. 3 per week 232 for the year.	1 per week 36 for the year	
4.	<i>Gujarat</i> Ahmedabad Baroda (R) Rajkot Bhuj	1595	Pri. 4 per week Sec. 6 per week 295 per year.	1 per week 53 per year	603

1	2	3	4	5	6
5.	<i>Rajasthan</i>				
	Jaipur	814	Pri. 1 per week	1 per fortnight	54
	Ajmer (R)		Sec. 4 per week	11 for the year	
	Udaipur (R)		131 for the year.		
	Jodhpur (R)				
	Bikaner (R)				
6.	<i>Himachal Pradesh</i>				
	Simla	about 500	Pri. 3 per week	1 per week	87
			Sec. 3 per week	52 per year	
			167 per year.		
7.	<i>Jammu and Kashmir</i>				
	Srinagar	250	144 for the year.	12 for the year	103
			Pri. 2 per week		
			Sec. 3 per week		
	Jammu	195	Pri. 2 per week	1 per week	
			Sec. 3 per week		
8.	<i>Punjab</i>				
	Jullundur	2250 (50 Schools have recorders)	Pri. 6 per week	1 per week	
			Sec. 7 per week		
9.	<i>Haryana</i>				
	Rohtak	754	Pri. 2 per week	1 per week	89
			Sec. 3 per week	17 for the year	
			130 for the year.		
10.	<i>Uttar Pradesh</i>				
	Lucknow	about 3000	Pri. 2 per week	8 for the year	38
	Allahabad		Sec. 2 per week		
	Varanasi (R)		143 for the year.		
	Rampur (R)				
	Gorakhpur (R)				
11.	<i>Madhya Pradesh</i>				
	Bhopal	940	U. Pri. 2 per week	27 for the year	66
	Indore		Sec. 4 per week		
	Gwalior (R)		L. Pri. also started.		
	Jabalpur (R)				
	Chattarpur (R)				
	Ambikapur (R)				
	Raipur (R)				

1	2	3	4	5	6
12.	<i>West Bengal</i>				
	Calcutta	**642 (A few schools have recorders).	Pri. 4 per week Sec. 6 per week	2 to 3 per month	288
	Kurseong	6	Pri. 2 per week Sec. 3 per week 206 per year.	1 per fortnight 18 per year.	
13.	<i>Meghalaya</i>				
	Shillong	Not-available may be 6	Pri. Nil Sec. 3 per week	Nil	78
14.	<i>Orissa</i>				
	Cuttack	about 1000	313 for the year	52 per year	175
	Sambalpur		L. Pri. 5 per week	1 per week	
	Jeypore		278 for the year Sec. 5 per week		
15.	<i>Andhra Pradesh</i>				
	Hyderabad	About 3500	Pri. 5 per week	2 per week	220
	Vijaywada		Sec. 6 per week		
	Visakhapatnam (R)				
	Cuddapah (R)				
16.	<i>Tamil Nadu</i>				
	Madras	29537 (270 school have tape recorders)	294 per year	72 per year	480
	Tiruchy		L. Pri. 4 per week	2 per week	
	Coimbatore (R)		Sec. 6 per week		
	Tirunelveli (R)				
16. a.	Pondicherry				
17.	<i>Karnataka</i>				
	Bangalore	1450	400 for the year for both teachers and pupils.	1 per week	250
	Dharwar		Pri. 5 per week		
	Bhadravati (R)		Sec. 5 per week		

** The State Govt. is to provide 1000 more schools with sets.

1	2	3	4	5	6
18.	<i>*Kerala</i> Trivandrum Calicut Trichur (R) Aleppey (R)	1770	210 for year Pri. per week-2 progs Sec. per week-3 progs	7 per week 197 for the year	370
19.	<i>Goa</i> Panaji	State Govt. has promised to give sets to as many schools as possible shortly.	Pri. 2 per week Sec. 3 per week	Nil	265
20.	<i>Delhi</i> Delhi	about 700	Pri. 2 per week Sec. 2 per week	Nil	100
21.	<i>Andaman and Nicobar Islands</i> Port Blair	about 20	Pri. Nil Sec. 10 per week	Nil	
22.	<i>Nagaland</i> (Kohima)	about 100	362	18	

Total Schools with radio sets—56, 310

* UNICEF is financing free distribution of radio sets to primary schools in Kerala.

Questionnaire on Reorganisation of Broadcasting

1. What are or should be the objectives of the national broadcasting organisations, AIR and Doordarshan? Would these objectives fit into any larger national communication policy?
2. What is your conception of "autonomy" for AIR and Doordarshan? Is the concept of autonomy limited to freedom from day-to-day Government control or does it have a wider amplitude? Is it an end in itself or only a means to an end?
3. It is said that a broadcasting organisation can have no editorial policy. But what values should it subserve?
4. Can there be absolute freedom? If not what should be the limits of control and how should relations between AIR/Doordarshan and the Government be regulated?
5. If there is no Government control or only limited control, in what manner can it be ensured that the national broadcasting organisations adequately project and communicate to the people official policies and programmes though not to the exclusion of other points of view?
6. If the autonomy and role of the broadcasting media are enshrined in a Charter, what should be its content and should this form part of a Statute or be an independent statement of policy?
7. Should there be any accountability to Parliament and, if so, in what form, assuming that Parliament Questions on day-to-day matters are avoided?
8. Should the autonomous broadcasting authorities submit an annual report to Parliament?

9. What measures should be taken to balance diverse pulls, pressures and constraints that might exert themselves on an autonomous organisation?
10. What form should autonomy take? A Corporation? A Commission? A Board? The Chanda Committee (1967) suggested a Corporation with a Board of Governors. Who should appoint such a Board? What should be its composition, tenure, and terms of reference? Should this be a body of eminent public men or should the members have any functional responsibility?
11. Should the Chief Executive of the broadcasting media be an appointee of the Board or of the Government? What should be his tenure and powers? Should he be all in all or should he head a functional directorate like the Railway Board?
12. Should AIR and Doordarshan be separate or united, or be brought together under an umbrella organisation with a common Board of Governors but separate executive heads-cum-directorate? The Chanda Committee suggested two Corporations.
13. In either case, should there be a common technical cadre or common recruitment of programme personnel with interchangeability?
14. Conventions, traditions and a culture of autonomy often do more than formal structures and regulations to pressure and foster independence. If this is so, how best can professionalism and creativity be developed and safeguarded in the broadcasting organisation?
15. Should AIR/Doordarshan have autonomy in selection of all programme, technical and management personnel or should they be required to go through the UPSC for certain higher posts as at present? In the former case should there be a regular and independent recruitment and auditioning board which might also screen promotions to selection posts?
16. Is there need for any structure or modality for internal autonomy within the broadcasting organisation as between major functional departments like news, instructional broadcasts, cultural programmes, the technical branches and the like?
17. Apart from such "horizontal autonomy" to what extent should or can there be "vertical autonomy" going down to the regional and local stations and how should this be structured? Should there be any regional

boards? If so, at what level? What should be their role, composition and relationship with the Central management?

18. At present local radio at best goes down to outlying regional stations of AIR/Doordarshan. Is there scope for further decentralisation down to smaller or specific communities? If so, should these low-power stations be operated by AIR/Doordarshan or can they be licenced to be operated by approved institutions like Agricultural Universities, IITs, Zila Parishads and Universities under supervision?
19. Should the authority to grant such licences vest in AIR/Doordarshan or should this be subject to Government or Parliamentary approval?
20. If broadcasting is in the public domain, should there be any requirement regarding public affairs broadcasting or instructional broadcasting, and what criteria should be laid down for determining the public interest?
21. It is widely held that the broadcasting media can be powerful development aids. What area of development or public affairs broadcasting is Radio/TV best suited to, and what proportion of broadcast time should appropriately be devoted to such programmes?
22. What expertise, what linkages with public authorities and other interested or concerned institutions would be required to fulfil this function?
23. If educational, health, farm and other instructional or extension programmes are broadcast, should part or all of the direct revenue costs be borne by the sponsoring agency, Department or Government? If so, should the broadcasting media retain editorial control over these sponsored programmes?
24. External broadcasting perhaps falls in a special category since it is not intended to be heard by those who pay taxes in India or otherwise sustain Indian broadcasting. In the circumstances, should the entire cost of external broadcasting, including part or all of the capital cost be a charge on the Government? Yet, if the credibility of the country's external broadcasts are to be maintained, what should be the relationship between the broadcasting organisation and the Ministries of the Government concerned with external relations, diplomatic, economic and cultural?
25. What elements essentially go to make for credibility in a broadcasting organisation? The existing AIR Code is given in Appendix I. Is this

satisfactory or adequate? Who would monitor this code? An ombudsman?

26. If broadcasting is a national service rather than a Governmental function, does the listener have a "right to know" and to be informed? And can there be any "right to participation"?
27. Should there be listeners' councils? What should be their composition and role?
28. Should any section of the public be permitted to rent time on the air for specific kinds of programmes which might be approved by the broadcasting organisations or on the basis of some predetermined code? How should such broadcasts be organised?
29. Should there be any other means of promoting competition or diversity? Could local/community station programmes be graded for rebroadcast at the regional or national levels?
30. What types of broadcasts truly fall into the category of national broadcasts or regional broadcasts, and should programmes so designated be mandatory or optional for relay or rebroadcast by local stations?
31. What kind of language should the broadcasting media use?
32. Full functional autonomy is ensured by financial autonomy. A broadcasting organisation requires an adequate and permanent source of income to be able to incur both revenue and capital expenditure. What should be such independent sources of income for the organisation?

Should receiver licence fees be raised?

Should there be more or different categories of commercial broadcasting?

Can public affairs and cultural programmes be sponsored without affecting the independence of the broadcasting organisation?

33. Is a subsidy, grant or allocation of funds by the Government on a regular basis necessary to supplement the autonomous organisation's own sources of income? Would such subsidy/grant bring in, directly or indirectly, Government control? If so, how to ensure the financial backing of the State and yet guard against official influence in the formulation and implementation of media policy?

34. Are the current advertising codes suitable and adequate? Should advertisers be required to conform to development or other priorities? What kind of advertisements should be barred? Who should monitor and enforce this code?
35. On what principles should the advertisement rating schedule be based, if the present system is considered inadequate?
36. Should the broadcast media have, or seek to establish, any cultural policy or norms for regulating its music, drama and other programmes?
37. What norms should be established for party-political broadcasts and election broadcasts?
38. To what extent should the broadcasting media be dependent on Samachar or its successors for news? Is there any distinction between news gathering and news editing for the spoken word as opposed to the print media?
39. To what extent would it be desirable and feasible for the broadcasting media to develop their own news services within the country and abroad? Could there be any commonality here between Radio and TV?
40. An effective communications policy supposes a two-way traffic. A broadcasting organisation should have a feedback of public reactions to its programmes. Should audience research be a part of the broadcasting organisations or independent of it?
41. What should be the role and areas of technical research and training of programme and technical personnel?
42. What should be the role of external broadcasting in terms of news, other programmes and target audience? To what extent should it be influenced by foreign broadcasts beamed to India?
43. What are the special requirements for broadcasting in the border regions or for special categories of listeners/viewers such as youth, women, tribal populations, weaker sections?
44. What should be the relative weight given to Radio and TV over the next 10 years, and over the next 20 years? Does this have any technical, budgetary or personnel implications?

45. Should there be a second TV channel for special programmes of any kind or can this be supported by additional advertising revenue?
46. What should be the priorities in expanding Radio and TV in terms of areas and programmes?
47. Does any problem of utilisation of allocated frequencies in India by the International Telecommunications Union indicate the need for certain time-bound developments? If so, how best might these frequencies/facilities be used?
48. With satellite broadcasting, should the Indian broadcasting organisations go in more extensively for international exchange? What types of programmes should be exchanged?

Any other comment or suggestion.

Response to Questionnaire

S. No.	Category	Questionnaire sent	Replies received
1.	Governors/Chief Ministers/Ministers and Members of Parliament	806	17
2.	Central/State Government Departments	194	16
3.	Govt. of India Undertakings, Companies, Private Companies and Associations etc.	153	21
4.	Advertisers and Advertising Agencies	247	9
5.	Vice-Chancellors/Universities and Educationists	414	19
6.	Educational Institutions/Schools and other Institutions etc.	372	28
7.	Broadcasting and communications experts	76	10
8.	Knowledgeable persons in the field of Art, Music, Dance, Films, Literature, Sports etc.	110	16
9.	Journalists/Press Correspondents etc.	644	24
10.	Staff Associations/Members of Staff of Akashvani & Doordarshan	94	13
11.	Others	1090	42
TOTAL :		4200	215

Meetings and Visits of the Working Group and Members

Delhi 31.8.77
General Meeting
Ahmedabad 5.9.77

1. Shri D.S. Purohit,
 Station Director,
 All India Radio,
 Ahmedabad, with Staff.

2. Shri Arun Shroff,
 Director, Doordarshan Kendra,
 Ahmedabad, with Staff.

Delhi 7.9.77.

1. Shri P.V. Krishnamoorthy,
 Director General, Doordarshan,
 New Delhi.

2. Shri P.C. Chatterji,
 Director General,
 All India Radio, New Delhi.

8.9.77

1. Shri D. Chidananda Dasgupta,
 Editor, 'SPAN', USIS,
 New Delhi.
2. Shri M.V. Desai,
 Director, Indian Institute of Mass
 Communication, New Delhi.
3. Shri J.P. Naik,
 Member Secretary,
 Indian Council of Social Sciences Research,
 New Delhi.

4. Shri Dileep Padgaonkar,
 Times of India, New Delhi.

5. Dr. Rajni Kothari,
 Chairman, Institute for the Study of
 Developing Societies,
 New Delhi.

9.9.77

1. Shri S.V. Purushottam,
 Joint Secretary, XP,
 Ministry of External Affairs,
 New Delhi.

2. Shri P. Mathur,
 Station Director,
 A.I.R., New Delhi.
 (Formerly Director,
 External Services Division,
 New Delhi).

3. Dr. Sunil Misra,
 Director, Audience Research,
 All India Radio, New Delhi.

4. Dr. Mangal Sain,
 Research Engineer,
 All India Radio, New Delhi.

5. Shri S.K. Mukherjee,
 Planning Officer,
 Doordarshan, New Delhi.

6. Shri G.H. Vyas,
 Deputy Director General,
 (Commercial), All India Radio,
 New Delhi.

7. Shri S.N. Sivaswamy,
Controller of Sales (TV Commercials)
Doordarshan, New Delhi.

Uttar Pradesh 12.9.77 to 16.9.77

1. Shri B.K. Chaturvedi,
Director of Information,
Uttar Pradesh.
2. Shri K.K. Mathur,
Station Director,
All India Radio, Lucknow.
3. Shri K.R. Gupta,
Station Engineer,
All India Radio, Lucknow.
4. Staff of Akashvani and Doordarshan,
Lucknow.
5. Shri Narain Dutt Tiwari,
Leader of the Opposition,
U.P. Vidhan Sabha.
6. Shri K.N. Srivastava,
Chief Secretary,
Govt. of U.P.
7. Shri Ram Naresh Yadav,
Chief Minister,
Uttar Pradesh, Lucknow.
8. The General Manager,
HAL, Lucknow.
9. Shri R. U. Singh,
Vice-Chancellor,
Lucknow University,
Lucknow.

Bihar 12.9.77 to 16.9.77

1. Shri Karpoori Thakur,
Chief Minister, Bihar.
2. Shri C.B. Mahato,
Assistant Engineer,
TV, Muzzafarpur.

3. Shri Ram Lakhan Singh Yadav,
Leader of the Opposition,
Bihar Assembly, Patna.

4. Shri Chatur Bhuj Narain,
A.S.D., A.I.R., Patna.
5. Shri P.T. Lakhe,
Station Engineer,
A.I.R., Patna.
6. District Development Officer,
Muzzafarpur.
7. Faculty of the Bihar,
Agricultural University,
Pusa.
8. Staff of Akashvani, Patna.

Bombay 14.9.77

Shri A.L. Maini, Station Director, All India Radio, Bombay, and Shri V.S. Shastri, Director, Doordarshan Kendra, Bombay with Staff of AIR/Doordarshan.

Delhi 29.9.77

1. Prof. M.G.K. Menon,
Secretary, Deptt. of Electronics,
New Delhi.
2. Shri K.K. Nair,
Former Media Head of the
Ministry of I & B.
3. Shri S.C. Bhatt,
Director, News Services Division,
AIR, New Delhi.
4. Shri T. Janakiraman,
Chief Producer,
Educational Broadcasts.
All India Radio, New Delhi.
5. Smt. Amita Malik,
Author and Critic,
New Delhi.

6. Prof. Ruddar Dutt,
Principal, Correspondence Courses
University of Delhi, Delhi.

Delhi 1.10.77

1. Shri Melville de Mellow,
Producer (Emeritus),
All India Radio, New Delhi.
2. Shri J.C. Mathur,
Former Director General,
All India Radio, New Delhi.
3. Dr. (Mrs.) Veena Majumdar,
Director, Indian Council
of Social Sciences
Research, New Delhi.
4. Dr. M.S. Swaminathan,
Director General, Indian
Council of Agricultural
Research, New Delhi.
5. Shri. G.C. Awasthy,
Veteran Broadcaster,
New Delhi.
6. Shri K.S. Mullick,
Veteran Broadcaster,
New Delhi.
7. Shri I.J. Bahadur Singh,
Secretary General,
Indian Council of World Affairs
New Delhi.

8. Smt. Amrita Pritam,
Writer, New Delhi.

9. Shri N.L. Chowla,
Former Addl. Director
General, Doordarshan,
New Delhi.

Bombay 4.10.77

5.10.77

1. Shri Vasant Rao Dada Patil,
Chief Minister, Maharashtra.

2. Shri S.V. Bhawe,
Chief Secretary,
Govt. of Maharashtra.

3. Shri M.I.R. Mathur,
Director of Information,
Govt. of Maharashtra.

4. Shri V.S. Shastri,
Director, Doordarshan,
Kendra, Bombay and Staff.

5. Shri M.N. Thirunarayanan,
Engineer-in-Charge,
Doordarshan Kendra,
Bombay.

6. Shri Mushir Ahmed,
Director, Film Division,
Bombay.

7. Shri A.L. Maini,
Station Director,
All India Radio, Bombay
and Staff.

8. Shri I.V. Bal Krishnan
Station Engineer,
All India Radio, Bombay.

9. Shri P. Raman Kutty Nair,
Regional Engineer (West),
AIR, Bombay.

10. Shri M.S. Gopal,
DDG (West),
All India Radio Bombay.

Bombay 14.10.77

1. Shri A.F.S. Talyarkhan,
Veteran Sports-writer and
Critic.

2. Smt. M.R. Choksi

3. Advertising Agencies
Association of India
(S/Shri Roger, C.B. Pereira
and others).

4. Delegation of Indian Merchants' Chamber, Bombay led by Shri P.C. Jain, President.
 5. All India Radio (Subordinate Offices) Admn. Staff Association, Bombay Unit.
 6. Akashvani Artists' Association, Bombay Unit.
 7. Assistant Engineers of Doordarshan Kendra, Bombay.
 8. Shri V. Shantaram, Producer-Director (Films).
 9. Smt. Swaran Kohli, Chairman, Consumer Guidance Society of India, with Smt. Jog and Smt. Indu S. Shriali.
 10. Delegation of Radio Advertisers' Producers Association (led by Shri Vinod Sharma).
 11. Fr. Gerry D' Rozario, Dean, St. Xavier Institute of Mass Communications.
 12. Delegation of Indian Society of Advertisers, led by Shri S.P. Godrej, Chairman.
 13. Dr. Homi N. Sethna, Chairman, Atomic Energy Commission, Bombay.
 14. All India Radio Engineers, Association, Bombay Unit
 15. Doordarshan Technical Employees Association, Bombay Unit.
 16. All India Radio Programme Staff Association, Bombay Unit.
- 15.10.77**
1. Staff of Pay & Accounts Office, Ministry of I & B, Bombay Unit.
 2. Programme Staff of Doordarshan Kendra, Bombay.
 3. Shri Mahesh Desai, General Secretary, Hind Mazdoor Sabha, and Dr. Kumud Mehra.
 4. Shri Hafeez Noorani, General Manager, Consumer Products, Geoffrey Manners & Co. Ltd., Bombay.
 5. Shri S.A. Dange, President, AITUC, and Smt. Roza Deshpande.
 6. Shri Alyque Padamsee, Lintas India Ltd., Bombay.
 7. Shri Gerson da Cunha, General Manager, Lintas (India) Ltd., Bombay.
 8. Smt. Mrinal Gore, M.P.
 9. Representatives of All India Radio Electronics Association (Western Zone) led by Shri B.L. Kohli, President.
 10. Shri Shyam Benegal, Film Director.

11. Dr. V.K. Narayana Menon,
Former Director General,
A.I.R.
12. Prof. Yash Pal, Director,
Space Applications Centre,
Ahmedabad and Shri K. Karni
13. Floor Managers, Doordarshan
Kendra, Bombay.

Pune 16.10.77

1. Shri B.P. Bhatt,
former Director General,
All India Radio.
2. Shri S.G. Munagekar,
Editor, 'Sakal'.
3. Shri N.D. Nagarwala,
Veteran Sports Broadcaster.
4. Prof. A.B. Shah,
Editor, 'New Quest'.
5. Shri K.D. Dixit
formerly Station Director,
A.I.R.
6. Shri V.D. Madgulkar,
Producer (SW),
All India Radio, Pune.
7. Shri D.V. Pathak,
Retired Chief Engineer,
All India Radio.
8. Students of Film Wing
of the Film & Television
Institute of India, Pune.
9. Faculty of the Film &
Television Institute of India,
Pune.

17.10.77

1. Prof. D.A. Dabholkar,
Vice Chancellor,
Pune University.

2. Prof. Arvind Mangrulkar,
Retired Professor of
Sanskrit.
3. Prof. Bal Gadgil,
Principal, Fergusson
College, Pune
4. Shri P.C. Shejwalkar,
Director, Institute of
Management, Development
and Research, Pune.
5. Prof. V.M. Dandekar,
Director, Gokhale Institute
of Politics and Economics,
Pune.
6. Prof. M.R. Bhidey,
Dean, Faculty of Science,
University of Poona,
Pune.

Delhi 22.10.77

1. Mr. David Barlow,
the Head of Liaison in
the International Relations
Division of the B.B.C.

Delhi 28.10.77

1. Mr. Lloyd Somerland,
Regional Communication
Adviser, UNESCO, Kuala
Lumpur.

Simla 31.10.77

1. Shri Suresh Chopra,
Director, Monitoring Unit,
Simla and Staff.
2. Shri D.D. Kalia,
Station Director,
A.I.R., Simla and Staff.
3. Shri L.H. Tochhwang,
Chief Secretary,
Govt. of Himachal Pradesh.

Chandigarh 1.11.77

1. Shri Devi Lal,
Chief Minister, Haryana.
2. Shri Bailur,
Development Commissioner,
Haryana.
3. Chaudhury Balram,
Leader of the Opposition,
Punjab Assembly.
4. Prof. Paul,
Vice-Chancellor,
Punjab University.
5. Shri Prem Bhatia,
Editor, Tribune.

Bombay 2.11.77

1. Director and Engineer-in-
Charge, Doordarshan
Kendra, Bombay with Staff.

Delhi 3.11.77

1. Prof. V. Ramalingaswami,
Director, All India
Institute of Medical
Sciences, New Delhi.
2. Shri Ramu Damodaran,
Student, 'Yuv Vani',
All India Radio,
New Delhi.
3. Shri T.V. Srirangan,
Wireless Adviser,
Ministry of Communications.
4. Shri M.N. Mathur,
Deputy Director General,
Posts & Telegraphs Board.
5. Shri Prem Prakash,
Television News Features,
New Delhi.

6. Shri Anil Srivastava,
Director, Centre for
Development of Instructional
Technology, New Delhi.
7. Shri Surajit Sen,
Chief News Reader,
All India Radio.
8. Shri M.L. Gaind,
Member, (Postal Development)
Posts & Telegraphs Board,
New Delhi.
9. Miss Mehra Masani,
Former Deputy Director General,
All India Radio.
10. Dr. A.W. Khan,
Director, Farm & Home,
Directorate General,
All India Radio.

Delhi 4.11.77

1. Shri Kailash Joshi,
Chief Minister,
Madhya Pradesh.
2. Shri Kedar Nath Sahani
Chief Executive Councillor,
Delhi.
3. Shri T.N. Chaturvedi,
Chief Commissioner,
Chandigarh.
4. Shri Mahboob Ali,
Minister for Public Relations,
Rajasthan.
5. Shri Buddhadev Bhattacharya,
Minister for Information,
West Bengal.
6. Minister for Information,
Manipur.
7. Minister for Information,
Karnataka.

8. Smt. S.V. Mulay,
Principal, Centre for Educational
Technology, NCERT, New Delhi.

9. Shri P.N. Haksar.

Madras 5.11.77

1. Smt. Sarojini Varadappan,
formerly Chairman, Central Social
Welfare Board.
2. Dr. P.V. Rajamannar.
3. Shri T.R. Sridharan, Headmaster,
T.T.V. High School & Shri S. Varadan,
Headmaster, H.M. Singarampillai
Primary School, Madras.
4. Representative of Group 'D'
Staff Association, Regional
Engineers Office, Civil Construction
Wing, All India Radio.
5. Representatives of Group 'D'
Staff Association, AIR & Doordarshan
Kendra, Madras.
6. Shri Cho Ramaswamy,
Editor, Tughlak.
7. Shri P.V. Akilandom,
'Akillon' Producer, AIR, Madras.
8. Representatives of AIR Engineers'
Association.

5.11.77

9. Representatives of Administrative
Staff Association.
10. Prof. S. Ramani,
Indian Institute of Technology
Madras.
11. Pay & Accounts Staff
Association, All India Radio,
Madras.

12. Representatives of Doordarshan
Engineers' Association.

6.11.77

1. Shri Chaturvedi Badrinath,
Member of Revenue,
Tamil Nadu.
9. Representatives of All India
Radio and Doordarshan Programme
Staff Association.
3. Representatives of All India
Radio Group 'D' Association,
High Power Transmitter,
Avadi.
4. Shri Nagarajan,
Film Technology Institute
Madras.
5. Shri T.R. Muralidharan,
Director, Doordarshan
Kendra, Madras
6. Shri N. Venkateshwarlu,
Engineer-in-Charge,
Doordarshan Kendra, Madras.
7. Shri S. Kandaswami,
Station Director,
AIR, Madras.
8. Shri R. Venkataraman
9. Representatives of All
India Radio non-gazetted
Engineering Employees
Association.
10. Shri P.T.S. Raghavan
Regional Engineer,
AIR & TV, Madras.
11. Smt. Rukmini Devi Arundale,
Director, Kala Kshetra,
Madras.

12. Shri M.P. Somasundaram,
Cheif Producer (Features),
Southern Region.
All India Radio.
13. Shri M.B. Srinivasan,
Conductor, Madras All
India Radio Choral Group.

Bangalore 7.11.77

1. Dr. Ramakrishnan,
Dean, University of Agricultural
Sciences, Hebbal.
2. Prof. Venkatrao,
Editor, University of
Agricultural Sciences,
Hebbal.
3. Dr. (Miss) Leela Rao,
Deptt. of Communications,
University Vishveshwarayya
College of Engineering.
4. Prof. N.S. Ramaswamy,
Indian Institute of
Management, Bangalore.
5. Prof. Adya Rangacharya,
Noted Dramatist.
6. Smt. Komala Varadan,
President, Sangeeta Nritya
Academy, Bangalore.
7. Shri Chandrasekhar,
Audience Research Officer,
All India Radio, Bangalore.
8. Shri V.C. Devasundaram,
Director, Regional Institute
of English, Bangalore.
9. Representatives of
Ministerial Staff Association,
All India Radio,
Madras.

8.11.77

- Prof. K.E. Eapen,
Dean, Faculty of Communication,
University of Visheshwarayya
College of Engineering,
Bangalore.
- Shri K.N. Ashok Kumar,
Programme-cum-Scientific
Writer, Educational
Technology Cell.
- Shri A.A. Mecci,
Assistant Director,
Audio-Visual Education,
Bangalore.
4. Prof. V.K.R.V. Rao,
former Minister and
Vice-Chancellor.
5. Prof. D. Javare Gowda,
former Vice-Chancellor of
Mysore University.
6. Shri D.V. Urs,
Vice-Chancellor, University
of Mysore, Mysore.
7. Dr. H.K. Ranganath, Head of the
Department of Dance, Drama
and Music, Bangalore University,
Bangalore.
8. Shri M. Chinnaswamy,
President, Cricket Control
Board of India.
9. Prof. S. Dhawan
Secretary,
Department of Space.
10. Smt. Selvie Dass,
Director, College of Education
in Karnataka, Bangalore.

Coimbatore 8.11.77

1. Shri T.S. Avinashilingam
Chettiar, Former Minister.
2. Shri G. Rangaswami,
Vice-Chancellor,
Tamilnadu Agricultural
University. Coimbatore.
3. Shri K. Kasturi,
Station Director,
AIR, Coimbatore, and Staff.

Trichur 10.11.77

1. Shri N. Kaliswaran,
Vice-Chancellor, Kerala
Agricultural University,
Trichur.
2. Prof. N.K. Seshan, former
Minister of Kerala.
3. Shri G. Sankara Pillai,
Chairman, Sangeet Natak
Akademi, Trichur.
4. Shri Pavanan, Asstt. Secretary
Kerala Sahitya Akademi,
Trichur.
5. Shri E. Govindarajulu,
Station Director and
Staff of AIR, Trichur.
6. Members of Akashvani Club.

Calcutta 14.11.77

1. Shri J.N. Ray,
Engineer-in-Charge,
All India Radio, Calcutta.
2. Shri P.T. Srinivasan,
Engineer-in-Charge,
TV Centre, Calcutta.

Shri Birender Krishnan Bhadra,
Dramatist and Veteran
Broadcaster.

4. Shri A.K. Sen,
Chief Secretary,
Govt. of West Bengal.
5. Shri Shanti Chowdhury,
Image India Films.
6. Prof. A.B. Chowdhury,
Director, Calcutta School
of Tropical Medicine.
7. Dr. (Miss) Asima Chatterjee,
Chairman, Bangiya Bijnan
Parishad.
8. Representatives of Programme
Producers' Association,
All India Radio, Calcutta.
9. Shri M.J. Akbar,
Editor, Sunday Magazine.
10. Shri Kashikanta Moitra,
Leader of Opposition,
West Bengal Legislative
Assembly.
11. Shri P.M. Narielwala,
Accountant-Partner,
S R. Batliboi & Co. with
Shri M.K. Bose.
12. Programme Staff Association,
Doordarshan.
13. Representatives of News
Staff Doordarshan Kendra,
Calcutta.
14. Representatives of Doordarshan
Technical Employees'
Association.
15. Representatives of Staff
Artists' of Doordarshan.
16. Staff Artists Association of All India
Radio, Calcutta.

15.11.77

1. Shri K.C. Sharma
Deputy Director General
(East), AIR, Calcutta.
2. Shri D.N. Dey,
Deputy Regional Engineer,
All India Radio, Calcutta.
3. Dr. Naresh Guha,
4. Shri Premendra Mitra,
Eminent Writer & Broadcaster.
5. Dr. Bhupen Hazarika,
6. Shri Jyoti Bosu,
Chief Minister, West Bengal.
7. Shri S. Nihal Singh,
Editor, 'Statesman',
Calcutta.
8. Dr. Phulrenu Guha.
9. Shri Samik Banerjee,
Editor, Oxford University,
Press.
10. Dr. D. Basu,
Director, Indian Association
for Cultivation of
Sciences.
11. Shri Vibekananda Mukherjee.
12. Pay & Accounts Officer with
two members of All India Radio.
13. Representatives of Programme
Assistants of All India Radio.
2. Shri S.C. Basu,
Editor 'Betar Jagat'
All India Radio, Calcutta.
3. Shri Subhas Ghoshal,
President, Advertising
Agencies Association of
India.
4. Shri Pratul Gupta,
Vice-Chancellor, Rabindra
Bharati University.
5. Shri Aveek Sarkar.
6. Shri Gour Kishore Ghosh,
Anand Bazar Patrika.
7. Shri Sumendra Nath Bandhopadhyaya,
Reader in Bengali
Vishwabharti Shantiniketan.
8. Mira Moozoomdar,
Director, Doordarshan
Kendra, Calcutta.
9. Shri Jahar Sen Gupta,
President, Bengal Chamber
of Commerce & Industry.
10. Shri A.N. Haksar.
11. Shri D.K. Biswas,
Station Director, All
India Radio, Calcutta.
12. Representatives of Asstt.
Engineers Association.
13. Representatives of Non-Gazetted
Engineering Employees'
Association.

16.11.77

1. Representatives of Central
Information Service Association,
Press Information
Bureau.
14. Representatives of All
India Radio Administrative
Staff Association.
15. Shri K.L. Ghatak,
Caretakar.

16. Shri S.K. Banerjee,
Junior Reception Officer.
17. Shri B. Singh, Studio
Attendant.

Gauhati 17.11.77 and 19.11.77

1. Shri S.C. Sinha,
Chief Minister, Assam.
2. Deputy Director,
Agriculture, Gauhati.
3. Shri B.D. Sarma, Director,
Public Instruction, Assam.
4. Shri Gaurishankar Bhattacharya,
Leader of the Opposition,
Assam Assembly.
6. Shri A.K. Dass,
Station Director,
Station Engineer
and Staff of A.I.R. Gauhati.

Shillong 18.11.77

1. Shri E.W. Davies,
Station Director,
A.I.R. Shillong.
2. Shri N.L. Chauhan,
Station Engineer,
All India Radio, Shillong.
3. Shri N.K. Rustomji.
4. Shri L.P. Singh,
Governor of Assam,
Meghalaya and Nagaland.
5. Staff of AIR, Shillong.
6. Shri Mirani, Secretary,
North Eastern Council.
7. Shri Romesh Chander,
Chief Secretary, Meghalaya.

8. Dr. Miri and Dr. Joseph of the
North Eastern Hill University.
9. Capt. Williamson Sangma,
Chief Minister. Meghalaya.

**Itanagar (Arunachal, Pradesh)
20 & 21.11.77**

1. Shri P.K. Thungon,
Chief Minister,
Arunachal Pradesh.
2. Shri Khaund,
Secretary, Information
Arunachal Pradesh.
3. Shri Hazarika,
Director of Information,
Arunachal Pradesh.
4. Shri Joshi, Director of
Agriculture, Arunachal Pradesh.
5. Secretary, Planning and Development,
Arunachal Pradesh.

Ratnagiri 22.11.77

The Station Director,
All India Radio,
Ratnagiri with Staff.
Local Educationists,
Social workers,
men and women from the field of culture.

Delhi 5.12.77

1. Shri Robert Tyabji,
UNICEF, New Delhi.
2. Shri M.N. Kaul. Director General,
Institute of Constitutional & Parliamentary
Studies.
3. Shri Romesh Chander,
Editor-in-Chief, Television
News Features, New Delhi.

4. Shri Prakash Tandon,
Director General,
National Council of Applied Economic
Research, New Delhi.

Delhi 5.12.77

1. Visit to Centre for Educational
Technology, N.C.E.R.T.,
New Delhi.
2. Visit to Studio and Office of
Television News Features,
New Delhi.

Delhi 6.12.77

1. Representatives of All India
non-gazetted Engineering
Employees' Association.
2. Representatives of All India
Radio Technical Employees
Association.
3. Representatives of All India
Radio Programme Staff
Association.
4. Representatives of All India
Stenographers' Association.
5. Representatives of All India
Engineers' Association.
6. Representatives of All India
Radio Extension Officers'
Association.
7. Representatives of Akashvani
Artists' Association.
8. Representatives of All India
Radio Programme Producers'
Association.
9. Representatives of Doordarshan
Technical Employees'
Association.

10. Shri Atal Behari Vajpayee,
Minister of External
Affairs.

11. Shri J.S. Mehta,
Foreign Secretary.

12. Representatives of All India
Radio Assistant Engineers'
Association.

13. Representatives of Doordarshan
Programme Staff Union.

14. Representatives of All India
Staff Artist' Union.

Delhi 7.12.77

1. Shri P.C. Chatterji,
Director General,
All India Radio.
2. Shri S.N. Mitra,
Chief Engineer, A.I.R.
3. Shri V.A.D. Rayalu,
Chief Engineer, Doordarshan.
4. Shri P. Sabanayagam,
Education Secretary,
(with Joint Secretary, and Financial
Adviser of the Ministry of
Education).
5. Shri K.G. Ramakrishnan,
Chief Editor, 'Yojana',
Planning Commission, New Delhi.
6. Smt. Latika Ratnam,
News-Reader, All India Radio.

Delhi 8.12.77

1. Shri P.V. Krishnamoorthy,
Director General,
Doordarshan.

2. Dr. J.G. Krishnayya,
Executive Director, Systems
Research Institute, Pune.
3. Representatives of Central
Information Service
Association.
4. Dr. A.V. Shanmugam.
Professor (Communications),
Indian Institute of Management,
Bangalore.
5. Shri Krishan Sondhi,
Consultant (Communication
Systems and Evaluation)
Planning Commission and his Group.
10. Shri Sarabjeet Shukla,
Navbharat Times Correspondent.
11. Shri Satish Chandra, Samachar.
12. Shri Rajendra Kapoor, Gandiva.
13. Shri Sri Krishna Srivastava,
Dainik Jagran.
14. Shri Gopal Ranjan,
Dainik Jagran.
15. Shri Krishna Chandra Srivastava,
Samachar.
16. Shri Shyamanand Srivastava,
Bismil.
17. Shri Sudhansu Upadhyaya, Aj.
18. Shri P.B. Varma, The Pioneer.
19. Shri Ram Sudarshan, Organiser,
Charcha Mandal, (Charaiya Danr,
Azamgarh Distt.)

Delhi 9.12.77

INTERNAL MEETING

Gorakhpur 12.12.77 to 14.12.77

1. Shri H.R. Nagarajan,
Engineer-in-Charge, A.I.R.
Gorakhpur.
2. Shri S.N. Dubey, Asstt.
Station Director, AIR,
Gorakhpur.
3. Shri Brij Bhushan Sharma,
FRO, AIR.
4. Shri Daya Shankar Lal,
District Planning Officer.
5. Shri Madan Gopal Upadhyaya,
School Teacher.
6. Shri R.A. Gupta, Manager,
Union Bank of India.
7. Dr. Rajesh Tiwari,
Veterinarian.
8. Shri Prahlad Singh, BDO.
9. Shri R.K. Agarwal,
Agricultural Finance Officer,
Union Bank of India.

Delhi 16 12.77 to 18.12.77

INTERNAL MEETINGS

Delhi 2.1.78

Visit to:

1. News Services Division (AIR)
2. Staff Training Institute (P)
3. Audience Research Unit (AIR).
4. Farm and Home Unit (AIR).
5. Educational Broadcast Unit, AIR.
6. Staff Training Institute
(Technical)—AIR.
7. Office of the Research Engineer,
AIR.

Delhi 3.1.78 to 7.1.78

INTERNAL MEETINGS

(Mr. Sherman of USIS showed a film on the U.S. Public Broadcasting Service on 5th Jan., 1978).

Delhi 9.1.78

Visit to Educational Broadcast Unit of Doordarshan Kendra, New Delhi.

10.1.78

Visit to Educational Broadcast Unit of D.G. AIR, New Delhi.

12.1.78

1. Visit to Govt. Girls Higher Secondary School in Jorbagh and Television Branch of the Directorate of Education, Delhi Administration.
2. Mrs. Usba Baweja, Principal, Govt. Girls Higher Secondary School, Jorbagh, New Delhi.
3. Shri S. Sidhu, Asstt. Director Education, Delhi Administration.

Agartala 12.1.78 to 13.1.78

1. Shri R. Ghosh, Station Director, AIR, Agartala and Staff.
2. Village and Township leaders in Pathaliaghat, Dewanbazar, Kelangthakur, Bascopra, Charilam, Bishalgarh, Udaipur Bagma etc.

Silchar 13.1.78 to 16.1.78

1. Shri S.C. Biswas, Station Director, AIR, Silchar, with Staff.
2. Shri Devabrata Datta, Principal, Cachar College, Silchar.
3. Shri Prakash Chandra Sen, Advocate.

Aizawl 14.1.78 to 15.1.78

1. Shri Rao, Asstt. Station Director, Shri R.N. Gupta, Station Engineer, AIR, Aizawal with Staff.
2. Shri Neema, Installation Engineer, AIR.
3. Shri Surendra Nath, Chief Secretary, Mizoram.
4. Rev. Zairema, Senior Executive Secretary, Presbyterian Church Mizoram.
5. Shri R.L. Thanzowna, Director, Information and Public Relations, Mizoram.
6. Shri Denghnuna, Deputy Director, Information and Public Relations, Mizoram.

Imphal 17.1.78 to 18.1.78 and 21.1.78

1. Shri L.R. Sailo, Station Director, AIR, Imphal.
2. Shri Yangmasho Shaiza, Chief Minister, Manipur.
3. Shri Ngurdnglien, Minister for Tribal Affairs, Health and Transport, Manipur.

4. Shri Ashraf Ali,
Minister for Information and
Public Relations,
Manipur.

5. Shri Ibohal Singh,
Additional Director, Publicity,
Manipur.

Kohima 19.1.78 to 20.1.78

1. Shri B. Siva Rao, Engineer-in-Charge,
AIR with Staff.

2. Shri K. Tlanthanga,
Asst. Station Director, AIR.

3. Shri A.K. Phookan,
Correspondent AIR.

4. Shri V. Bhoovarajan,
Correspondent, AIR.

5. Shri M. Murry, Minister of
State for Information,
Nagaland.

6. Rev. Neihuli—Bible College
Nagaland.

7. Shri K. Peseyie, Deptt. of
Physical Education, Nagaland.

8. Shri T. Chuba, Principal,
Kohima Arts College, Nagaland.

9. Shri B.R. Gupta, Vice-Principal
Kohima Arts College, Nagaland.

10. Miss. V. Sekose,
Prog. Executive, AIR Kohima.

Bhopal 16.1.78

1. Shri S.D. Bhagat,
Station Director (c) and
Shri V.P. Joshi, Station
Engineer, A.I.R., Bhopal,
with Staff.

2. Shri Satyam, Director of
Education.

3. Principal, Kamla Nehru Girls'
School.

4. Principal of Experimental
School.

5. Shri Ashok Bajpeyi,
Information Officer.

6. Saroj Lal Vani, Social Worker
and businesswoman.

7. Various Staff Associations/
Unions of AIR Gorakhpur.

Rajpur 17.1.78, 20.1.78 and 21.1.78

1. Shri B.L. Barot, Station
Director, AIR, Raipur
with Staff.

2. Shri J.N. Singh,
Officer On Special Duty,
Doordarshan Kendra,
Raipur.

3. Major Birendra Bahadur Singh,
(Raja of Khairagarh), ex-Vice
Chairman of M.P. Tourism
Development Board.

Jagdalpur 18.1.78 to 19.1.78

1. Shri B.D. Mathur, Station
Director, AIR Jagdalpur
with staff.

2. Shri Abhaya Parhi,
Prog. Executive (Tribal progs.),
A.I.R., Jagdalpur.

Dharwar 17.1.78 to 18.1.78

1. Shri R.C. Bhusnurmath,
Station Director, All India
Radio, Dharwar with Staff.

Gulbarga 19.1.78 to 20.1.78

1. Shri R. Itigi,
Asstt. Station Director,
A.I.R. Gulbarga with Staff.

Hyderabad 20.1.78 to 22.1.78.

1. Shri P. Venkateswarlu,
Station Director, A.I.R.
Hyderabad, with Staff.
2. Shri R.S. Sawdekar,
Director, Doordarshan Kendra
Hyderabad, with Staff.

Ahmedabad 20.1.78 to 21.1.78

1. Prof. Yash Pal, Director,
Space Applications Centre,
Ahmedabad.
2. Prof. E.V. Chitnis
Scientist, and Staff of
Doordarshan Kendra, Space
Application Centre.
3. Visit to Pij transmitter and
Villages.
4. Shri D.S. Purohit,
Station Director, A.I.R.,
Ahmedabad, with Staff.

Jaipur 22.1.78

1. Shri J.D. Baweja,
Station Director,
A.I.R., Jaipur,
with Staff.
2. Shri L.S. Kang,
Station Engineer,
A.I.R., Jaipur.
3. Shri S.C. Garg, O.S.D.,
Doordarshan Kendra,
Jaipur with Staff,

4. Shri Saxena,
Station Engineer,
Doordarshan Kendra,
Jaipur.

5. Chief Secretary,
Govt. of Rajasthan.

6. Minister for Information
Govt. of Rajasthan.

Delhi 23.1.78 to 28.1.78

INTERNAL MEETING.

Jammu 5.2.78 and 6.2.78

1. Shri L.K. Jha,
Governor J & K.
2. Shri Mirza Afzal Beg,
Deputy Chief Minister,
J & K.
3. Shri J.D. Sharma,
Vice-Chancellor,
Jammu University.
4. Shri Jamal Kidwai,
Chairman, Public Service
Commission, J & K.
5. Shri Ishwar Sharma,
Director, Institute of
Correspondence Courses,
Jammu University.
6. Kazi Afzal Beg,
Development Commissioner,
J & K.
7. Shri K.L. Sarin, Engineer-in-
Charge and Staff of Radio
Kashmir, Jammu.

Delhi 7.2.78

Shri Ngurdinglien
Minister of Tribal Affairs,
Health & Transport, Govt. of
Manipur.

Delhi 8.2.78

Visit to Base Production
Centre, Upgraha Doordarshan
Kendra, New Delhi.

Ahmedabad 9.2.78 to 12.2.78

- | | |
|-----------------------|---|
| 1. Prof. E.V. Chitnis | } of Space
Application
Centre,
Ahmedabad |
| 2. Shri B.S. Bhatia | |
| 3. Shri K. Karnik | |
| 4. Shri H. Baradi | |
| 5. Ila Patel | |
| 6. Leela Trivedi | |

Delhi 13.2.78 to 16.2.78

INTERNAL MEETINGS
(Prof. E.V. Chitnis and
Shri G.C. Jain of Space
Application Centre, Ahmedabad,
met Working Group on 15.2.78).

Delhi

1. Shri Ashok Parthasarathy,
Joint Secretary, Electronics
Commission, New Delhi.
2. Shri Soli Sorabji,
Additional Solicitor General of
India, New Delhi.
3. Shri Nirmal Mukherji,
Cabinet Secretary.
4. Dr. Jagan Chawla,
Member, NCST,
K-74A, Hauz Khas,
New Delhi.
5. Smt. Shanti Chawla,
K-74A, Hauz Khas,
New Delhi.
6. Shri K.D. Sharma,
K-21, Hauz Khas,
New Delhi.

7. Shri V.N. Kakar,
Chief Media,
Ministry of Health and
Family Welfare,
Madhya Pradesh.
8. Rami Chhabra, Journalist.
9. Smt. Pramilla Dandavate,
Social Worker.
10. Shri Jagdish Kapur.

Persons met abroad

1. Lord Annan,
Provost, University College,
London.
Chairman of the Committee on the
Future of Broadcasting.
2. Sir Charles Curran,
Director General, B.B.C.
3. Mr. Ansgar Skriver,
Political Editor,
West German Radio,
Cologne.
4. Mr. Friedrich-Wilhelm Von Sell,
Intendant Westdeutscher Rundfunk,
Cologne.
5. Dr. Helmut Druck,
Head, Office of the Intendant,
WDR, Cologne.
6. Mr. Dieter Brauer,
Deutsche Welle,
Voice of Germany,
Cologne.
7. Dr. Richard W. Dill,
Head, Office of International
Relations, ARD,
Munich.
8. Mr. Michael Type,
European Broadcasting Union,
Geneva.

9. Mr. Majid Rehnema, President, Adult Education Society, Teheran.
10. H.E. Princess Ashraf, Chairman, UNESCO Liaison Committee, Tehaah.
11. M. A Raadi, Radio Iran, Teheran.
12. Mr. Osario Tafall, Director, Third World Centre, Mexico.
13. Mr. V. Urquidi, President, Collegio Mexico, Mexico City.
14. Mr. Casslas, Radio Mexico, Mexico
15. Mr. A. Kim, Rector, University of Korea, Seoul.
16. Mr. Puy, Director, Publications Division, Seoul.
17. Mr. Liang, Editor, Korean Times, Seoul.
18. Representatives of National Broadcasting Corporation, Public Broadcasting Corporation and CBS of USA.
19. Mr. Anthony Jay, Member, Annan Committee, U.K.
20. Mr. Dcepak Nandy, Member, Annan Committee, U.K.
21. Mr. Robin Scott, Deputy Managing Director, Television, BBC, U.K.
22. Mr. Alistair Osborne, Producer, Current Affairs, BBC. U.K.
23. Mr. Mark Dood, Head, Eastern Service (BBC—External Brordcasting), U.K.
24. Mr. Ken Brazier, External Services, BBC, U.K.
25. Mr. Anthony Jennings, Legal Adviser, BBC, U.K.
26. Mr. P. Hardiman, Scoett, Chief Assistant to DG, BBC, U.K.
27. Mr. J.E. Wilkinson, Secretary, BBC, U.K.
28. Mr. J.A. Norris, Deputy Secretary, BBC, U.K.
29. Mr. Maurice Tinniswood, Director of Personnel, BBC, U.K.
30. Mr. N.M. Wilson, Controller, International Relations, BBC. U.K.
31. Mr. Paul Hughes, Director of Finance, BBC, U.K.
32. Mr. Edward Ploman, Executive Secretary, International Institute of Communications, U.K.
33. Lady Plowden, Chairman, Independent Broadcasting Authority, U.K.
34. Mr. J. Kangwana, Director General, Voice of Kenya, Nairobi.
35. Mr. Kamjat Keepanich, Director General, Public Relations Department, Office of the Prime Minister Bangkok, Thailand.
36. Mr. Florentino S. Daus, Director, Bureau of Broadcasts, Department of Public Information, Republic of the Phillipines, Manila.

- | | |
|---|--|
| <p>37. Mr. Satoru Harada,
Senior Officer,
Foreign Relations and
Programme Exchange Division,
Overseas Broadcasting Department
NHK (Japan).</p> | <p>40. Mr. R. Balakrishnan,
Director, Asian Institute for
Broadcasting Development,
UNESCO Regional Broadcast
Office, Kuala Lumpur</p> |
| <p>38. Mr. Akira Nagano,
Head, Planning Division
Broadcast Department
Radio Regulatory Bureau,
Ministry of Posts and Tele-
communications, Japan.</p> | <p>41. Prof. Robert Staneley,
Chairman of Department of
Communications, Hunter College,
New York City University.</p> |
| <p>39. Mrs. Wong-Lee Siok Tin,
Director (Broadcasting)
Singapore.</p> | <p>42. Mr. Steve S.C. Huang,
Managing Director,
Rediffusion Television,
Hong Kong.</p> |

Staff of the Office of the Working Group

Research Staff

- | | | |
|--------------------------|--------------------|------------------|
| 1. Shri D.P. Puri | Deputy Secretary | (up to 7-12-77) |
| 2. Shri M. Sundara Rajan | Deputy Secretary | (from 7-12-77) |
| 3. Shri G.L. Ahuja | Research Officer | (from 11-12-77) |
| 4. Shri R. Renganath | Research Officer | (up to 11-12-77) |
| 5. Shri Kashmiri Lal | Research Officer | |
| 6. Shri S.S.K. Rao | Research Assistant | |

Secretarial Staff

- | | | |
|------------------------|--------------|-----------------|
| 1. Shri N.M. Bharathan | Sr. P.A. | (up to Dec. 77) |
| 2. Shri Joginder Singh | Sr. P.A. | (from Dec. 77) |
| 3. Shri R.S. Negi | Stenographer | |
| 4. Shri S. Narayanan | Stenographer | |
| 5. Shri S.K. Bajaj | Stenographer | (from 27-1-78) |
| 6. Shri M.K. Jain | L.D.C. | |
| 7. Shri R.P. Sharma | L.D.C. | |
| 8. Shri Asher Dennison | L.D.C. | |

Acknowledgements

The Working Group was assisted by a large number of persons and institutions who volunteered information or readily responded to our requests. It would be impossible individually to list all those persons and institutions. We would, however, particularly like to acknowledge our debt to :

The Indian Institute of Mass Communication, New Delhi ; The Indian Institute of Public Opinion, New Delhi ; NCERT ; TVNF ; the Space Applications Centre ; the Times of India ; the Hindu ; Amrita Bazar Patrika ; the Vice-Chancellor, University of Agricultural Sciences, Bangalore ; Hindustan Thomson Associates; Shri Hafeez Noorani; Shri P.K. Venkata Subramaniam, Deputy General Manager, Development and Engineering, B.E.L.; DG P&T; Wireless Adviser Ministry of Communications.

The Ford Foundation; the World Bank; UNESCO; UNDP; AMIC (Singapore); EBU (Geneva); Embassies or High Commissions of the U.K., the U.S.A. (The American Library, USIS, New Delhi), the Federal Republic of Germany, Sri Lanka; Mr. Derek Holroyde (Western Australian Institute of Technology); and the BBC.

Bibliography

ADHIKARYA, Ronny

Broadcasting in Peninsular Malaysia : by Ronny Adhikarya with Woon Ai Leng, Wong Hock Seng and Khor Yoke Lim

London : Routledge, Kegan & Paul with the IIC, 1977.

ASIAN MASS COMMUNICATION RESEARCH AND INFORMATION CENTRE

AMIC study seminar on Development Communication : a report edited by Guy de Fontgalland

Singapore : April 22-27, 1976.

AWASTHY, G.C.

Broadcasting in India : by G.C. Awasthy, Allied Publications, New Delhi.

ASAR, Akhlaq

Radiyo Drame ke tarikh 1975, 48 p.

Bibliography p. 33-48

(Urdu).

Broadcasting in Asia. An annotated bibliography

AMIC 1974.

Broadcasting in Africa.

A continental survey of radio and television

Temple Univ. Press, 1974.

BRACK, Hans

German radio and television : organization and economic basis.

EBU monograph no. 6, 1968.

BELTRAN, Luis. Communication policies and planning in Latin America,

UNESCO meeting of experts July 1974

Bogota COM-74/CONF 617/2.

BISMARCK, Klaus von

Future tasks of information and public education work in the field of development policy. Address at UNICEF, typescript.

BBC

25 years of British Broadcasting

Published by the BBC.

BROADCASTING FOR NATIONAL DEVELOPMENT IN AFRICA,
Aug 1975

Taking the initiative : Broadcasting for development; as edited transcript of discussion from Study Seminar 50 Broadcasting for national development in Africa, August 1975, edited and produced by Barry Scherer.

The Broadcast industry; an examination of major issues/edited by Robert H. Stanley for the International Radio and Television Society. Hastings House, 1975, 256 p.

Broadcasting : the critical challenges. Ed. by Charles S. Steinberg. Hastings House, 1974. 315 p.

BRIGGS, Asa

The Birth of Broadcasting

Oxford University Press.

BRIGGS, Asa

The Golden Age of Wireless

Oxford University Press.

BRIGGS, Asa

The War of Words

Oxford University Press.

BERT, David K

The Process of Communication

Holt, Rinhart & Winston, New York.

BHATTACHARYA, Vivek Ranjan

Communication in global village

New Delhi, Chetana Publications, 1976. 152 p.

CERCEL, Riza

The management of broadcasting services in Turkey. Paper presented at Symposium on role and management of telecommunication in a democratic society. Munich 1974.

COLLE, Royal D. Communication systems and the new rural development strategies with a case study in Indonesia. New York : Cornell University Communication, Art & Research Center, Nov. 1976 (Communication Arts Series No. 11).

COOMS, John E.

Freedom and Responsibility in Broadcasting
North Western University Press.

COMMITTEE ON THE FUTURE OF BROADCASTING

Report, presented to Parliament by the Secretary of State for the Home Dept. by Command of H.M. March, 1977.

Chairman : Lord Annan. London HMSO, 1977 (Cmnd. 6753).

COMMUNICATION FOR GROUP TRANSFORMATION IN DEVELOPMENT

Edited by Godwin C Chu, Syed A Rahim, D Lawrence Kincaid East West Center/East West Communication Institute, Honolulu, 1976 (Communication Monographs No. 2).

COMMUNICATION AND RURAL CHANGE edited by P. R. R. Sinha,
Singapore : AMIC, 1976 (An AMIC anthology).

CONFERENCE ON COMMUNICATION POLICY & PLANNING FOR DEVELOPMENT, April 5-10, 1976. East-West Center/East-West Communication Institute, Honolulu.

CONFERENCE ON COMMUNICATION POLICY & PLANNING FOR EDUCATION AND DEVELOPMENT, July 1976, Stanford. Organised by US Agency for International Development. US National Institute of Education & Stanford University published Mar. 77 Institute for Communication Research. Stanford University

COUNCIL OF EUROPE

Report on the Role and Management of Telecommunications in a Democratic Society.

Reporter : O Schwencke. Doc. 3520. 1975.

Carnegie Commission on Educational Television.
Public television, program for action; the report and recommendations of the
Carnegie Commission on Educational Television. Harper, 1967 254 p.

COLEMAN, Howard W.
Case studies in broadcast management. Hastings House, 1970. 95 p.

CHESTER, Garrison & Wills
Television & Radio
Prentice Hall.

CHATTERJI, R.K.
Mass Communication
National Book Trust, New Delhi.

DEFEVER, Armand.
Integrated development support communication— a study in Dahomey. UN,
FAO Development Support Communication Unit, no date; mimeographed.

DIAZ BORDENAVE, Juan E
Communication and rural development Paris : UNESCO, 1977

DOLUKHANOV, M
Radioyotarangasancaranam
tr. by N.C Nayyar, Trivandrum, State Institute of Languages, Aug. 74. viii,
474 p. Propagation of Radio Wave. English Title (Malayalam).

DESAI, M.V.
Communication Policies in India (UNESCO, Paris, 1977).

DHAWAN, B D.
Economics of Television in India
New Delhi, S. Chand, 1974. 182 p.

EUROPEAN BROADCASTING UNION (EBU)
Medium and long range economic planning in broadcasting organisations; from
the 9th Symposium for the study of problems of economic organisation and
associated matters, Vienna. Oct. 1973
Geneva : EBU, 1975.
(EBU Monograph; 10 Legal & Administrative Series).

EAST-WEST CENTER

Communication policy and planning for development : an annotated bibliography. Draft prepared for EWCI International Conference on Communication Policy and Planning for Development, 1976. East-West Center Honolulu. Edited by Syed A Rahim.

ESPEJO, Cristina Y.

Communication and development, Bibliography in : Asian Mass Communication Research & Information Centre. Amic Study seminar on development communication 22-27 April, 1976.

EMERY, Walter Byron

National and international system of broadcasting; their history, operation and control.

Michigan State Univ. Press, 1969. 752 p.

EPSTEIN, Edward Jay

News from Nowhere : Television and the news.

Random House. 1973. 321 p.

EMERY, Walter Byron

Broadcasting and Government : responsibilities and regulations.

Michigan State Univ. Pr., 1971. 569 p.

FRIEDRICH-EBERT STIFTUNG

Horfunk und Fernsehen fur die dritte Welt.

Bonn-Bad Godesberg : FES, 1972.

FEDERATION OF GUJARAT MILLS AND INDUSTRIES, BARODA

Report on the proceedings of the National Television Seminar.

Baroda, the Author, 1975. 50 p.

FILM & TELEVISION INSTITUTE OF INDIA (Poona)

Summary report children's television workshop-cum-seminar : Oct. 20-23, 75.

Poona, the Author, 1975. 47 p.

GEORGE WASHINGTON UNIVERSITY :

Program of policy studies in science and technology. Strategies for the use of mass communications media in the technologically developing nations. Vol. 1. Executive summary. The University, 1971.

- GREEN, Timothy**
 The universal eye; the world of television.
 Stein and Day, 1972. 276 p.
- HEAD, Sydney W.**
 Broadcasting in America; a survey of television and radio. 2d ed.
 Houghton Mifflin, 1972. 563 p.
- HILLARD, Robert E.**
 Radio broadcasting; an introduction to the sound medium.
 Hastings House, 1974. 312 p.
- INDIA, AGRICULTURE (Min. of) Extension (Directorate of—)**
 Evaluation of farmers, training, functional literacy and farm broadcasting programmes. India, Min of Agriculture, 1976. 14 p.
 (Farmers training and functional literacy project).
- INDIAN INSTITUTE OF MASS COMMUNICATION**
 Farm and Home Units of All India Radio : A study. New Delhi,
 The Author 1974. 7 p.
- JACKSON, Karl D & Moeliono, Johannes.**
 Communication and national integration in Sundanese villages : implications for communication strategy.
 Honolulu : East-West Center/EWCI 1972.
- JOHNSON, Joseph Steve**
 Modern radio station practices.
 Wadsworth Pub. Co., 1972. 269 p.
- JOSI, Sures Narayan**
 Tranjhistar radio durust; margadarsak, Bombay, Santosh Prakashan Feb. 1974.
 xii, 100 p
 (Marathi)
- JOSI, Sures Narayan**
 Telivijanci Tondolakh. Bombay, Santosh Prakashan, Apr. 1974 viii, 63 p.
 (Marathi)
- KLAVER, Franca**
 Media in the Netherlands; study for Council of Europe Sept. 76
 Strasbourg COE 1976
 (CCC/DE (76) 65-E)

KRASNOW, Erwin G.
The politics of broadcast regulation.
St. Martins Pr. 1973, 148 p.

KEUNE, Reinhard and SINHA, P. R. R.
Broadcasting teaching and training.
Singapore, 1977, 24 p.
(Amic occasional papers 7)

KOTLI, M. S.
Telivijan, Dharwar, Karnatak University, 1974, viii, 56 p.
(Kannada)

LICHTY, Wilson, Comp.
American broadcasting; a sourcebook on the history of radio and television.
Hastings House, 1975. 723 p.

MARTELANC, Tomo
Participation and Broadcasting : the Yugoslav Model of Self-government.
London : IBI, 1973
(Nicosia meeting).

MALAYSIA, Ministry of Information
SAINS MALAYSIA "Communication as a development strategy"
Penang, June 22-28, 1975.

MACY, John W.
To Irrigate a Wasteland: the struggle to shape a public television system in the
United States.
Univ. of California, 1974, 186 p.

MASANI, Mehra
All about AIR
Orient Longman.

MASANI, Mehra
Broadcasting and the People
National Book Trust.

MENON, Narayana
The Communication Revolution.
National Book Trust.

MULLICK, K.S.
Tangled Tapes
Sterling Publishers.

MCLUHAN, Marshal
Understanding Media
Hazell Watsons & Viney Aylesbury, Busks.
Also Published by Routledge' Kegam Paul & Co., London.

NAYAR, G. P. S.
Radiyo Smaranakal; introd. by Kainikkara Kumara Pillai.
Kottayam, S.P.C.S., Nov. 1974, 211 p.

NIPPON HOSO KYOKAI
International studies of broadcasting, with special reference to the Japanese studies, ed. by H. Eguchi and H. Ichinohe.
NHK 1971.

NASCIMENTO, C A
The development of a national broadcasting system for Guyana.
Guyana Government 1967.

NIPPON HOSO KYOKAI
50 years of Japanese broadcasting, edited by History
Compilation Room, Radio & TV Culture Research Institute NHK Tokyo, 1977.

NEW ZEALAND. Government of
The Broadcasting Future for New Zealand : Report of the Committee on Broad-
casting, 31st July 1973.

PHILIPOSE, Pamela
Radio Programmes of All India Radio.
Delhi, 1975 58 p.

Press Institute of India, Sapru House Annexure, New Delhi.
Mass Media and Communal & Ethnic Tensions.
Press Institute of India.

PENNYBACKER, John H.
Broadcasting and the public interest, ed. by John H.
Pennybacker and Waldo W. Braden,
Random House, 1969, 175 p.

PLOMAN, Edward W

Broadcasting in Sweden by E W Ploman with Sveriges Radio London : Routledge and Kegan Paul with International Broadcast Institute 1976
(Case studies on Broadcasting Systems).

PHILIPPINES UNIVERSITY:

Institute of Mass Communication.

Communications strategies in community development
3rd International seminar, 1970.

QUAAL, Ward L.

Broadcast management : radio, television. 2d. ed. rev. & enl.
Hastings House, 1976, 464 p.

RAHIM, Syed A.

Communication and rural development in Bangladesh, Honolulu : East-West
Communication Institute, 1976
(Case Study no. 3).

ROGERS, E. M.

Social Structure and Communication Strategies in rural development: the communication effects gap and the second dimension of development 1974 in :

CORNELL-CIAT International Symposium on Communication strategies for rural development Ithaca, NY Cornell University, Institute for International Agriculture.

RIDER & ABBOT

Hand Book of Broadcasting
Mc Graw Hill Book Co , New York.

ROY, KIOLIN, Fligh & Sen

Communication in India
National Institute of Community Development, Hyderabad.

ROMESH CHANDER AND KARNIK, Kiran

Planning for Satellite broadcasting : Indian Instructional Television Experiment.
Paris, UNESCO, 1976. 72 p.
(Reports and papers on mass communication 78).

SATELLITE COMMUNICATION and family planning.

New Delhi, ISRO Audio-Visual Instructional Division. n.d. 95 p.

SUNDARA RAJAN, Mohan
India in Space, New Delhi,
Publications Division, 1976. 92 p.

SESADRI AYYANGAR, K.
Duradarsana. Bangalore,
Bangalore University, 1972, viii, 72 p.
(Kannada).

SHINGI, Prakash M and Mody, Bella
Farmers' ignorance and the role of television. Ahmedabad, Centre for
Management in Agriculture, Indian Institute of Management, 1974. 103 p.

SINHA, B. P.
Television in diffusion of farm information : A Motivational Study.
Delhi, New Heights, 1974. 163 p.

SCUPHEAM, J.
Broadcasting and the Community
G A. Watts & Co., London.

SUMMERS, Robert Edward
Broadcasting and the public,
Wadsworth; 1966, 402 p.

SUSANTO, Astrid S.
Problems of communication planning, paper at East-West Center Conference on
Communication Policy and Planning.

SCHRAMM, Wilbur
The Process and Effects of Mass Communication.
University of Illinois Press, London.

TEBBEL, John
The Media in America
New American Library.

TEPPER, Marvin
Basic Radio, Bombay,
D.B. Taraporevala
Vol. 1-6, 1974.

TEHRANIAN, Majid

The future role of broadcasting in Iran. Preliminary report of a national survey.

**Prospective Planning Project,
National Iranian Radio Television, 1975**

UNESCO

The Mass Media in a Violent World

UNESCO

UNESCO

Planning for Satellite Broadcasting

UNESCO

UNESCO

World Communication

UNESCO PRESS.

U.S. LAWS, Statutes etc.

Radio laws of the United States.

U.S. Govt. Print. Off., 1968. 264 p.

UNITED STATES CODE ANNOTATED,

Title 47: Telegraphs, Telephones and Radiotelegraphs.

Chapter 5—Wire on Radio Communication : Section 151-155

Federal Communications Commission.

VARDAMAN, George

Effective Communication of Ideas.

Van Nostrand Reinhold Co., New York.

VAIDYA, Madhurkant Gunvantray

Akashvani Vise Janva Jevum.

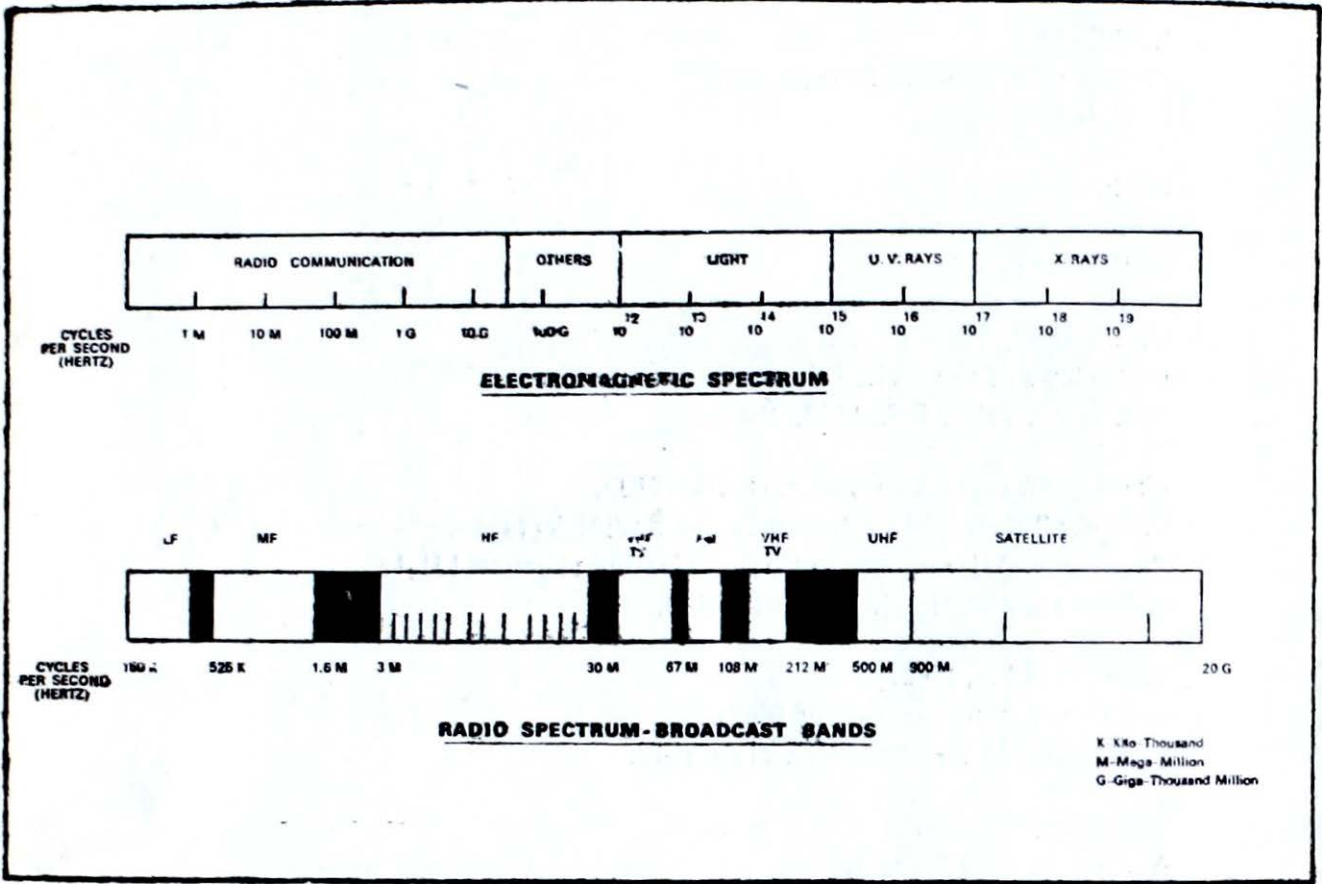
Bombay, Parichay Trust, 1975, 32p.

(Gujarati).

WILLIS, Edgar E

Foundations in Broadcasting Radio & Television.

Oxford University Press, New York.



The Electro-magnetic Spectrum and Broadcast Bands