

Electronic Media (Radio and Television)

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MA – Semester 1 - Electronic Media (Radio and Television)

Tutorial

Unit 1 Introduction to Electronic Media

Rapid communication through latest technology has facilitated speedy information gathering and dissemination and this has become an essential part of the modern society. It was Marshall McLuhan who said that electronic technology

is reshaping and restructuring patterns of social interdependence and every aspect of our personal life. Extraordinary information explosion have dramatically shrunk time and distance and have converted our world into a Global Village. Electronic media have transformed communication and our ability to share, store and gain information and knowledge. The widely available media services are changing the ways in which we live and work and also altering our perceptions and beliefs. It is essential that we understand these changes and effects in order to develop our electronic resources for the benefit of society.

These changes are:

It has abolished distances and time in disseminating the information, events and ideas.

People's access to information has become easy and universal.

External control of information flows has become more difficult.

Information exchange has come cheaper and simple.

It has become easy to have two-way interaction and exchange of ideas.

Wide reach and low reception costs encourage centralised information dissemination.

With multi-channels listeners and viewers have opportunity to pick and choose among the programmes of their likings?

Politically two-way media are democratic in which each party is equally empowered to raise new issues on electronic network.

Networks are not new. "Hard" networks such as road, rail, electric and water supply networks have been with us for ages. "Soft" networks such as computer programmes, radio and television are equally important in relations to our needs, usefulness to our culture.

STRENGTHS OF RADIO AND TELEVISION: Radio and Television have their own characteristics. UNESCO has enumerated the following strengths and weaknesses of radio and television.

STRENGTHS AND WEAKNESSES OF RADIO:

Strengths

- # It has imaginative potential to his/her own developed radio visual
- # Receivers are relatively cheap medium
- # It is relatively inexpensive in terms are required.
- # As an entertainment medium, psychologically languages is
- # As a major news source it is widely heard and accepted.
- # It has massive, immediate distribution.

Weaknesses

- # It requires a fully listener to add interpretation network.

- # It is a non-visual and portable
- # Trained personnel production
- # Knowledge of local it is acceptable. essential.

HISTORY OF RADIO AND TELEVISION:

Historically speaking, Marconi started radio broadcasting in 1896 with the invention of first wireless telegraph link. It took ten years since then for the first demonstration of radio broadcasting to establish but it was hard to distinguish words from music. Another successful demonstration took place from the Eiffel Tower in Paris in 1908. A New York Station transmitted the first radio news bulletin in 1916 on the occasion of the election of US President. By 1927, broadcasting services were started as a major medium of information. Radio broadcasting in India began as a private venture in 1923 and 1924, when three radio clubs were established in Bombay, Calcutta and Madras (now Chennai). The Radio Club broadcast the first radio programme in India in June 1923. The daily broadcasts of 2 to 3 hours consisted mainly of music and talks. These stations had to close down in 1927 for lack of sufficient financial support. It was followed by the setting up a Broadcasting Service that began broadcasting in India in July 1927 on an experimental basis at Bombay and a month later at Calcutta under an agreement between the Government of India and a private company called the Indian Broadcasting Company Ltd. Faced with a widespread public outcry against the closure of the IBC, the Government acquired its assets and constituted the Indian Broadcasting Service under the Department of Labour and Industries. Since then, broadcasting in India has remained under Government control. In 1936, a radio station was commissioned in Delhi. In the same year, the Indian Broadcasting Service was renamed All India Radio (AIR) and a new signature tune was added. The Delhi station became the nucleus of broadcasting at the national level. All India Radio has come a long way since June 1936. When India became Independent, the AIR network had only six stations at Delhi, Bombay, Calcutta, Madras, Lucknow and Tiruchirapalli with 18 transmitters - six on the medium wave and the remaining on short wave, Radio listening on medium wave was confined to the urban elite of these cities. Radio broadcasting assumed considerable importance with the outbreak of World War II. By 1939, the entire country was covered by a short-wave service and the programme structure underwent a change to meet wartime contingencies. During this period, news and political commentaries were introduced and special broadcasts were made for the people on the strategic northeastern and northwestern borders. After Independence, the broadcast scenario has dramatically changed with 198 broadcasting centers, including 74 local radio stations, covering more than 97.3 per cent of the country's population. Presently, it broadcasts programmes in a number of languages throughout the day. The function in of All India Radio is unparalleled in sense that it is perhaps the only news organizations, which remain active, round-the-clock and never sleeps. Mostly the broadcasting centers are fullfledged stations with a network of

medium wave, short wave and FM transmission. Besides, the external services Division of AIR is a link with different regions of world through its programmes in as many as 24 languages for about 72 hours a day.

HISTORY OF TELEVISION:

Television began in India way back in 1959 as a part of All India Radio when it was formally commissioned on September 15 as an experimental service. Its aim was to promote social education and general awareness. It was not until Mrs. Indira Gandhi was in charge of the Information and Broadcasting Ministry that television was commissioned as a regular daily service from 15th August 1965. Now television transmitters carry Doordarshan signals to almost three fourth of the country's population. On August 1, 1975 a Satellite Instructional Television Experiment (SITE) was launched with the help of an American Satellite for a period of one year when 2400 villages in six states - Orissa, Bihar, Rajasthan, Madhya Pradesh, Andhra Pradesh and Karnataka were exposed to area specific programmes beamed with the help of the satellite. The experiment was successful and was universally lauded. The programme content had the three necessary ingredients of entertainment, education and information. There was no denying that Doordarshan had become a catalyst to social change. One of the most popular programmes of Doordarshan has been the rural programme called "Krishi Darshan" which was launched on 26 January 1967. Doordarshan also caters to many schools and universities in the country through its Educational TV and Open University programmes. In 1982, Doordarshan went into colour and created its own national network through the help of INSAT- I A. Now with the help of INSAT-1B and Microwave facilities, Doordarshan is able to cater to a very wide area of the country in terms of imparting information and entertainment. Some of the significant presentations have been the IX Asian Games, the NAM summit, the CHOGUM conference, Republic Day Parades, Independence Day Celebrations, etc. Television went commercial from January 1, 1976 and now good numbers of sponsored programmes are telecast on Doordarshan, increasing its revenue. On March 22, 2000, INSAT- 3 B was launched under the INSAT series. It has three Ku-band transponders with 12 extended C-band transponders and Sband mobile Satellite service payloads. This will double the capacity, which was earlier, provided by seven transponders of INSAT-2B and INSAT-2C. INSAT-3B, besides providing business communication, development communication and mobile communication, will also provide set of transponders for the Swarna Jayanthi Vidya Vikas Upagraha Yojana for Vidya Vahini, an exclusive educational channel.

PRESENT SECENARIO OF RADIO AND TELEVISION:

Presently, AIR is utilizing satellite services for transmission of its programmes throughout the country with a radio networking. With the introduction of Radio Paging Service, FM transmitter has become the landmark of AIR. Today, All India Radio counts among the few largest broadcasting networks in the world to

serve the mass communication needs of the pluralistic population of India. The network has expanded gradually, imbibing new technologies and programme production techniques.

3-TIER BROADCASTING: All India Radio has evolved a three-tier system of broadcasting, namely, national, regional and local. It caters to the information; education and entertainment needs of the people through its various stations spread over the length and breadth of the country. They provide news, music, talks and other programmes in 24 languages and 146 dialects to almost the entire population of the country. The regional and sub-regional stations located in different states form the middle tier of broadcasting. Local radio and community radio is a comparatively new concept of broadcasting in India. Each of the stations serving a small area provides utility services and reaches right into the heart of the community, which uses the radio to reflect and enrich its life.

NEWS SERVICES: "This is all India Radio. The News, read by....." These words ring all over the country every hour, day and night, broadcasting news bulletins in Hindi, English and 17 regional languages. The bulk of AIR news comes from its own correspondents spread all over the country. It has 90 regular correspondents in India and has seven special correspondents/reporters and two hundred and forty six part-time correspondents stationed in different countries.

News Agency News agency, also called press agency, press association, wire service, or news service, organization that gathers, writes, and distributes news from around a nation or the world to newspapers, periodicals, radio and television broadcasters, government agencies, and other users. It does not generally publish news itself but supplies news to its subscribers, who, by sharing costs, obtain services they could not otherwise afford. All the mass media depend upon the agencies for the bulk of the news, even including those few that have extensive news-gathering resources of their own. The news agency has a variety of forms. In some large cities, newspapers and radio and television stations have joined forces to obtain routine coverage of news about the police, courts, government offices, and the like. National agencies have extended the area of such coverage by gathering and distributing stock market quotations, sports results, and election reports. A few agencies have extended their service to include worldwide news. The service has grown to include news interpretation, special columns, news photographs, audiotape recordings for radio broadcast, and often videotape or motion-picture film for television news reports. Many agencies are cooperatives, and the trend has been in that direction since World War II. Under this form of organization, individual members provide news from their own circulation areas to an agency pool for general use. In major news centres the national and worldwide agencies have their own reporters to cover important events, and they maintain offices to facilitate distribution of their service. In addition to general news agencies, several specialized services have developed. In the United States alone these number well over 100, including such major ones as Science Service, Religious News Service, Jewish Telegraphic Agency, and News Election Service. Specialized services in other countries include the Swiss Katholische Internationale Presseagentur, which

reports news of special interest to Roman Catholics, and the Star News Agency of Pakistan, which supplies news of Muslim interest in English and Urdu. The major press associations in the United States have expanded their service to include entertainment features, and some feature syndicates provide straight news coverage as a part of their service. The Newspaper Enterprise Association distributes both news and features in the United States. Despite the plethora of news services, most news printed and broadcast throughout the world each day comes from only a few major agencies, the three largest of which are the Associated Press in the United States, Reuters in Great Britain, and Agence France-Presse in France. Only these and a few others have the financial resources to station experienced reporters in all areas of the world where news develops regularly (in order to ensure access to well-organized transmission facilities) or to send them wherever news develops unexpectedly. These agencies are also equipped to distribute the service almost instantaneously. The world agencies have established a variety of relationships with other agencies and with individual news media. Most of them purchase the news services of national or local agencies to supplement news gathered by their own staff representatives at key points. Reuters, like the Agence France-Presse, supplies a worldwide news file to be distributed by some national agencies along with their domestic news reports. The American services more often contract to deliver their service directly to individual users abroad. News agencies in communist countries had close ties to their national governments. Each major communist country had its own national news service, and each news service was officially controlled, usually by the minister of information. TASS, the Soviet news agency, was the principal source of world news for the Soviet Union and its allies; it also made Soviet Communist Party policy known. Communist states outside the Soviet sphere, e.g., China and Yugoslavia, had their own state news services, which were controlled in similar fashion. China's Hsinhua, or New China News Agency, was the largest remaining news agency in a communist country by the late 20th century. Most other countries have one or more national news agencies. Some depend on a common service, such as the Arab News Agency, which provides news for several states in the Middle East. Others are national newspaper cooperatives, such as the Ritzaus Bureau of Denmark, founded in 1866. A few, like the Agenzia Nazionale Stampa Associata of Italy, have expanded coverage abroad in a limited degree to supplement their domestic service but still depend on Reuters and Agence France-Presse for much of their foreign news. Germany since 1949 has built Deutsche-Press-Agentur into one of the more important news agencies in Europe, including extensive exchange with other national services. In Canada the Canadian Press is a cooperative news agency with headquarters in Toronto. The oldest and largest news agency operating exclusively in Britain is the Press Association, founded by provincial newspapers on a cooperative basis in 1868. It began active work on February 5, 1870, when the postal service took over the private telegraph companies that had previously supplied the provincial papers with news. It supplies news to all the London daily and Sunday newspapers, provincial papers, and trade journals and other periodicals. The ability to transmit news rapidly greatly increased

during the 20th century. Radio teleprinters that make possible fast automatic transmission of news messages linked all major areas. Picture transmission by radio and high-fidelity wires became well developed. From the major agencies, teletypesetter service, pioneered by the Associated Press in 1951, was available to newspapers wishing to have computerized typesetting done directly from news-service transmissions. By the 21st century, most news agencies had moved the bulk of their operations and transmission to computers.

Reuters

Thomson Reuters, news agency founded in Britain in 1851 that became one of the leading newswire services in the world. Its headquarters are in New York City. The agency was established by Paul Julius Reuter, a former bank clerk who in 1847 became a partner in Reuter and Stargardt, a Berlin book-publishing firm. The firm distributed radical pamphlets at the beginning of the Revolutions of 1848, which may have brought official scrutiny on Reuter. Later that year he left for Paris, where he worked for a short time as a translator. In 1849 he initiated a prototype news service, using electric telegraphy as well as carrier pigeons in his network. Upon moving to England, he launched Reuter's Telegram Company two years later. The company was concerned with commercial news service at its inception and had headquarters in London serving banks, brokerage houses, and leading business firms. The agency expanded steadily, and in 1858 its first newspaper client, the London Morning Advertiser, subscribed. Newspapers bulked ever larger in the Reuters clientele thereafter. The value of Reuters to newspapers lay not only in the financial news it provided but in its ability to be the first to report on stories of international importance, as in 1865 when the service broke the news of the assassination of U.S. Pres. Abraham Lincoln hours before its competitors. Reuter saw the possibilities of the telegraph for news reporting and built up an organization that maintained correspondents throughout the world. The Press Association (PA), an organization representing the provincial press of Great Britain, acquired a majority interest in Reuters in 1925 and full ownership some years later. In 1941 the PA sold half of Reuters to the Newspaper Proprietors' Association, representing Britain's national press, and in 1947 co-ownership was extended to associations representing the daily newspapers of Australia and New Zealand. Reuters had become one of the world's major news agencies, supplying both text and images to newspapers, other news agencies, and radio and television broadcasters. Directly or through national news agencies, it provided service to most countries, reaching virtually all the world's leading newspapers and many thousands of smaller ones.

Agence France-Presse (AFP)

French cooperative news agency, one of the world's great wire news services. It is based in Paris, where it was founded under its current name in 1944, but its roots go to the Bureau Havas, which was created in 1832 by Charles-Louis Havas, who translated reports from foreign papers and distributed them to Paris

and provincial newspapers. In 1835 the Bureau Havas became the Agence Havas, the world's first true news agency. Stressing rapid transmission of the news, Agence Havas established the first telegraph service in France in 1845. Between 1852 and 1919 the agency worked in close collaboration with an advertising firm, the Correspondance General Havas. Staff correspondents for the agency were stationed in many world capitals by the late 1800s. The German occupation of France suppressed Agence Havas in 1940, and many of its personnel were active in the underground. After the liberation of Paris in 1944, underground journalists emerged to set up AFP as a wire-service voice for liberated France. The postwar French government gave AFP the assets of Agence Havas, including the Paris building that became its headquarters. AFP quickly joined Reuters (United Kingdom), TASS (U.S.S.R.; later, ITAR-TASS of Russia), and the U.S. agencies Associated Press (AP) and United Press International (UPI) as one of the world's leading news agencies. In addition to having bureaus in major French cities, it has bureaus and correspondents in important world capitals. Besides having contracts with AP, Reuters, and ITAR-TASS for exchange of news reports, it sells a domestic French news report to most of the world's news agencies and provides its worldwide report to many of them. AFP also has a photo service and a number of specialized news reports, several concerned with African matters.

Associated Press (AP)

AP cooperative 24-hour news agency (wire service), the oldest and largest of those in the United States and long the largest and one of the preeminent news agencies in the world. Headquarters are in New York, N.Y. Its beginnings can be traced to 1846, when four New York City daily newspapers joined a cooperative venture to provide news of the Mexican-American War. In 1848 six papers pooled their efforts to finance a telegraphic relay of foreign news brought by ships to Boston, the first U.S. port of call for westbound transatlantic ships. By 1856 the cooperative had taken the name New York Associated Press. It sold its service to various regional newspaper groups, and pressure from the regional customers forced changes in its control. Midwestern newspaper publishers formed the Western Associated Press in 1862, and in 1892 it broke from the New York Associated Press and was incorporated separately in Illinois as the Associated Press. In 1900 the regional organizations merged, and the modern AP was incorporated. The Chicago Inter Ocean, a newspaper that did not have AP membership, had brought an antimonopoly suit, and the AP moved to New York, where association laws permitted the group to continue its strict control of membership, including blackballing of applicants for membership by existing members. In the early 1940s Marshall Field III, who had established the Chicago Sun, fought his exclusion from the AP service. Prosecution under the federal antitrust powers ended the AP's restrictive practices. In 1967 the AP partnered with the U.S. financial information and publishing firm Dow Jones & Co., Inc., to launch the AP-Dow Jones Economic Report, which transmitted business, economic, and financial news across the globe. As computers began to replace

typewriters for many tasks—including writing, editing, and archiving—the AP launched a series of new technological initiatives, including DataStream (1972), a high-speed news-transmission service; LaserPhoto (1976), which enabled transmission of the first laser-scanned photographs; the “electronic darkroom” (1979), which electronically cropped, formatted, and transmitted photos; and LaserPhoto II (1982), the first satellite colour-photograph network. For many years the AP had leased more than 400,000 miles (644,000 km) of telephone wire to carry its transmissions, but its use of radio teleprinters— begun in 1952— began mitigating the need for leased wires, a trend that increasing employment of satellite transmissions carried on as subscribers installed appropriate antennas. In the early 1980s the AP’s staff was made up of some 2,500 reporters and correspondents, in bureaus in more than 100 U.S. and 50 other cities around the world, who collected and relayed to member papers news from about 100 countries. Staff efforts were augmented by those of more than 100,000 reporters of member papers. The agency had more than 6,500 newspaper clients in the early 1980s. In the early 21st century the AP began focusing on various reader initiatives including an online blog; asap, a multimedia news service targeting younger subscribers and members; citizen journalism; and the Mobile News Network for mobile phone users. The AP employs some 4,100 administrative, communications, and editorial workers worldwide. Over the decades, the news agency has received more than four dozen Pulitzer Prizes.

Press Trust of India (PTI)

Press Trust of India (PTI), news agency cooperatively owned by Indian newspapers, which joined together to take over the management of the Associated Press of India and the Indian outlets of the Reuters news agency of Great Britain. It began operating in February 1949 and is headquartered in Mumbai. A national nonprofit enterprise, PTI, which operates primarily in English, became one of the developing world’s largest cooperative news agencies. In the 1980s PTI underwent a program of modernization and diversification; it computerized many of its operations, introduced services in Hindi and other languages, and established a television facility (1986) as well as the country’s first wirephoto service (1987). In 1976 the government declared a state of emergency and required PTI to merge with India’s other three major agencies, the English-language United News of India and the multilingual Hindustan Samachar and Samachar Bharati, but in 1978 the four agencies were allowed to start operating independently again.

UNI The United News of India

(UNI), founded in 1961, has emerged as one of the largest news agencies in India with several hundred subscribers across the length and breadth of the nation. The agency’s subscribers include newspapers published in 14 languages, All India Radio and Doordarshan, the Prime Minister’s Office as well as Union Ministers’ offices, Central and State governments, corporate and commercial

houses besides electronic and web based media. Having started its commercial operations on March 21, 1961, UNI has developed over the years to launch innovative steps and ideas that proved to be of immense benefit not only for its subscribers but to journalism as a whole. It has News Bureaus in all state capitals and other major cities. The agency also has representatives in key world capitals. UNI was the first to start a multi-language news service UNIVARTA on May 1, 1982 that continues to provide Hindi newspapers and media organisations a comprehensive package of national, international, regional, sports and commercial news in their language of publication. UNI pioneered a national news photo service in 1987. From despatching just about a dozen black and white photographs through courier to subscribers, it now uses the latest technology to make available digital colour photos numbering nearly 150 from all over the country. The agency also has a tie up with Reuters to supply international photos. UNI remains the first and only news agency in the world to supply news in Urdu. UNI Urdu Service was launched by then Prime Minister PV Narasimha Rao on June 5, 1992. The service caters to newspapers, radio and television stations and government offices. Its ever expanding network covers Delhi, Uttar Pradesh, Madhya Pradesh, Bihar, Maharashtra, Karnataka, Andhra Pradesh and Jammu & Kashmir.

ANI

Founded over 50 years ago, ANI is today South Asia 's leading multimedia news agency with over 100 bureaus in India , South Asia and across the globe. Our growth has been fuelled by the desire to fulfill the basic human need for knowledge and information, and we have done so with truth, credibility, quality and speed as our guiding principles. To cater to the ever-increasing spectrum of demand for news and information in an era of rapidly evolving technologies, our pursuit of excellence sees us ever innovating, improving and redesigning our products and services. As South Asia 's leading Multimedia News Agency, and one of the best professionally managed corporate media entities of the world, ANI has a big reputation to live up to. No wonder, we race with time every minute of the day and every day of the year, to deliver to our multitude of clients- television channels, radio stations, newspapers, websites and mobile carriers, both at home and abroad, the best possible video/audio, text and picture content. When it comes to covering South Asia , ANI goes across the globe to bring news of and from South Asia , wherever it takes place. The result is a complete service, multi-faceted in the depth of its coverage, and extensive in its reach. Our range of products encompass loosely edited news feeds and customized programmes for television channels, audio bytes for radio stations, live web casting and streamed multimedia / text content for websites and mobile carriers, and news wire services for newspapers, magazines and websites API also provide a range of facilities for foreign and domestic channels to package their reports in India and uplink via satellite. These include provision of professional crews, editing and post production facilities, access to our archives, uplinking facilities, coordinators, producers and correspondents, if required. It cover almost

all areas of interest to viewers including news, entertainment and lifestyles, business, sports, human-interest features and social and developmental issues. At ANI the pioneering spirit continues in line with our vision - that of providing a comprehensive array of news services, facilities, programmes and talent. Today's digital era is seeing ANI fast emerging as a 'Complete Content House' providing text, video and picture content for TV, print, mobile and online media, all under one roof.

Unit 2 Public Media

Public broadcasting includes radio, television and other electronic media outlets whose primary mission is public service. Public broadcasters receive funding from diverse sources including license fees, individual contributions, public financing, and commercial financing. Public broadcasting may be nationally or locally operated, depending on the country and the station. In some countries, public broadcasting is run by a single organization. Other countries have multiple public broadcasting organizations operating regionally or in different languages. Historically, public broadcasting was once the dominant or only form of broadcasting in many countries (with the notable exception of the United States). Commercial broadcasting now also exists in most of these countries; the number of countries with only public broadcasting declined substantially during the latter part of the 20th century. In India, Prasar Bharati is India's public broadcaster. It is an autonomous corporation of the Ministry of Information and Broadcasting (India), Government of India and comprises the Doordarshan television network and All India Radio. Prasar Bharati was established on November 23, 1997, following a demand that the government owned broadcasters in India should be given autonomy like those in many other countries. The Parliament of India passed an Act to grant this autonomy in 1990, but it was not enacted until September 15, 1997.

Organizational Structure of All India Radio

All India Radio comes under the Ministry of Information and Broadcasting, Government of India. The Minister of Information and Broadcasting heads this ministry. A Secretary and four Joint Secretaries assist the Minister of Information and Broadcasting, in dealing with the following:

- Policy, • Broadcasting,
- Financial Advisor, and
- Film.

In order to help the joint secretaries in the execution of above jobs, there are deputy secretaries and under secretaries also. Radio stations come in all sizes and generally are classified as being either small, medium or large market outlets. The size of the community that a station serves usually reflects the size of its staff. That is to say, the station in a town of five thousand residents may have as few as six full-time employees. It is a question of economics. However,

some small market radio outlets have staffs that rival those of rival market stations because their income warrants it. However, a few small stations earn enough to have elaborate staffs. But the key word at the small station is flexibility, since each member of the staff is expected to perform numerous tasks. Medium markets are set up in more densely populated areas and in this type of station; there are twelve to twenty employees. While an overlapping of duties does occur even in the larger station, positions usually are more limited to specific areas of responsibility. Large market stations employ as many as fifty to sixty people and as few as twenty depending on the nature of their format. As far as All India Radio is concerned, Director General is the head of the organization. This being a sensitive post, the requirements include: a wide cultural background, initiative, tact, administrative ability, sound judgement of men and matters, a deep commitment to broadcasting and qualities of leadership of a high order. Sometimes, Indian Administrative Service Officers are assigned an additional task of Director General of All India Radio. This is somehow not considered to be a healthy trend. However, since independence, there have been around many I.A.S. officers who have performed the task of Director General of All India Radio. There are Additional Director General and Deputy Director Generals also who help the Director General in the discharge of his vast duty. Director of Programmes assists the Deputy Director General. Other than that a Director whose rank is equivalent to Deputy Director General heads the News Division. Chief News Editor, News Editor, and Joint Director etc assist the Director. Moreover, there are Translators, News Readers and Announcers also to help the News Division. The Engineering Division of AIR is looked after by Engineer-in-Chief and is assisted by Chief Engineer and Regional Engineers. The Regional Stations of AIR is under the control of Station Director who is assisted by Assistant Station Directors and Programme Executives. In addition to that B. G. Verghese Committee has also proposed an organizational structure for AIR, which is given below:

The committee proposed the creation of the following posts of General Managers:

- GM Legal Services
- GM Planning
- GM Information

The committee also proposed a Central News Room consisting of following:

- General Manager
 - Editor, Akashvani
 - Editor, Doordarshan
 - Foreign Editor
 - Editor Monitoring
- It also proposed the five Zonal Executive Boards, which are following:
- Zonal Director
 - Controller Doordarshan
 - Controller Personnel
 - Controller Engineering

- Controller Finance
- Controller Akashvani
- Regional Controller

Moreover, this committee also proposed the creation of the posts of Station Manager, Accounts and Personnel Officer, Programme Officer, Extension Officer, etc.

ORGANIZATIONAL STRUCTURE OF DOORDARSHAN:

The organizational structures of Doordarshan and All India Radio are more or less the same. But Doordarshan these days are growing bigger in terms of number of sections, sub-sections and staff of various kinds. The overall head of all the departments in Doordarshan is the Director General. The rank of the Director General of Doordarshan is equivalent to that of the Director General of All India Radio, while earlier it was not the case. Now as far as Doordarshan organizational services are concerned, it is crystal clear from chart-I and chart-II that there are mainly two departments — Department of Programme and Administration and Department of Engineering. The Director General heads the Department of Programme and Administration. His main job is to supervise, guide, govern and control the entire functioning of the department. Those who work under the Director General include the Additional Director General and Deputy Director General (Development), Deputy Director General (News and Current Affairs), Deputy Director General (Communication and Film), Deputy Director General (Production and Transmission), and Director (Finance and Personnel Control). The Additional Director General looks after News and Current Affairs, Programme Policy, Programme Coordination, Planning, Public Relations, etc. The rank of Additional Director General is equivalent to that of Joint Secretary, Govt. of India. He is assisted by the Controller of Programme (Policy), Controller of Programme (Coordination), Controller of Programme (Development), Public Relations Officer, etc. The Deputy Director General (Development) looks after the proper and sequence-wise development of the programme and is supported by Director, Audience Research, Controller of Programme (Development) and Deputy Controller of Programme. The Deputy Director General (News and Current Affairs) looks after the administrative part of current newsgathering, news selection, news processing, news evaluation and news presentation. He is supported by Chief Editor News, Chief Producer News and News Editor (Teletex). The Deputy Director General (Communication and Film) monitors the entire communication process of the organization. He is assisted by Controller of Programme (Communication) and Deputy Controller of Programme (Films). The Deputy Director General (Production and Transmission) looks after the entire activities of Production and Transmission and is supported by Deputy Director Administration in the discharge of his vast duties. The Director (Finance and Personal Control), guides, governs and controls the financial activities and personnel works and in the discharge of his vast duties, Deputy Director Administration and Senior Analyst support him. The Department

of Engineering is headed by Engineer-in-Chief who is answerable to the Director General. The Engineer-in-Chief is responsible for the growth and maintenance of all the engineering and technical activities. In the discharge of his enormous duties, he is assisted by Chief Engineer (Project and Budget) and Chief Engineer (Maintenance and INSAT). The Chief Engineer (Project and Budget) supervises and prepares various projects and budgets and is supported by Director Engineering (Study Design Coordination with ISRO and P&T), Director Engineering (Teletext), Director Engineering (Purchase), Director Engineering (Progress and Budget), Director Engineering (Estimates and NLF) and Director Engineering (Transmitter Design). In addition to that there is a large number of staff in Doordarshan which are directly associated with pre-production, production and post-production. These staff members are: Programme Producer, Programme Executive, Video Engineer, Vision Control Operation, Lighting Engineer, Cameraman, Vision Mixer, Studio Engineers, Make up Supervisors, Script Designer, Programme Assistant, Production Assistant, Audio Control Manager, Mic Boom Operator, and Script Writer.

Three tier service system of DD

Doordarshan is an Indian public service broadcaster, a division of Prasar Bharati. It is one of the largest broadcasting organisations in the world in terms of the studio and transmitter infrastructure. Recently, it has also started broadcasting on Digital Terrestrial Transmitters. Doordarshan has a three tier programme service – National, Regional and Local. The emphasis in the National programmes is on events and issues of interest to the entire nation. These programmes include news and current affairs, magazine programmes and documentaries on science, art and culture, environment, social issues, serials, music, dance, drama and feature films. The regional programmes are beamed on DD National at specific times and also on the Regional Language Satellite Channels, catering to the interests of a particular state, in the language and idiom of that region. The local programmes are area specific and cover local issues featuring local people. Doordarshan celebrated its 50th anniversary. Doordarshan's DD FREE DISH is a multi-channel Free to Air Direct to Home (DTH) service. This service was launched in December'2004 with the modest beginning of 33 channels. This service was inaugurated by Hon'ble Prime Minister of India. DD FREE DISH has been upgraded time to time and at present Doordarshan's DTH platform has the capacity of 59 TV channels along with 22 Radio channels. DD FREE DISH is available in Ku-Band on INSAT-4B (at 93.5°E) having 5 streams of channels with Downlink Frequencies - 10990, 11070, 11150, 11490 and 11570 MHz. This Ku-Band DTH service provides the TV coverage throughout the Indian territory (except Andaman & Nicobar Islands). DTH signals can be received through a small sized dish receive system. The DD provides television, radio, online and mobile services throughout metropolitan and regional India, as well as overseas through the Indian Network and Radio India. For the London Olympics, live telecasts of the opening and closing ceremonies of the games were broadcast on its national channel. DD sports channel has provided round the clock coverage of

sport events. Doordarshan had a modest beginning with an experimental telecast starting in Delhi on 15 September 1959, with a small transmitter and a makeshift studio. The regular daily transmission started in 1965 as a part of All India Radio. Doordarshan began a five-minute news bulletin in the same year in 1965. Pitampura was the first newsreader. Salma Sultan joined Doordarshan in 1967 and later became a news anchor. The television service was extended to Bombay (now Mumbai) and Amritsar in 1972. Up until 1975, only seven Indian cities had a television service and Doordarshan remained the sole provider of television in India. Television services were separated from radio on 1 April 1976. Each office of All India Radio and Doordarshan were placed under the management of two separate Director Generals in New Delhi. Finally, in 1982, Doordarshan as a National Broadcaster came into existence. Krishi Darshan was the first program telecast on Doordarshan. It commenced on 26 January 1967 and is one of the longest running programs on Indian television. National telecasts were introduced in 1982. In the same year, colour TV was introduced in the Indian market with the live telecast of the Independence Day speech by then prime minister Indira Gandhi on 15 August 1982, followed by the 1982 Asian Games which were held in Delhi. Now more than 90 percent of the Indian population can receive Doordarshan (DD National) programmes through a network of more than 1416 terrestrial transmitters. There are about 67 Doordarshan studios producing TV programmes today.

ROLE OF ELECTRONIC MEDIA:

In a democracy, the role of electronic media is not confined to provide information, education and entertainment. It has to play a greater role. It has to promote citizens' right to information. Further to secure the citizen's civil, political and social rights. It also has to act as a public watchdog to reveal state abuses. Public Communication System has been recognized as a public sphere, where widespread debate and discussion can take place. This will provide people information necessary to make informed decisions, and facilitate the formation of public opinion and can thus enable the citizens to shape the conduct of government by articulating their views. Role of electronic media, both radio and television is to be conceived in terms of representing adequately different social interests also. They have to give adequate expression to the full range of cultural-political values in society. A UNESCO study has also highlighted the role of the media in socialization, cultural promotion and national integration for creating better understanding and appreciation of others' viewpoints and aspirations. Media can help to democratize the relationship between government and governed.

REACH OF RADIO AND TELEVISION:

REACH OF RADIO: All India Radio and Doordarshan are now part of the Prasar Bharati - the autonomous broadcasting corporation of India through an Act of Parliament in 1990. The Prasar Bharati Board took charge of the administration

of All India Radio and Doordarshan with effect from 23rd November 1997. All India Radio presently has more than 200 Radio Stations including 183 full-fledged stations and nine relay centers and three exclusive Vividh Bharati Commercial Centers. In all AIR has 310 transmitters and provides radio coverage to a population of 97.3 per cent spread over 90 per cent area of the country. The External Services Division of All India Radio is a vital link between India and rest of the world, broadcasting in 25 languages. Of these 16 are foreign and 9 are Indian languages. The National Channel of All India Radio came on air on 18th May 1998. This Channel works as a night service from 6.50 p.m. to 6.10 a.m. everyday, covering 64% area and almost 76% population.

REACH OF DOORDARSHAN:

Compared to Radio, Doordarshan's network expansion is impressive in shortest time possible. In March 1999, Doordarshan -1 had 1000 transmitters and DD-2 (the Metro channel) had 57 covering about 87.9 per cent of population and about 74.8 per cent of area. As on March 2006

1. Transmitters for DD-1 1050 (High, Low and very Low Power transmitters)
2. Transmitters for DD-2 67 (High, Low and very Low power transmitters).
3. Other Transmitters 3 (2 at the Parliament & one at Srinagar)

FUTURE OF RADIO AND TELEVISION:

In a developing country like ours, a special function of broadcasting should be the coverage of development, its significance, achievements and problems. People's participation in development activities should be highlighted as also significant work being done by voluntary agencies. The style and methods of news reporting should reinforce the fundamental principles on which national policies are based. The primary purpose of the current affairs programmes should be to enlighten the people on various aspects of political, economic, social and cultural developments.

FM and Privatization of Radio: In recent years two very important developments have taken place in the field of radio and television broadcasting in India. With the advent of television it appeared that the importance of radio had gradually diminished. This actually happened for some years and radio ownership and radio listenership decreased considerably. But it seems that radio is reappearing once again in the form of FM transmission. The FM transmission stations are working as local stations catering to the local needs of the listeners. The partial privatization of FM broadcasting has also made the radio an important medium of mass communication. The programmes broadcast on FM are becoming very popular with the urban youth as the programmes cater specifically to them. Moreover, FM broadcasts are also becoming popular in cars and other vehicles. They provide necessary information regarding the roadblocks, traffic, and weather etc. to the motorists. FM broadcasting has gained a lot of popularity in last few years.

Private television channels:

The second but perhaps the most important development that has revolutionized not only the media system in India but the entire society has undergone a dramatic change is the availability of multiple channels on television - either direct through satellite or through cable TV. Doordarshan itself is a multi channel system having a separate sports channel and a separate educational channel (Vidya Vahini) on the anvil. But the sea change has occurred because of what is called "sky invasion". This term refers to the invasion of the households by private channels both Indian and foreign. The speed with which the private channels have expanded in India is an example in itself. The important point here is that this expansion has occurred in spite of and despite the government. The Indian government never wanted to provide up-linking facilities perhaps being afraid of the cultural invasion. But channels, including Indian channels, started up-linking from foreign soils like Kathmandu and Hong Kong and no technology available today can afford to block the down linking. This "sky invasion" coupled with rapid expansion of cable network has actually converted the entire urban and semi urban India into a big global village. The number of television owning household has also increased tremendously and it is estimated that about 70% of the urban households and 50% of the rural households today own at least one television set. This has to be noted and appreciated and also critically examined as this has happened in a record time unlike the Western countries where it took about 20 years. The Indian society has in fact leap-frogged at least in the field of television usage.

DD-Gyan Darshan, the educational TV channel of India is a joint venture of Doordarshan and IGNOU. Indira Gandhi National Open University, IGNOU transmits programs from its Electronic Media Production Centre at New Delhi. —The curriculum based programs include programs for primary schools, secondary schools, open school, teachers enrichment education, open and distance 115 learning, vocational courses, courses for disadvantaged sections of the society. Besides this, programs telecast include career guidance, computer education, preparation for competitive exams, edutainment, arts, culture, tourism and other developmental themes. The University Grants commission, the Consortium for Educational communication, the National council for Educational Research and Training, Department of Environment and Forests, Ministry of Rural Development, Department of Electronics, Ministry of Health, National Aids Control Organization, UNICEF, Department of Science and Technology, National Entrepreneurship Board, National Book Trust are some of the agencies who have already committed software to the channel. 13 The channel also telecasts educational current affairs program. Already as a prelude to the launching of the channel an educational current affairs program was produced and beamed through the Doordarshan's 24 hour news channel which is being telecast digitally through PAS IV satellite.

Unit 3 Commercial Media Television: growth and development of private channels in India

Indian Private Channels cater to the multiplying demand for entertainment of the Indian audience. The central government realised the requirements and launched a series of economic and social reforms in 1991 under Prime Minister Narasimha Rao. Under the new policies the government allowed private and foreign broadcasters to get engaged in limited operations of private channels in India. This process has been pursued consistently by all subsequent centralised administrations. Foreign privatised channels like CNN, Star TV and domestic channels, such as, Zee TV and Sun TV started satellite broadcasts. Starting with 41 sets in 1962 and one channel known as the Audience Research unit in 1991; presently private channels in India cater to more than 70 million homes. A large relatively unexploited market, easy accessibility of relevant technology and a variety of programmes are the main reasons for rapid expansion of Television in India. It must be focused that private television entertainment in India is one of the cheapest in the world. India has more than 130 million homes with television sets, of which nearly 71 million have connection to cable TV. The overall Cable TV market in India is growing at a robust rate of 8-10%. The industry of private television channels exploded in India, during the early 1990s when the broadcast industry was liberalised and saw the entry of many foreign players like Rupert Murdoch's Star TV Network in 1991, MTV, and others. The emergence and notification of the HDVSL standard as a home grown Indian digital cable standard shall open an era of interactivity on private networks. Presently, Indian television is on an uproar with private television channels. Sun TV (India) was launched in 1992 as the first private channel in South India. Today it has around 20 television channels in the four South Indian languages, namely Malayalam, Kannada, Tamil and Telugu. Channels of the Sun TV network are also available outside India. Recently Sun TV launched a DTH service. The Raj Television Network was started in 1994 and is still an important player in the South Indian cable TV provider space. The Raj Television Network operates two channels in Tamil - Raj TV and Raj Digital Plus. The content distributed by these two channels includes music videos, movies, and other entertainment programs for the entire family. Through its two channels - Raj TV, Raj Digital Plus, the network presents its viewers some of the best shows in the world of South Indian entertainment today. This network has built up a library of some of Tamil and Telegu films from the nostalgic old favourites to the contemporary box office hits. Recently, Raj Television Network has capitalised on the increasing demand for news that is unbiased, timely and accurate. In 1992, the government liberated its entertainment markets, thus, opening them up to private television. Five new channels belonging to the Hong Kong based STAR TV brought about a fresh breath of life - MTV, STAR Plus, BBC, Prime Sports and STAR Chinese Channel were the 5 private channels. Zee TV was the first private owned Indian channel to broadcast over private television. After few years, channels like CNN, Discovery Channel and National Geographic Channel made its entry in India. Star expanded its bouquet introducing STAR World, STAR Sports, ESPN and STAR Gold. Regional channels flourished along with a large number of Hindi channels and a few English channels. By 2001 HBO and History Channel were

the other international channels to enter India. By 2001-2003, other international private channels such as Nickelodeon, Cartoon Network, VH1, Disney and Toon Disney entered the boundaries of India. In 2003 news channels started to boom. Music channels had a great popularity in India, since its inception. Movie based channels; and soaps started dominating Indian private channels. Satellite Television for the Asian Region (STAR) is an Asian TV service owned by Rupert Murdoch's News Corporation. It is based in Hong Kong, with programming offices in India and Australia, as well as in other south Asian countries. The service of STAR is more than 300 million viewers in 54 countries and is watched by approximately 100 million viewers every day. STAR 's revenues have increased from \$220 million in 2003 to \$245 million in 2004. STAR has emerged as India's second-largest media company after Bennett, Coleman & Co. Ltd. which is the publisher of Times of India. Zee TV was founded by Subhash Chandra and launched in India in October 1992, becoming the first Hindi private channel. Zee TV is owned by Zee Entertainment Enterprises, and is one of the most popular Indian private channels. This network carries broadcasts in Hindi and other regional languages of India. ZEE TV is a part of the Essel Group. This channel formerly had a partnership with STAR TV. However, STAR ended their partnership with ZEE TV when Rupert Murdoch's News Corporation acquired STAR TV. Besides the above mentioned channels many more regional private channels have been introduced in Indian television that caters to the local audience. COLORS channel was launched on 21st July 2008 and it offers an entire spectrum of emotions to the viewers; starting from fictions, daily soaps to reality shows and hit movies. Meenakshi Sagar Productions, Balaji Telefilms, Endemol India, Wizcraft Television, Deepti Bhatnagar Productions, Playtime Creations, Sphere Origins, JayPranlal Mehta are some of the production houses that operate on Indian private channels. Indian private channels are some of the power packed entertainment boosters for the audience that still feature the essence of the bygone era by airing nostalgic black and white films and retrospective of well known actors. However, the regular soaps and reality shows have earned immense popularity amongst all other programmes on the Indian private channels on television.

Star News

Popular Hindi news channel from MCCA, Star news has now been rebranded as ABP News from 1 June 2012. Star News made its debut in March 2004 with the promise of keeping each individual ahead and informed. With prompt reporting, insightful analysis of current affairs, STAR News quickly became people's favourite. Living up to its motto of 'Aapko Rakhe Aagey', STAR News became a people's channel. Its cutting edge formats, state-of-the-art newsrooms commanded attention of 48 million Indians weekly. ABP News (formerly STAR News) is run by MCCA, Media Content & Communications Services

About MCCA

One of the biggest Indian media conglomerate, Anandabazar Patrika ventured into television space with a joint venture in 2003 with Star India for three news channels, Star News, Star Majha and Star Ananda. From June 12012, Star News, Star Majha and Star Ananda got rebranded into ABP News, ABP Majha and ABP Ananda respectively. ABP News is India's first 24-hr national Hindi news channel catering to North India primarily. ABP Majha is Marathi news channel catering to Mumbai and Maharashtra. ABP Ananda is Bengali news channel from ABP stable proving Bengali news and entertainment content. Editor •Shazi Zaman, Editor •Milind Khandekar, Managing Editor

Aaj Tak

Aaj Tak is a 24-hour Hindi news television channel owned by TV Today Network and launched December 31, 1998. Aaj Tak loosely translates as "Till Today" or "Up to the Minute". Aaj Tak initially began as a news bulletin on a public television station in India and turned to an independent channel after the carrier did not renew its contract. In India, Aaj Tak is free-to-air. In 2006 it began offering a pay channel to international markets.

Brief introduction to cable Industry

In India television transmission started on an experimental basis in Delhi in 1959 and the commercial services commenced in 1965. The television services were expanded to Mumbai and Amritsar in 1972. Seven more cities were covered by 1975 and sole service provider was Doordarshan. The first satellite based, live TV transmission using the INSAT 1B satellite took place with the live coverage of Independence Day celebrations on 15th August 1982. National telecasts as well as introduction of colour TV were launched in the year 1982 to coincide with Asian Games. There was rapid growth since then and today approximately half of all Indian households own a television. As of 2010, a total number of 515 channels are available in the country out of which 150 are pay channels. In 1992 the government liberalized the policies to allow foreign players which saw the entry of players like Star TV, MTV, HBO and BBC. The total number of households in India now is 223 million. Out of this 134 million households have access to either cable TV or satellite TV. 20 million households are covered by DTH services and the balance households are provided services by cable TV. While the cable and satellite TV subscribers grow at 15%, DTH subscribers grow at 28% in India. The urban TV penetration is 85%.

Cable TV

Cable TV was started in India during seventies mainly in metros. During this period, the TV services were provided only by Door Darshan and the customers were looking for variety of programmes. When the video cassette recorders were available freely in India, many enterprising individuals in metros started cable

services from their apartment homes and garages, telecasting through cable network English and Hindi movies, music and game shows which were in great demand. These cable TVs became very popular when CNN started telecasting of gulf war in 1990s. Business model of cable TV industry The TV distribution platforms in India are terrestrial (owned by doordarshan), cable, DTH and IPTV. The Indian TV distribution industry now comprises of 6000 Multi System Operators (MSOs), around 60,000 Local Cable Operators (LCOs), 7 DTH/ satellite TV operators and several IPTV service providers. The business model is undergoing a change in India. At one point of time, India had nearly 100,000 cable operators. The industry was run by small operators. The emergence of large operators from Hinduja group (incablenet), Zee group (Siticable), Asianet, Hathway (Raheja group) and RPG group (RPG Netcom), who are now known as MSO (Multi System Operators) changed the way in which the industry is run. But the MSOs are concentrated on the metros and major cities only so far. The industry is in the hands of local cable TV operators in the rural areas and small towns. The entry of big players from corporate led to the consolidation of small operators. This is because of the better quality of services offered by MSOs. While the local operators are able to offer around 30 channels, the MSOs are offering more than 65 channels to the customers. Besides, the MSOs are offering local channels which show films, local events, religious discourses, regional news etc. But all these MSOs operate on the model of franchising their cable TV feeds to the small operators. The broadcasting business in India is primarily driven by two sources of revenue – advertising and subscription.

There are two main types of broadcasting business models:

a.) Free to Air (FTA) channels which rely on advertising revenue as their primary source of revenue, and thus are dependent on the distribution supply chain only to ensure reach to their target audience.

b.) Pay TV channels which have a dual source of income from both subscription and advertisement. The channels need to ensure reach not just to earn advertising revenue but are also dependent on the distribution network to collect subscription revenue from the consumer.

The total revenue of the Indian television industry was estimated at Rs. 25,700 crore in 2009, of which advertising accounts for Rs.8,800 crore (34%) and subscription accounts for Rs.16,900 crore (66%). The average ARPU is Rs 165. Conditional Access System

Conditional Access System (CAS) is a digital mode of transmitting TV channels through a set-top box (STB). The transmission signals are encrypted and viewers need to buy a set-top box to receive the signal. CAS was introduced by the Government in 2001 to control and monitor the cable operators and to improve the quality of services and control the tariff. Initially CAS has been introduced in metros, but the penetration is only 25% so far. The reason for the slow growth of CAS is due to the initial entry cost of STB. TRAI has recently recommended that

all Cable operators should move from analogue system to digital system by 2013.

Regulatory and policy intervention

Cable Television Services were brought under Telecom Regulatory Authority of India in 2004. TDSAT (Telecom Disputes Settlement Appellate Tribunal) is now available for settlement of disputes between broadcasters and MSOs /cable operators Cable Act 1994 was amended in 2006 empowering TRAI to issue new customer friendly CAS Regulations. TRAI issued three regulations in August 2006 to create a legal framework for smooth implementation of CAS. These included a tariff order, interconnect and pricing regulation revenue share methodology and process and QOS regulation.

Key recommendations of TRAI

- Restructuring of Cable Industry with a larger role for MSOs and Digitalization plan within five years
- Head end in the Sky (HITS) policy to be announced by Government , TRAI completes all recommendations on this
- DTH policy on tariff and Quality of Services
- New recommendations on FDI policy in cable- upto 74 % by TRAI
- Internet Telephony allowed for ISP's.
- Cable Broadband focus with easier Right of Way (RoW) and Wireless possibilities
- Non CAS tariff regulations for TV subscribers
- Cable Companies can provide IPTV. Recommendations cleared by Government. MSOs can consider this opportunity, marketwise
- Ala carte choice of Channels by MSOs from Broadcasters in non CAS
- New Television Rating points (TRP), Television Audience Measurement (TAM) policy by TRAI.
 - MVNO policy announced
- Greater emphasis laid on network digitization, increased addressability and to encourage voluntary CAS
- Incentives prescribed to Multi System Operators (MSOs) to introduce total digitized networks
- The registration for cable TV operator to be replaced by a comprehensive and supportive licensing framework
- Separate licensing frameworks for Cable TV operators (LCOs) and Multi System Operators (MSOs)
- Eligibility criterion made specific to identify the entities who can act as LCOs and MSOs
- Option and flexibility to choose Service area given both to LCOs and MSOs
- CAS extension to the remaining three metros and subsequently followed by digitalization of 55 cities within a span of 3 years (with addressability)

New technologies

The viewers are increasingly demanding more features and better content from the TV channels and cable operators. These new technologies like PVR, video on demand, IPTV are revolutionizing the viewing experience.

Personal Video recorder

(Digital Video Recorder) PVRs facilitate viewing of channel while simultaneously recording the programme running in another channel. PVRs allow the viewer to pause, re-wind and re-play live TV.

Video on demand

Video on demand allows viewers to order movies available in service providers' library. The movies can be downloaded for a fee. With more than 1000 movies produced in India, Video on demand offer lucrative business opportunity for the cable operators.

Digitalization

The current TV transmission in India is predominantly analog which does not allow any technological upgradation. Besides it results in huge revenue leakage for the Indian cable operators as the household gets more than one TV connected to cable and pays only for one connection. Besides the quality of analog transmission is very poor. In the case of analog transmission, the operator cannot restrict the choice of channels to the customer. As a result, the cable operators pay for pay channels even if they are not required by the user. Digitalization leads to triple play where the customers get TV, broadband connection and telephone services from the same source. This will facilitate the cable operator to effectively compete with DTH and IPTV technologies.

Major operators

Last mile connectivity, technological up gradation and digitalization requires huge investments. The cable industry is moving towards consolidation in favour of triple play operators or Multi service operators. There are five major national operators in India. They are Hathway Cable, incablenet, Wire & Wireless India, DEN and Asianet. They collectively access over 25% of the country's TV subscribers. Competition in the cable TV segment has intensified as the corporates battle for acquiring the last mile connectivity. The recent acquisition of Digicable by RCom is a prelude to the shape of things to come in the merger and acquisition in the industry. The industry is still fragmented and unorganized due to which it is not able to attract investment. The revenue estimate of the industry is not accurate and the industry is blamed for under reporting of subscriber numbers. The cable TV sector will come under a proper licensing mechanism where city, state or national licenses can be bought. The TRAI recommendations

are a big step forward in ensuring effective licensing compliance, digitization of networks and attracting investment.

The Way Forward

The cable sector is emerging as a very attractive space owing to the TRAI recommendations and the clear edge of digital cable over its competition like DTH and IPTV in offering a larger number of channels, greater reliability even in adverse weather conditions and easier access to cheaper after-sales and customer services. Globally, India is the third largest player in the cable TV space. Even though DTH Technology is emerging as a competition to Cable in India, globally Cable has been resilient to such technology and even in developed countries like US, Cable has a 70% market share within In-home Entertainment. Industry experts expect cable TV industry to consolidate and Corporatize in the near future, this will lead to economies of scale, higher efficiency and also easier access to capital.

Development of private radio

Radio Broadcasting in India ZOHRA CHATTERJI Radio as a communication medium has played a very important role in the economic, political and cultural development of nations. It has the unique advantage of being receivable through low cost, battery operated, and mobile receiving sets, affordable for almost everyone, even in the rural areas. For the average "Argumentative Indian" who loves "baatein" (talking), radio is an easy and effective medium to bond with and hence its continuing popularity in India. It is interesting to know that Radio broadcasting in India was pioneered in the early 1920s by some young enthusiasts through their amateur radio clubs. The successful growth of radio in Europe and the United States gave impetus to a young group of Indian entrepreneurs, who established the Indian Broadcasting Company on 23rd July, 1927. However, their efforts to launch privately owned radio could not fructify. The colonial government seeing the potential danger of using this medium for the nationalist movement bought this company and renamed it the Indian State Broadcasting Service. In 1935, the British Government invited the BBC to help develop radio. One of the senior BBC producers is credited with the change of the name of the organisation to All India Radio later known as "Akashwani" (voice from the sky) from 1957. The growth of All India Radio over the years has been phenomenal and today, AIR's network provides radio coverage to 97.3 per cent of the population and reaches 90 per cent of the total area. Till 1995, the radio sector remained the monopoly of the Public Broadcaster, AIR though the seed was sown by young entrepreneurs. It is after the Supreme Court ruling in 1995 that India's airwaves became "public property" and the need for utilising this medium for promoting the public good and ventilating plurality of views, opinions and ideas was strongly felt. The resurgence of Radio actually took place in India in 1995 with the commencement of FM broadcast by AIR, where some slots were given to private producers. FM stations of AIR have also grown over the years. At

the start of VIIth Plan, there were only 4 AIR FM stations in the country. At the end of VIIIth Plan, 98 FM stations were in operation which was further increased to 130 at the end of IXth Plan and 161 at the end of the Xth Plan. As on date, there are 170 AIR FM stations all over the country. In 1999, the Government announced a liberalised policy for Expansion of FM Radio broadcasting through private agencies (Phase I), allowing fully owned Indian companies to set up private FM radio stations on a licence fee basis. The main objectives of the policy were to make quality programmes with a localised flavour in terms of content and relevance and to encourage new talent and generate employment opportunities directly and indirectly. This would supplement the services of AIR and more importantly, promote rapid expansion of the broadcast network in the country for the benefit of the Indian population. In May 2000, the Government auctioned 108 frequencies in the FM Spectrum across 40 cities in the country to the Private Agencies. However, the results were not very encouraging as only 21 channels (about 20 per cent) could be operationalised. Even those licensees who operationalised reported that their operation was unviable and suggested a system of revenue share regime instead of existing licence regime of upfront licence fee with annual increase of 15 per cent. Subsequently, a new policy of expansion of FM Radio Broadcasting through private agencies (Phase II) was notified on 13.7.2005. The new policy provides for grant of Permission on the basis of One Time Entry Fee (OTEF) and annual fees as revenue share in contrast with earlier fixed Annual Licence fee regime. Other important provisions included allowing 20 per cent FDI, networking of channels in C&D category cities etc. A total of 337 channels were put on bid under the new scheme and finally permission was granted for operationalisation of 245 channels. Out of this, 184 channels are already operational and the remaining are likely to be operational shortly. FM Policy Phase II has been well accepted by all stakeholders and has resulted in huge growth not only in the FM Radio Industry but also in employment opportunities. It has also created a demand for FM Radio in category C&D cities and even in rural areas. Keeping this in mind, and to accelerate the growth of FM Industry, it has been decided by the Government to expand FM Radio broadcasting to other cities through private agencies under FM Policy Phase III. The Telecom Regulatory Authority has submitted its recommendation on Phase III of the Policy, which include allowing additional channels in the same city, allowing broadcasting of news and current affairs taking content from AIR/Doordarshan, authorised news channels etc., allotment of FM channels for a district instead of single city, enhancing FDI limit, relaxation of fee structure for North-East and J&K, allowing networking of FM Radio programmes across entities, auto renewal of permission to district level permission holder etc. The Policy is under finalisation after which about 690 more channels are likely to be put on bid. Community Radio is the emerging new sector, which has tremendous potential in India. While a commercial radio station is mainly market driven, the public service broadcasting on the other hand concentrates on content for education, information and entertainment. The medium of Community Radio, as distinct from commercial radio or public service broadcasting serves to bring small communities together, focuses on the common man's day-to-day concerns

and helps in realising local aspirations. In this sense, it aims to contribute to the lives of the local people of that community. Since Community Radio focuses on issues relating to education, health, environment, agriculture, rural and community development, the advantage of this medium as an effective tool for empowerment of weaker section is enormous. Recognising the huge potential of the medium of Community Radio, the Government of India announced in December 2002 a policy for the grant of permission to well establish educational institutions to set up Community Radio. The Government subsequently, liberalised the policy guidelines on Community Radio in December 2006 by bringing in "Non-Profit" organisations like civil society and voluntary organisations etc. under its ambit in addition to the educational institutions.

As per the guidelines, community based organisations, which satisfy the following basic principles are eligible to apply for Community Radio:

- It should be explicitly constituted as a 'non-profit' organisation and should have a proven record of at least three years of service to the local community.
- The CRS to be operated by it should be designed to serve a specific well-defined local community.
- It should have an ownership and management structure that is reflective of the community that the CRS seeks to serve.
- Programmes for broadcast should be relevant to the educational, developmental, social and cultural needs of the community.
- It must be a legal entity. Annual licence fee is not charged for a Community Radio Station.

Only a bank guarantee of Rs. 25,000 is required. However, spectrum fees of approximately Rs. 20,000 is to be paid to Wireless Planning & Coordination (WPC) annually. The cost of setting up a station ranges between Rs. 600,000 to 1.2 million and it can serve an area of 10-15 KM with the maximum permitted ERP (effective radiated power) of 100 watt. Five minutes advertisement time per hour is also permitted on the channel (Details can be seen at www.mib.nic.in).

The Policy emphasises the need for involving the community not only in the production of the programmes but also in the overall management of the Community Radio station. As visualised in the Policy, Community Radio is a radio, which is of the community, by the community and for the community. Even so, a trend has been noticed for the CRS to copy the commercial FM channels and to even call themselves "FM Radio". Accordingly, through a recent advisory issued to all CRS including those allotted to educational institutions, they have been advised to take necessary steps in this regard for involvement of the community and to invariably air the name of the CRS as "Community Radio" or "Samudayik Radio" or equivalent name for community in the local language.

Presently, 34 community Radio stations are operational in the country. The Government has so far received 208 applications under the new guidelines and permission has been granted so far to 36. This includes educational institutions, NGOs, Agricultural Universities and KVK. The government has decided to give wide publicity to the new policy in order to create awareness about the scheme and its potential for being used as a medium for the upliftment of the masses

particularly in the rural areas. There are many global examples which have demonstrated the viability of Community Radio in the field of social development.

Radio Mirchi

Radio Mirchi is a nationwide network of private FM radio stations in India. It is owned by the Entertainment Network India Ltd (ENIL), which is one of the subsidiaries of The Times Group. Mirchi is Hindi for chili pepper. The tagline of Radio Mirchi is "It's hot!". Radio Mirchi maintains weekly music charts (or record charts) for India. The most followed charts are Mirchi Top 20 (Bollywood Songs) and Angrezi Top 20 (English Songs). Both of these charts are a ranking of recorded music according to popularity. These charts are published on a weekly basis in the Indian English language daily newspaper, The Times of India, and on Radio Mirchi's official website.

History

The original avatar of Radio Mirchi was Times FM. Radio Mirchi began operations in 1993 in Indore, Madhya Pradesh. Until 1993, All India Radio or AIR, a government undertaking, was the only radio broadcaster in India. The government then took the initiative to privatize the radio broadcasting sector. It sold airtime blocks on its FM channels in Indore, Hyderabad, Mumbai, Delhi, Kolkata, Vizag and Goa to private operators, who developed their own program content. The Times Group operated its brand, Times FM, till June 1998. After that, the government decided not to renew contracts given to private operators.

First round of licences

In 2000, the government announced the auction of 108 FM frequencies across India. ENIL won the largest number of frequencies, and thus started its operations under the brand name Radio Mirchi.

Second round of licences

In January 2006, Radio Mirchi purchased 25 frequencies in the second wave of licences that were issued by the Government of India. This pushes the Radio Mirchi presence in 32 centres. In the first wave of launches, Indore was the first city in India having grade of first private radio channel. Times decided to start radio channel to address the mass audience as advertisers can be attracted by showing a low cost per thousand. Areas of operation Currently, Radio Mirchi has a presence in 33 metros Including Delhi, Mumbai, Kolkata, Pune, Jaipur, Hyderabad, Indore, Ahmedabad, Chennai and Bangalore and Radio Mirchi is the costliest station in India as they charge more than double of the competition. Radio Mirchi believes premiumness can be achieved by charging more from the clients, unlike BIG FM 92.7 which is comparatively much more economic but airs content which does not meet the expectations of its listeners.

Radio City

Radio City is India's first private FM radio station and was started on July 3, 2001. It broadcasts on 91.1 (earlier 91.0 in most cities) megahertz from Mumbai (where it was started in 2004), Bengaluru (started first in 2001), Lucknow and New Delhi (since 2003). It plays Hindi, English and regional songs. It was launched in Hyderabad in March, 2006, in Chennai on July 7, 2006 and in Vishakapatnam October 2007. Radio City recently forayed into New Media in May 2008 with the launch of a music portal - PlanetRadiocity.com that offers music related news, videos, songs, and other music-related features. The Radio station currently plays a mix of Hindi and Regional music. Apurva Purohit is the CEO of the company. In 2010, Radio City launched its first web radio station Radio City Fun Ka Antenna and now they have 13 web radio stations. Radio City is present in Ahmedabad, Ahmednagar, Akola, Bengaluru, Chennai, Coimbatore, Delhi, Jaipur, Hyderabad, Lucknow, Mumbai, Nagpur, Nanded, Pune, Sangli, Solapur, Surat, Vadodara and Vishakapatnam. Friends FM is the strategic partner for Radio City in Kolkata

Unit 4 New Communication Technologies

Optic fiber communication

Fiber-optic communication is a method of transmitting information from one place to another by sending pulses of light through an optical fiber. The light forms an electromagnetic carrier wave that is modulated to carry information. First developed in the 1970s, fiber-optic communication systems have revolutionized the telecommunications industry and have played a major role in the advent of the Information Age. Because of its advantages over electrical transmission, optical fibers have largely replaced copper wire communications in core networks in the developed world. Optical fiber is used by many telecommunications companies to transmit telephone signals, Internet communication, and cable television signals. Researchers at Bell Labs have reached internet speeds of over 100 petabits per second using fiber-optic communication. The process of communicating using fiber-optics involves the following basic steps: Creating the optical signal involving the use of a transmitter, relaying the signal along the fiber, ensuring that the signal does not become too distorted or weak, receiving the optical signal, and converting it into an electrical signal.

High Definition Television

HDTV (high definition television) is a television display technology that provides picture quality similar to 35 mm. movies with sound quality similar to that of today's compact disc. Some television stations have begun transmitting HDTV

broadcasts to users on a limited number of channels. HDTV generally uses digital rather than analog signal transmission. However, in Japan, the first analog HDTV program was broadcast on June 3, 1989. The first image to appear was the Statue of Liberty and the New York Harbor. It required a 20 Mhz channel, which is why analog HDTV broadcasting is not feasible in most countries. HDTV and standard definition television (SDTV) are the two categories of display formats for digital television (DTV) transmissions, which are becoming the standard. HDTV provides a higher quality display with a vertical resolution display from 720p to 1080i. The p stands for progressive scanning, which means that each scan includes every line for a complete picture, and the i stands for interlaced scanning which means that each scan includes alternate lines for half a picture. These rates translate into a frame rate of up to 60 frames per second, twice that of conventional television. One of HDTV's most prominent features is its wider aspect ratio (the width to height ratio of the screen) of 16:9, a development based on research showing that the viewer's experience is enhanced by screens that are wider. HDTV pixel numbers range from one to two million, compared to SDTV's range of 300,000 to one million. New television sets will be either HDTVcapable or SDTV-capable, with receivers that can convert the signal to their native display format. In the United States, the FCC has assigned broadcast channels for DTV transmissions. In SDTV formats, DTV makes it possible to use the designated channels for multiple signals at current quality levels instead of single signals at HDTV levels, which would allow more programming with the same bandwidth usage. Commercial and public broadcast stations are currently deciding exactly how they will implement their use of HDTV.

Very Small Aperture Terminal

VSATs could be described as earth stations that share satellite resources among a large number of similar terminals. Individual VSAT terminals typically have small aperture sizes, transmit at relatively low equivalent isotropically radiated power (e.i.r.p.) levels, and use relatively small equipment that allows flexible installation of a satellite network earth station directly at a wide variety of user locations and platforms. Technical and operational characteristics of VSATs are provided below.

2.2 Operational characteristics of VSATs

Some of the advantages of VSAT operational characteristics are: – local supervision of the terminal is not required; – allows for efficient use of shared satellite resources; – performance of the station is remotely monitored by a VSAT network control centre; – deployment in a geographical area without restrictions on installation density; – so as to ensure the VSAT is operating with the correct satellite and frequency, the VSAT transmitter can only be enabled after having received authorization to do so via a signal from the VSAT network control centre. As a consequence of these characteristics, many administrations around the world allow blanket licensing or simplified licensing procedures to allow quick deployment and easy operation of VSAT networks.

Technical characteristics of VSATs Technical characteristics of VSATs are: –

- while most VSAT networks make use of a star topology where a large hub is at the centre of the star which communicates with remotes, other topologies are possible
- dynamic assignment of satellite capacity to accommodate variable demand by a VSAT
- capability that allows compatibility with closely spaced satellites
- capability of VSAT to dynamically adapt to changing channel conditions in order to improve link reliability by manipulation of the station's characteristics such as signal parameters, data rate and power
- typically designed so as to be able to carry TCP/IP traffic.

The VSAT may also be designed to carry other multimedia applications

- may make use of air interfaces appropriate for satellite communications (DVB-S2, DVB-RCS, etc.) which allow very diverse coding and modulation techniques corresponding to the most effective information technologies
- typically operated in the 4/6 GHz, 11-12/14 GHz and 20/30 GHz frequency bands
- suitable for applications involving frequent relocation given the developments in control and monitoring function

Digital TV

Digital TV's roots have been tied very closely to the availability of inexpensive, high performance computers. It wasn't until the 1990s that digital TV became a real possibility. In the mid-1980s as Japanese consumer electronics firms forged ahead with the development of HDTV technology, and as the MUSE analog format proposed by NHK, a Japanese company, was seen as a pacesetter that threatened to eclipse U.S. electronics companies. Until June 1990, the Japanese MUSE standard—based on an analog system—was the front-runner among the more than 23 different technical concepts under consideration. Then, an American company, General Instrument, demonstrated the feasibility of a digital television signal. This breakthrough was of such significance that the FCC was persuaded to delay its decision on an ATV standard until a digitally based standard could be developed. In March 1990, when it became clear that a digital standard was feasible, the FCC made a number of critical decisions. First, the Commission declared that the new ATV standard must be more than an enhanced analog signal, but be able to provide a genuine HDTV signal with at least twice the resolution of existing television images. Then, to ensure that viewers who did not wish to buy a new digital television set could continue to receive conventional television broadcasts, it dictated that the new ATV standard must be capable of being "simulcast" on different channels. The new ATV standard also allowed the new DTV signal to be based on entirely new design principles. Although incompatible with the existing NTSC standard, the new DTV standard would be able to incorporate many improvements. The final standard adopted by the FCC did not require a single standard for scanning formats,

aspect ratios, or lines of resolution. This outcome resulted from a dispute between the consumer electronics industry (joined by some broadcasters) and the computer industry (joined by the film industry and some public interest groups) over which of the two scanning processes—interlaced or progressive—is superior. Interlaced scanning, which is used in televisions worldwide, scans even-numbered lines first, then odd-numbered ones. Progressive scanning, which is the format used in computers, scans lines in sequences, from top to bottom. The computer industry argued that progressive scanning is superior because it does not "flicker" in the manner of interlaced scanning. It also argued that progressive scanning enables easier connections with the Internet, and is more cheaply converted to interlaced formats than vice versa. The film industry also supported progressive scanning because it offers a more efficient means of converting filmed programming into digital formats. For their part, the consumer electronics industry and broadcasters argued that interlaced scanning was the only technology that could transmit the highest quality pictures then (and currently) feasible, i.e., 1,080 lines per picture and 1,920 pixels per line. Broadcasters also favored interlaced scanning because their vast archive of interlaced programming is not readily compatible with a progressive format. Digital television transition started in the late 2000s. All the governments across the world set the deadline for analog shutdown by the 2010s. Initially the adoption rate was low. But soon, more and more households were converting to digital televisions. The transition is expected to be completed worldwide by mid to late 2010s.

Direct To Home (DTH)

Direct-broadcast satellite (DBS) is a type of artificial satellite which usually sends satellite television signals for home reception.[1] The type of satellite television which uses direct-broadcast satellites is known as direct-broadcast satellite television (DBSTV) or direct-to-home television (DTHTV).[2] This has initially distinguished the transmissions directly intended for home viewers from cable television distribution services that are sometimes carried on the same satellite. The term DTH predates DBS and is often used in reference to services carried by lower power satellites which required larger dishes (1.7 m diameter or greater) for reception.[citation needed] In Europe, prior to the launch of Astra 1A in 1988, the term DBS was commonly used to describe the nationally commissioned satellites planned and launched to provide television broadcasts to the home within several European countries (such as BSB in the United Kingdom and TV-Sat in Germany). These services were to use the D-Mac and D2-Mac format and BSS frequencies with circular polarization from orbital positions allocated to each country. Before these DBS satellites, home satellite television in Europe was limited to a few channels, really intended for cable distribution, and requiring dishes typically of 1.2m. SES launched the Astra 1A satellite to provide services to homes across Europe receivable on dishes of just 60-80 cm and, although these mostly used PAL video format and FSS frequencies with linear

polarization, the DBS name slowly came to applied to all Astra satellites and services too.

Convergence of Technologies

Technological convergence is the tendency that as technology changes, different technological systems sometimes evolve toward performing similar tasks. Digital convergence refers to the convergence of four industries into one conglomerate, ITTCE (Information Technologies, Telecommunication, Consumer Electronics, and Entertainment). Previously separate technologies such as voice (and telephony features), data (and productivity applications), and video can now share resources and interact with each other synergistically. Telecommunications convergence, network convergence or simply convergence are broad terms used to describe emerging telecommunications technologies, and network architecture used to migrate multiple communications services into a single network.[1]

Specifically this involves the converging of previously distinct media such as telephony and data communications into common interfaces on single devices, such as most smart phones can make phone calls and search the web. The rise of digital communication in the late 20th century has made it possible for media organizations (or individuals) to deliver text, audio, and video material over the same wired, wireless, or fiber-optic connections. At the same time, it inspired some media organizations to explore multimedia delivery of information. This digital convergence of news media, in particular, was called "Mediamorphosis" by researcher Roger Fidler, in his 1997 book by that name. Today, we are surrounded by a multi-level convergent media world where all modes of communication and information are continually reforming to adapt to the enduring demands of technologies, "changing the way we create, consume, learn and interact with each other". Convergence in this instance is defined as the interlinking of computing and other information technologies, media content, and communication networks that has arisen as the result of the evolution and popularization of the Internet as well as the activities, products and services that have emerged in the digital media space. Many experts[who?] view this as simply being the tip of the iceberg, as all facets of institutional activity and social life such as business, government, art, journalism, health, and education are increasingly being carried out in these digital media spaces across a growing network of information and communication technology devices. Also included in this topic is the basis of computer networks, wherein many different operating systems are able to communicate via different protocols. This could be a prelude to artificial intelligence networks on the Internet eventually leading to a powerful superintelligence[via a technological singularity. Convergent services, such as VoIP, IPTV, Mobile TV, Smart TV, and others, tend to replace the older technologies and thus can disrupt markets. IP-based convergence is inevitable and will result in new service and new demand in the market