Chapter III

ELECTRONIC MEDIA

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3.1 INTRODUCTION

At the end of the nineteenth century and the beginning of the twentieth century, communication moved from static, written forms to dynamic electronic forms. The telegraph, telephone, record player, radio and movies all hit the communication spectrum and transformed how we communicate. Before the advent of writing, communication was primarily oral. Speakers spoke and hearers heard. Moving to electronic media was actually a shift back to the oral communication that humanity started with. The pace and structure of communication shifted as well. Books are, of necessity, linear. They depend on a flow of thought and a logical process. Engaging in understanding books meant that human brains were re-wired to think in linear, logical patterns. But when communication shifted to a dynamic, emotional process that is a part of the oral communication culture, brains were re-wired again to process information from that perspective.

Moving to electronic media at the beginning of the twentieth century made the communication faster and ubiquitous, but it kept the content firmly in the control of the people who could afford to produce it. The power structures shifted slightly, but only so far as to be able to incorporate the new players in places like Hollywood. There was no dissemination of power, just the accrual to different wealthy people. At the end of the twentieth century, with the invention of the internet, all of that began to change.

Electronic media are ubiquitous in most of the developed world. As of 2005, there are reports of satellite receivers being present in some of the most remote and inaccessible regions of China. Electronic media devices have found their way into all parts of modern life. The term is relevant to media ecology for studying its impact compared to print media and broadening the scope of understanding media beyond a simplistic aspect of media such as one delivery platform aside from many other options. The term is also relevant to professional career development regarding related skill sets.

In its literature definition, electronic media has been identified as a pipe-line: a carrier of messages that includes electronic text, voice and even visual channel components. (Griffith &Northcraft, 1994).Electronic mediaincludes all types of electronic equipment, such as telephones, computers, computer peripherals, photocopy machines, fax machines, computer software, laptops, voice mail, electronic mail (e-mail), Internet access, World Wide Web access, online information service, and any other electronic type of equipment.

The electronic media has a profound impact on our daily life and the future of local and global communities. Electronic media is anything that is used to advertise or promote that is run by electricity.

Electronic media is widely understood as media that useselectronics or electromechanical energy for the end user (audience) to access the content. This is in contrast to static media (mainly print media), which today isalso most often created electronically, but does not require electronics to be accessed by the end user in the printed form. The primary electronic media sources familiar to the general public are video recordings, audio recordings, multimedia presentations, slide presentations, CD-ROM and online content. Most new media are in the form of digital media. However, electronic media may be in either analog electronicdata or digital electronicdata format. Although the term is usually associated with content recorded on a

storage medium, recordings are not required for live broadcasting and online networking.Any equipment used in the electronic communication process (e.g. television, radio, telephone, desktop computer, game console, handheld device) may also be considered electronic media.

Electronic media has advantages as well as disadvantages. The advantages are:

1. Quick communication – electronic media are known for quicker communication.
2. Memorizing effect – message in a pictorial form may long last in the mind.
3. Understanding at a glance – visual techniques like pictures and slides enable the observer to concentrate on them to understand at a glance.
4. Dynamic – the subject matter of communication may continuously be changing based on activities, work and correspondence.
5. Bird's eye view – charts, graphs, slides and other visual aids give a bird's eye view of a given text of a subject matter shown at appropriate time and spot.
6. More revealing and appealing – electronic media are more revealing and appealing to the eyes.
7. Comparison – charts and graphs depicting data for various years so that theyfacilitate easy comparison.
8. Stimulating – they can often generate
9. Saving time – electronic media save a lot of time as very little effort is sufficient to grasp to draw meaning-full inferences.
10. Audience participation – the participatory approach in communication can be achieved through visual media.[1]

3.2 DIFFERENT ELECTRONIC MEDIA

Electronic media will be classified and studied in details as radio, FM radio, television and cable television only.

3.2.1 RADIO

The early history of radio is the history of technology that produced radio instrumentsusing radio waves. Within the timeline of radio, many people contributed theory and inventions to what became radio.Radio development began as "wireless telegraphy". Later radio history increasingly involves matters of programming and content. In 1894 the Italian inventor,Guglielmo Marconi built the first complete, commercially successful wireless telegraphy system based on airborne Hertzian waves (radio transmission).Marconi demonstrated the application of radio in military and marine communications and started a company for the development and propagation of radio communication services and equipment. The invention of amplitude-modulated (AM) radio, so that more than one station can send signals (as opposed to spark-gap radio, where one transmitter covers the entire bandwidth of the spectrum) is attributed to Reginald Fessenden and Lee de Forest. On Christmas eveof 1906, Reginald Fessenden used an Alexanderson alternator and rotary spark-gap transmitter to make the first radio audio broadcast, from Brant Rock, Massachusetts. Ships at sea heard a broadcast that included Fessenden playing *O Holy Night* on the violin and reading a passage from the Bible.

The history of radio can be traced back to the earliest radio transmission in 1915 by universities to disseminate news. The first radio station was set up in Pittsburg, New York and Chicago in the 1920's to broadcast election news, sporting events and opera performances. (Kumar J Keval, 2011). In the mid- 1923 as many as 450 stations sprouted across the United States – all run by a pool of amateurs. These stations were later connected by AT & T to form the

National Broadcasting Company (NBC) in 1926. The following year, a number of independent stations clubbed together to form a second national network, the Columbia Broadcasting System (CBS). The public service radio network, National Public Radio (NPR) was established much later. In Britain and in Europe, however, radio broadcasting was felt to be much too important mass medium to be left to private profit oriented companies. Public service broadcasting supported by taxes or license feesrather than advertising oriented commercial broadcasting found widespread favor.[2]

3.2.1.1 RADIO IN INDIA

Broadcasting was introduced in India by amateur radio clubs in Calcutta, Bombay, Madras and Lahore, though even before the clubs launched their ventures, several experimental broadcasts were conducted in Bombay and other cities. TheTimes of India records that a broadcast was transmitted from the roof of its building on August 20, 1921. However, the first license granted for transmitting a broadcast was given only on February 23, 1922. The radio Club of Calcutta was perhaps the first amateur radio club to start function in November 1923, followed by the Madras Presidency Radio Club which was formed on May 16, 1924 and began broadcasting on July 31. Financial difficulties forced the clubs to come together in 1927 to form the Indian Broadcasting Company Ltd a private company, fired by the financialsuccess of European Broadcasting.

The government run broadcasting set up was called the Indian State Broadcasting Service (ISBS) which was later turned into All India Radio (AIR) in June 1936. Lionel Fielden became the first Controller of Broadcasting. The first daily news bulletin was introduced in 1936.

All India Radio was transferred to the Department of Information and Broadcasting in 1946 and it remained with that Department/Ministry until September 1997 when the

PrasarBharati(Broadcasting Corporation of India) an autonomous statutory body was constituted under the PrasarBharati Act (1990).

On the eve of independence, AIR was yet to have a truly national network. With only six stations located at Delhi, Bombay, Calcutta, Madras, Lucknow and Tiruchirapalli and four stations in the princely states of Mysore, Travancore, Hyderabad and Aurangabad, a mere 18 transmitters and the number of receiver sets at just 250,000 for a population exceeding 325 million, drastic steps were called for.

All India Radio (AIR) has been serving to inform, educate and entertain the masses since its inception, truly living up to its motto – 'BahujanHitaya,BahujanSukhaya'.

All India Radio strives to:-

a) Uphold the unity of the country and the democratic values enshrined in the constitution.

b) Present a fair and balanced flow of information of national, regional, local and international interest, including contrasting views, without advocating any opinion or ideology of its own.

c) Promote the interest and concerns of the entire nation, being mindful of the need for harmony and understanding within the country and ensuring that the programmes reflect the varied elements which make the composite culture of India.

d) Produce and transmit varied programmes designed to awaken, inform, enlighten, educate, entertain and enrich all sections of the people.

e) Produce and transmit programmes relating to developmental activities in all their facets including extension work in agriculture, education, health and family welfare and science and technology.

f) Serve the rural, illiterate and under-privileged population, keeping in mind the special needs and interest of the young, social and cultural minorities, the tribal population and those residing in border regions, backward or remote areas.

g) Promote social justice and combat exploitation, inequality and such evils as untouchability and narrow parochial loyalties.

h) Serve the rural population, minority communities, women, children, illiterate as well as other weaker and vulnerable sections of the society.

i) Promote national integration.[3]

Growth of Radio Network since Independence:

Year	Number of Centres	Estimated number of Radio Receivers (in Millions)
1947	10	0.2
1951	21	0.7
1961	30	2.2
1971	65	12.8
1985	86	35.0
1986	90	50.0
1987	93	65.0
1988	94	80.0
1989	97	90.0
1990	105	100.0
1991	110	111.0
1995	177	115.0
2005	210	120.0
2007	219	132.0

Source: *Kumar Keval J (2011)"Mass Communication in India"*

Radio programmes may be classified into two broad groups:

1. Spoken words programmed, which include news bulletins, talks, discussions, interviews, educational programmes for schools and colleges, specific audience programmes directed at women, children, rural and urban listeners, drama, radio features and documentaries.

2. Music programmes which include disc jockey programmes, countdown shows, musical performances of all types and variety programmes called magazine programmes.

The major sources of AIR's programmes are in-house productions, outside productions, sponsored programmes and programmes obtained under the Cultural Exchange and programmes Exchange Service, apart from those programmes available on commercial records, audio cassettes, CD and DVD. A small number of programmes are obtained from SAVE (the SAARC) Audiovisual Exchange). However, forits news bulletins AIR is dependent on PTI and UNI for national and regional news, and to Reuters, Associated Press, AFP and other multinational news agencies for its foreign news coverage. The multinational news agencies route their copy via the national news agencies.

Music programmes on All India Radio (1992)

Music (excluding VividhBharati	Percentage with reference to total music (231,050.35 hours)
Classical music	30.15
Folk music	11.56
Light music	21.65
Devotional music	12.86
Film music	19.73
Western music	4.05
Total	100.00

Spoken word Programmes on All India Radio (1992)

Spoken word programmes (excluding VividhBharati)	Percentage with Reference to Total Spoken Word (219,652.37 Hours)
Talks/ Discussions	26.58
Drama	6.97
Religious	0.49
Educational • Women • Rural • Industrial • School/University • Children	 3.67 13.59 2.15 8.15 2.46
Youth	10.33
Tribal	2.76
Armed Forces	3.17
Publicity	6.59
Others	13.09
Total	100.00

Until September 15, 1997, AIR was fully owned, controlled and run by the Central Government. But this was not what founding fathers intended. The Chanda Committee on Broadcasting and Information media said in its report in April, 1966 that 'it is not possible in the Indian context for a creative medium like broadcasting to flourish under a regime of departmental rules and regulations and therefore recommended an 'institutional change' so that AIR can be liberated and separated corporations for Akashvani and Doordarshan. In April 1970, four years later, the Indira Gandhi Government responded stating that 'the present is not an opportune time to consider the conversion of AIR into an autonomous corporation. However, with effect from April 1, 1976, television was separated from AIR and constituted into a new body, Doordarshan.

AIR's home service comprises 413 stations today located across the country, reaching nearly 92% of the country's area and 99.19 % of the total population. AIR originates programming in 23 languages and 146 dialects.

Facts at a glance as on 05.05.2014

1. Broadcasting Centres:		413
a) Full-fledged Stations with Studios: i) Local Radio Stations: ii) Stations with Studios other than LRS: iii) Community Radio Stations:		218 86 127 5
b) Relay Centres: Including 169 Nos. of 100 W FM RelayCentres)		195
Total Stations		413
c) AIR Stations having FM Transmitter (s):		584
d) VividhBharatiCentres:		37
e) Transmitting CentresforExternal services:		11
f) Recording Studio:		1
2. Number of Transmitters:		584
a) Medium Wave		145
b) Short Wave		48
c) FM		391
Total Transmitters:		584
3. Broadcast Coverage		
	By Area (%)	By Population (%)
By Primary Grade Signal MW &FM	92.00%	99.20%

Source: *Kumar Keval J (2011)"Mass Communication in India"*

3.2.2 FM RADIO

In the mid-30s, Major Edwin Armstrong, an inventor who had already devised asuccessful circuit to improve AM radio, came up with a whole new approach totransmitting radio signals.Armstrong was clearly a technical genius. Although his life was cut short, he is stillconsidered the most prolific inventor in radio's history.Even though he had improved AM radio in significant ways, Armstrong was well awareof AM radio's major limitations:

- Static interference from household appliances and lighting
- Limited audio quality (frequency response and dynamic range)
- Night-time interference between many stations (co-channel interference), because of ionosphere refraction, especially in rural areas.

3.2.2.1 FM RADIO IN INDIA

FM Radio was first introduced by All India Radio in 1972 at Madras and later in 1992 atJalandhar.Phase One: In 1993, the government sold airtime blocks on its FM channels in Madras,Mumbai, Delhi, Kolkata and Goa to private operators, who developed their ownprogramme content.

Times FM (now Radio Mirchi) began operations in 1993 in Ahmedabad. 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. In 2000, the government announced the auction of 108 FM frequencies across India.Radio City Bangalore is India's first private FM radio station and was started on July 3, 2001.[4]

Earlier, it is recorded that India's attempts to privatize its FM channels ran into rough weather when private players bid heavily and most could not meet their commitments to pay the government the amounts they owed.

3.2.3 TELEVISION

The history of television comprises the work of numerous engineers and inventors in several countries over many decades.

The first practical demonstrations of television, however, were developed using electromechanical methods to scan, transmit, and reproduce an image. As electronic camera and display tubes were perfected, electromechanical television gave way to all-electronic systems in nearly all applications.

However, if television is defined as the live transmission of moving images with continuous tonal variation, Baird first achieved this privately on October 2, 1925. Till today John Logie Baird is regarded as Father of Television whereas German technician Paul Nipkow is regarded as the inventor of the TV set.

The first commercially made electronic television sets with cathode ray tubes were manufactured by Telefunken in Germany in 1934, followed by other makers in France (1936), Britain (1936), and America (1938). The cheapest of the pre-World War II factory-made American sets, a 1938 image-only model with a 3-inch (8 cm) screen, cost US$125, the equivalent of US$2,020 in 2013. The cheapest model with a 12-inch (30 cm) screen was $445 ($7,200).

3.2.3.1 TELEVISION IN INDIA

Television in India is a huge industry which has thousands of programmes in many languages. The small screen has produced numerous celebrities, some even attaining national fame. More than half of all Indian households own a television.As of 2012, the country has a collection of free and subscription services over a variety of distribution media, like the Cherian channel, through which there are over 823 channels of which 184 are pay channels.(Keval Kumar J, 2011)

Terrestrial television in India started with the experimental telecast starting in Delhi on September 15, 1959 (official launch date) with a small transmitter and a makeshift studio. The regular daily transmission started in 1965 as a part of All India Radio. The television service was extended to Bombay and Amritsar in 1972. Up until 1975, only seven Indian cities had a television service. Television services were separated from radio in 1976. National telecasts were introduced in 1982. In the same year, colour TV was introduced in the Indian market. Indian small screen programming started off in the early 1980s. At that time there was only one national channel Doordarshan, which was government owned. The Ramayana and Mahabharata (both Indian spiritual and mythological stories) were the first major television series produced. This serial notched up the world record in viewership numbers for a single program. By the late 1980s more and more people started to own television sets. Though there was a single channel, television programming had reached saturation. Hence the government opened up another channel which had part national programming and part regional. This channel was known as DD 2 later DD Metro. Both channels were broadcast terrestrially.

PAS-1 and PAS-4 are satellites whose transponders help in the telecasting of DD programmes in half the regions of the world. An international channel called DD International was started in 1995 and it

telecasts programmes for 19 hours a day to foreign countries-via PAS-4 to Europe, Asia and Africa, and via PAS-1 to North America.

TV Programs: The eighties was the era of Doordarshan with shows like Hum Log (1984),Wagle Ki Duniya (1988), Buniyaad (1986–87) and comedy shows like Yeh Jo HaiZindagi (1984), mythological dramas like Ramayan (1987–88) and Mahabharat (1989–90) glued millions to Doordarshan and later on Bharat EkKhoj, The Sword of Tipu Sultan and Chandrakanta. Hindi film songs based programs like Chitrahaar, Rangoli, SuperhitMuqabla, crime thrillers like Karamchand, ByomkeshBakshi. Shows targeted at children include Dada DadikiKahaniyan, VikramAurBetal, Malgudi Days, Tenali Rama.[5]

It is also noted that Prabir Roy had the distinction of introducing colour television coverage in India in February - March (1982) during the firstNehru Cup which was held at Eden Gardens, Kolkata with 5 on-line camera operation, long before Doordarshan started the same during the Delhi Asian Games in November 1982.

Asianet is the first private channel in India and also most popular in India.(Keval Kumar, 2011). The central government launched a series of economic and social reforms in 1991 under Prime Minister NarasimhaRao. Under the new policies the government allowed private and foreign broadcasters to engage in limited operations in India. This process has been pursued consistently by all subsequent federal administrations. Foreign channels like CNN, STAR and private domestic channels such as Zee TV, ETV and Sun TV started satellite broadcasts. Starting with 41 sets in 1992 and one channel, by 1995, TV in India covered more than 70 million homes giving a viewing population of more than 400 million individuals through more than 100 channels.

There are at least five basic types of television in India,broadcast or "over-the-air" television, unencrypted satellite or "free-to-air", Direct-to-Home (DTH), cable television, and IPTV.Over-the-air and free-to-air TV is free with no monthly payments while Cable, DTH, and IPTV require a monthly payment that varies depending on how many channels a subscriber chooses to pay for. Channels are usually sold in groups or a la carte. All television service providers are required by law to provide a la carte selection of channels.[6]

In India television transmission started on an experimental basis in Delhi in 1959 and the commercial services commenced in1965. The television services were expanded to Mumbai and Amritsar in 1972. Seven more cities were covered by 1975 and the 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. (Keval Kumar J, 2011)

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%.

3.2.3.1.1 DOORDARSHAN

Doordarshan is an Indian public service broadcaster, a division of PrasarBharati. It is one of the largest broadcasting organisations in India in terms of the studio and transmitter infrastructure. Recently, it has also started broadcasting on Digital Terrestrial Transmitters. On 15 September 2009, Doordarshan celebrated its 50th anniversary. 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 provides 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 make shift studio. The regular daily transmission started in 1965 as a part of All India Radio. Doordarshan began a five-minute news bulletin the same year.

Doordarshan (DD) is country's Public Service Television and has the distinction of being one of the world's largest terrestrial networks. DD is the biggest media organization in the country covering over 90.1 % of its population and 78.2 % of its area. Doordarshan operates 24 channels – four All India channels, eleven regional languages satellite channels, eight Hindi belt networks and one international channel.

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 April 1, 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. KrishiDarshan was the first program telecast on Doordarshan. It commenced on January 26, 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 nearly 1,400 terrestrial transmitters. There are about 46 Doordarshan studios producing TV programmes today.

Doordarshan has a three-tier programme service – national, regional and local. The national programme includes news, current affairs, science, cultural magazines, sports, music, dance, drama, serials and feature films. The regional programmes carried on all the transmitters in the different states of India also deal with similar programmes, but in the language and idiom of the particular region/state. The local programmes are area specific and cover local issues featuring local people. National and regional programme services of Doordarshan are also available on satellite and DTH.

Doordarshan operates 21 channels – two All India channels – DD national and DD News, 11 regional language satellite channels (RLSC), four state networks (SN), an international channel, a sports channel DD sports and two channels RajyaSabha TVandLokSabha TV for live broadcast of parliamentary proceedings.On DD National aka (DD-1), regional programs and local programs are carried on time-sharing basis. DD news channel, launched on November 3, 2003, which replaced the DD metro formally known as (DD-2) Entertainment channel, provides 24-hour news service.

The regional languages satellite channels have two components – The regional service for the particular state relayed by all terrestrial transmitters in the state and additional programs in the regional language in prime time and non-prime time available only through cable operators. DD-Sports channel is exclusively devoted to the broadcasting of sporting events of national and international importance. This is the only sports channel which telecasts rural sports like kho-kho, kabbadiand others something which private broadcasters will not attempt to telecast as it will not attract any revenue.[7]

3.2.4 CABLE TELEVISON

Cable television is a system of broadcasting television programmes to paying subscribers via radio frequency (RF) signals transmitted through coaxial cables or light pulses through fiber-optic cables. This contrasts with traditional terrestrial television, in which the television signal is transmitted over the air by radio waves and received by a television antenna attached to the television. FM radio programming, high-speed Internet, telephone service, and similar non-television services may also be provided through these cables.

The abbreviation CATV is often used for cable television. It originally stood for *Community Access Television* or *Community Antenna Television*, from cable television's origins in 1948: in areas where over-the-air reception was limited by distance from transmitters or mountainous terrain, large "community antennas" were constructed, and cable was run from them to individual homes. The origins of cable *broadcasting* are even older as radio programming was distributed by cable in some European cities as far back as 1924.[8]

In order to receive cable television at a given location, cable distribution lines must be available on the local utility poles or underground utility lines. Coaxial cable brings the signal to the

customer's building through a service drop, an overhead or underground cable. If the subscriber's building does not have a cable service drop, the cable company will install one. The standard cable used in the U.S. is RG-6, which has a75 ohm impedance, and connects with a type F connector.

The cable company's portion of the wiring usually ends at a distribution box on the building exterior, and built-in cable wiring in the walls usually distributes the signal to jacks in different rooms to which television set are connected. Multiple cables to different rooms are split off the incoming cable with a small device called a splitter.[9]

3.2.4.1CABLE TELEVISION IN INDIA

Cable TV was started in India during seventies mainly in metros. During this period, the TV services were provided only by Doordarshan 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.

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 and other programmes. 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 (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.

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:

1. Restructuring of Cable Industry with a larger role for MSOs and digitalization plan within five years.
2. Head end in the Sky (HITS) policy to be announced by government, TRAI completes all recommendations on this.
3. DTH policy on tariff and quality of services.
4. New recommendations on FDI policy in cable- upto74 % by TRAI.
5. Internet telephony allowed for ISP.
6. Cable broadband focus with easier Right of Way (RoW) and Wireless possibilities.
7. Non CAS tariff regulations for TV subscribers.

8. Cable companies can provide IPTV. Recommendations cleared by Government. MSOs can consider this opportunity, marketwise.
9. Ala carte choice of channels by MSOs from broadcasters in non CAS.
10. New Television Rating Points (TRP), Television Audience Measurement (TAM) policy by TRAI.
11. MVNO policy announced.
12. Greater emphasis laid on network digitization, increased addressability and to encourage voluntary CAS.
13. Incentives prescribed to Multi System Operators (MSOs) to introduce total digitized networks.
14. The registration for cable TV operator to be replaced by a comprehensive and supportive licensing framework.
15. Separate licensing frameworks for Cable TV operators (LCOs) and Multi System Operators (MSOs).
16. Eligibility criterion made specific to identify the entities who can act as LCOs and MSOs.
17. Option and flexibility to choose Service area given both to LCOs and MSOs.
18. CAS extension to the remaining three metros and subsequently followed by digitalization of 55 cities within a span of 3 years (with addressability). (Kumar Keval J, 2011)

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.

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 aftersales 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 the US, cable has a 70% market share within inhome 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.

The launch of Star TV and ZeeTV further fuelled the spread of cable TV. In the first half of 1992, almost 4,500 households were being cabled up daily. That figure increased to 9,450 homes daily in the second half of the year, according to a study conducted by market research firm - Frank Small for Star TV: on how many homes could receive its service. (If one considers that almost all Indian cable homes can receive Star TV because it shares the same platform as Zee TV then the numbers would be a fair representation of the total number of C&S homes at that time because Zee TV has almost 100% penetration in cable homes.) From a mere 412,000 urban households in January 1992, the number of cable homes went up to 1.2 million by November 1992. The number of homes estimated in 1993 was 3.3 million according to the Frank Small study. This is estimated to have gone up to 7.3 million, by January 1994, according to one estimate. Frank Small once again surveyed the market in end-1994 and the firm placed the number of cable and satellite homes at 11.8 million out of a total of 32.4 million TV owning homes.

Subsequently, no extensive research was conducted by the industry which went by guesstimates until two readership surveys were conducted in 1995. The two national readership surveys: the Indian Readership Survey and the National Readership Survey pegged the penetration of C&S at below 10 million in 1995 whereas industry estimates placed it at least 14 million. The NRS said that 9.3 million homes in urban India were cabled while the IRS said that the numbers for urban and rural India were 8.4 million and 3.4 million respectively.

No further updates have been done because of the magnitude of the research covering a population of almost 70 million TV homes today. Nevertheless, the satellite TV industry has upped its estimate for C&S homes to about 22 million now attributing the increase to the spread of the cable TV networks in smaller towns, villages and untapped developing areas on the outskirts of major metros, where cable TV is being installed in housing at the time of construction itself.

Cable TV growth in urban India

Year	**Number of households Cabled**
January 1992	412,000 *
November 1992	1.2 million *
1993	3.3 million *
January 1994	7.4 million
End-1994	11.8 million *
1995	15 million
1996	18 million
1999	22 million

*Frank Small studies; the rest are industry estimates.

The growth of cable TV household:-

Year	Household	Year	Household
1984	100	1996	22,000,000
1985	450	1997	27,000,000
1986	80	1998	32,000,000
1988	1200	1999	39,000,000
1989	2000	2000	40,000,000
1990	4000	2002	43,000,000
1991	6000	2003	48,000,000
1992	15,000	2004	50,000,000
1993	125,000	2005	55,000,000
1994	130,000	2006	60,000,000
1995	18,000,000	2007	70,000,000

Sources: *INFA Yearbook, 2000- 2001:V.C Khare "Cable TV Scenario in India". Paper presented at International Broadcasting Cable and Satellite Conferences, October 1993; FICCI-PwC Report – 2008.*

The business has undergone a transformation too. In the beginning it was small and driven by entrepreneurs. At one time the cable TV operator's population was estimated at a sky high 100,000. For the past three years, large companies have also set up their own cable networks. Among them: InCablenet (managed by the Hinduja group), Siticable (a joint venture between Zee TV promoter Subhash Chandra and Rupert Murdoch's News Television), Asianet, Hathway Cable &Datcom, Ortel Communications and RPG Netcom (a company promoted by the RPG group). While the Hindujas claim to have invested close to Rs 2000 million into their network building, Siticable talks of a higher figure of close to Rs 2500 million. But the MSOs have concentrated on the major metros only. They have yet to spread out into the smaller towns and the interiors of India over time where cable TV networks are still in the hands of small businessmen.

International cable networking companies such as United International Holdings, TCI and Falcon Cable of the US, have tested the waters: While UIH almost set up a joint venture with the RPG group which did not fructify, TCI/Time Warner discussed possibilities with The Times of India group which were inconclusive. Falcon Cable, however, was successful in establishing a joint venture with The Hindustan Times publishing group in New Delhi called India Information Technologies Ltd. An investment of nearly Rs 50 million was made to buy over a few small cable TV networks. The company however did not take charge of the networks, leaving them to be run by the cable operators. The joint venture was in litigation for quite sometime and finally Falcon Cable had to wash its hands off it. International investors and cable TV networks are still place hope in the Indian cable TV market. United International Holdings is in partnership with liquor group UB. Falcon Cable and Cox Communications are meanwhile waiting for some semblance of order in this industry before committing further resources.

The entry of the big boys in the business led to consolidation amongst smaller operators several of whom combined their resources to set up sophisticated headbands capable of delivering 30-50 channels similar to the bouquet of the MSOs. And as the MSOs increased the number of channels that they were offering, the independents have also kept pace. Today, in cities like Mumbai, Indian viewers can hook into more than 100 channels. Some of the major agglomerations that emerged initially were: Seven Star and Shree Bhawani in Mumbai, Malleswaram Cable Network and UCN in Bangalore, SkyVision in Ahmedabad. By 1999, one of them had partnered with the fast moving Hathway Cable &Datacom. But they all operate on the similar model: franchising of their cable TV feed to smaller operators.

The programming that cable TV offers ranges from Hindi films to local events like fairs, religious discourses, civic elections, regional news, community games such as Bingo and favorite local sports.

Practically, every network has at least two cable channels -sometimes both of which screen Hindi movies and songs. At one time they also screened pirated or illegal versions of English movies. This ceased with the Motion Picture Association of America (MPAA) cracking down heavily on these cable operators. But piracy keeps cropping up on cable TV networks the moment the pressure is eased. The larger cable TV networks have their own branded channels too: Siticable has SitiCinema.;InCable has CVO while Hathway has C-News.

That the programming on these cable channels is extremely popular is evident from the audience share they manage to garner. They rank second after DD on this parameter in all cities. As an example cable TV accounted for close to 11.7% of share of the audience in Delhi in 1996 during prime time on Sunday evenings, and 8.4% on weekdays. The numbers for the other cities were 8.4% and 4.6% for Chennai and Mumbai on Sunday evenings and 6.4% for weekdays in Mumbai during prime time. However, they cannot really attract advertising to the extent of their viewership because of the fragmented nature of the cable networks and there being no central body to work as a channelising agent for the thousands of networks in a city. Cable channels attract no more than Rs 250-300 million advertising annually, according to back-of-the-envelope calculations by one of the large MSOs. But the potential is enormous: some even quote the annual ad revenue potential being in the region of some Rs 1200 million, if some efforts are made.

STATEWISE PENETRATION OF CABLE & SATELLITE TV (1995)

State	Penetration (%)
Gujarat	58
Andhra Pradesh	45
Tamil Nadu	41
Karnataka	41
Madhya Pradesh	37
Punjab	34
Maharashtra	33
Orissa	31
Bihar	28
Harayana	27

Source: IMRB study for Sony Entertainment Television

3.3 CODES, COMMITTEES AND RECOMMENDATION FOR BROADCAST MEDIA.

3.3.1Code to control the broadcast media

The AIR Code which also applies to Doordarshan, was adopted in 1968 and revised in 1970 clearly states that broadcasts on All Indian Radio by individuals will not permit the following:

i. Hostile criticism of any state or the centre,

ii.Attack on religion or communities,

iii. Criticism of friendly countries,

iv. Incitement to violence or anything against maintenance of law and order,

v. Attack on political parties by name,

vi. Anything obscene or defamatory,

vii. Aspersion against the integrity of the President, Governors and Judiciary,

viii. Anything showing disrespect to Constitution or advocating changein the constitutionby violence; but advocating changes in constitutional way should not be debarred.[10]

The above code allows an objective discussion of various policies pursued by a government orpolitical party. Since 1977, air time is allotted to political parties for broadcasting prior to national and state elections (Kumar, 1989). Besides the AIR Code, there are some conventions observed by both All India Radio and Doordarshan. These are - appeal for funds are disallowed except in national emergencies; exclusion of trade names in broadcasts which amounts to advertising directly and direct publicity is not permitted for or on behalf of an individual or organization which is likely to benefit only that individual or organization.

3.3.2 ChandaCommittee

On 15 March, 1948, Prime Minister JawaharlalNehru said that he was in favor of a broadcasting set up, approximating as far as possible to the British Model of BBC. Later, when Mrs. Indira Gandhi became Minister for Information and Broadcasting she appointed a Committee on Broadcasting and Information media with A.K.Chanda, a former Auditor General as Chairman. The committee was set up against the backdrop of Sino-India war of 1962 in which the inadequacy of broadcasting was realized and there were organizational problems in the AIR structure. This Committee was constructed in December 1964 and presented the report on Television and Radio in April 1966. They observed it is not possible in the Indian context for a creative medium like broadcasting to flourish under a regiment of departmental rules and regulations. It is only by an institutional change that AIR can be liberated from the current financial and administrative procedures of government. They also recommended among other things the setting up of two autonomous corporations for radio and Television. However, it was not acceptable to the government. Mrs. Gandhi was of the opinion

that it is important that the Channels should not be subject to political and economic control which would constrain the flow of information. The government further argued that as the press and films were in the private sector, radio and television must remain with the government to build its images. In December 1969, the Cabinet considered the recommendations of Chanda Committee and conveyed to the *LokSabha*in April 1970 that "it was agreed that the present is not an opportune time to consider the conversion of the AIR into an autonomous corporations." The second recommendation for the separation of Doordarshan from AIR was accepted and implemented from 1 April, 1976, making Doordarshana separate organization within the parameters of the Ministry of Information and Broadcasting. (Kumar, 1989)

3.3.3 Verghese Committee

The electronic media is so powerful that autonomy to this media group has been under debate since broadcasting started in India. As per the Indian Constitution, Broadcasting together with Posts and Telegraphs, Telephones, Wireless and other forms of communication are in the Union List and are the exclusive responsibility of the Union or Central Government (Chatterji, 1987). Submitting its report on autonomy, the Verghese committee recommended a single National Broadcasting Trust (NBT) instead of autonomous regional corporations or even a federation of State government corporations. According to Duggal (1983), the Verghese Committee recommended that the freedom of the press and Broadcasting is derived from Article 19(1) (a) of the Constitution which guarantees freedom of speech and expressions to every citizen. When the Congress government came to power, they announced that Radio and TV would continue to function as departments of government. However, many political thinkers and media experts view government's control as monopoly over the media. The constitution gives the government the right to control, but not the right to monopoly over the media (Mitra, 1986). Autonomy for

broadcasting is a critical issue. In countries where illiteracy is not a problem, people can receive information through the media with objectivity. This is a different story in India, especially in the rural areas, which are backward in all aspects. Even though full autonomy was given to broadcast media in some developed countries, there is constant check on their functioning fromtime to time. It is doubtful to leave the electronic media in the hands of a vested few in the name of autonomy.

3.3.4 Bhagavantam andParthasarathi Committee

The Ministry of Information and Broadcasting in June 1965 set a technical committee of which S. Bhagavantam was the Chairman. Priorities were given to report on the technical aspects of development of television network in India; organizational and financial aspects involved with the production of world class TV service. The Committee examined the 25-year master plan drawn up by IR. It also recommended a two-stage development of Television service – ½ KW pilot transmitters and high power transmitters at limited places in the country. The ParthasarathiCommittee has made recommendation regarding what should be the news policy for broadcast media and the Government has accepted it. This news policy provides that distinction should be made between news and views. The Committee recommended that factual and objective reporting along with news making views should only be included in news bulletins. Doordarshan has been directed to show attractive news and current affairs programs, emphasizing on the quality of news presentation with improved visual and professionalism.

3.3.5 Vardan Committee

Vardan Committee was appointed by the government of India in 1991 to study the relevance of cable TV invasion. The committee observed some disturbing implications of this development. The

committee pointed out that no country can sit back passively and let some foreign agency decide what kind of programs should be broadcast to the people of the country. At the same time, it is neither desirable nor feasible to stop these transmissions or completely ban their reception. The committee further recommended arrangements to be made under which the programs put by the licenses are continuously monitored to ensure the prescribed guidelines are not violated. It suggested that a single autonomous body known as the Broadcasting Council of India (BCI) envisaged under the PrasarBharati Bill is assigned the task of laying down guidelines and monitoring the quality of programs, find out warnings and suggests punitive actions in cases of violation of the guidelines. (Kumar, 1989) Subsequently, the Government of India introduced legislation in the Parliament in August 1993. This Bill provided for a registering authority, resources to the program code and theadvertisementcode, to be framed under the Act.

3.3.6 Communication Convergence Bill of 2001

This bill aims to provide a choice of services to the people with a view to promoting plurality of news, views and information. It also facilitates development of national infrastructure for an information based society. This bill will work for the promotion, development and regulation of the carriage and content of communications (including broadcasting, telecommunication, and multimedia), for the establishment of an autonomous commission to regulate all forms of communications, and for setting up of an Appellate Tribunal and to provide for matters connected with it.

3.4 India's Copyright Act

India's Copyright Act of 1957 was amended in 1994 and later in 1999 to comply with the demands of TRIPS which incorporated all the principles and practices laid down in the Rome Conventions of 1961 and 1971 respectively, as well as the subsequent Paris Convention in

1971. Moreover, institutes to administer the demands of the Act were established in the form of the Copyright Office, the Registrar and Deputy Registrar of Copyrights, and the Copyright Board(Sections 9-11). India promulgated the International Copyright Order(1991) which was subsequently superseded by the International Copyright Order (1999) in pursuance of the Berne Convention where the member countries agreed to extend protection of copyright to areas beyond the territorial limits of nations.

Further, the amendments made in the Copyright Act in 1999 in Chapter VIII ('Rights of Broadcasting Organizations and of Performers') extended the provisions to certain other countries provided there were reciprocal provisions in those countries. At the same time, the provisions provided for the empowerment of the Central Government to restrict the rights of foreign broadcasting organizations and performers if they failed to give adequate protection to rights of broadcasting organizations or performers. The Government of India has also established the Copyright Enforcement Advisory Council to enforce IPR all across the country. The penalty for infringement of copyright has been made more stringent with increase in fines and duration of imprisonment.

3.4.1 The Meaning of 'Copyright'

Copyright is generally defined as an 'exclusive right granted to the owner of an original work (e.g. lyrics, movies, computer programs, paintings, designs, logos)for a limited period of time. Copyright is inherent not in ideas but rather in the unique expression of ideas. Copyright offers a legal protection granted to an artist or creative writer to reproduce, prepare derivative works, distribute, perform and display the work publicly. Interestingly, the Copyright Act (1957) does not attempt to define 'Copyright' but rather describes its various types and spells out at great length what constitutes or does not constitute 'infringement' of copyright.

There are three types of works in which copyright subsist, according to both TRIPS and the Copyright Act of India, in almost identical terms:

1.Original, literary, dramatic, musical and artistic works. Literary works includes tables, compilations, and computer programs; dramatic works includes plays, staged plays, scripts, recitations, and choreography; and artistic works include painting, sculpture, drawing, comic strips, and photographs.

2.Cinematograph films

3.Sound recordings, such as on tapes, records, disks, perforated rolls.[11]

3.4.2 Adaptations and Derivative Works

Adaptations and derivative works are also protected. For instance, translations, remixes, dramatizations, musical arrangements which can be re-cast, transformed, or adapted. A derivative work consists of,for instance, editorial revisions, annotations, elaborations or other modifications which as a whole represent an original work of authorship.

The Copyright Act (1957) (1.3) offers an elaborate explanation of what 'adaptation' means:

- In relation to a dramatic work,the conversion of the work into a non-dramatic work;
- In relation to a literary work or an artistic work the conversion of the work into a dramatic work by way of performance in public or otherwise;
- In relation to a literary or dramatic work, any abridgement of the work or any version of the work in which the story or action is conveyed wholly or mainly by means of pictures in a form suitable for reproduction in a book, or in a newspaper, magazine or similar periodical;

- In relation to a musical work, any arrangement or transcription of the work; and
- In relation to any work, any use of such work involving its re-arrangement or alternation.[12]

3.4.3 Indian Broadcasting

This section applies directly to practices in Indian broadcasting. Several made-for television films, dramas, soap operas, and documentaries are direct or loose adaptations of dramatic and artistic works. Satyajit Ray's television film, Sadgati, for instance, tells a Premchand short story of the same title; so is Malgudi Days an adaptation of R.K.Narayan's novel. The television serial,The Sword of Tipun Sultan is, based on an historical novel; some soap operas are straight adaptations of Mexican telenovellas, and GovindNihalani'sTamas was based on a novel of the same title. Dubbed, sub-titled and 'remakes' of films and TV serials and game shows in different Indian languages have become the norm in the entertainment industry.

Further, 'clones' or adaptations of successful American and European films and TV shows are quite widespread. The most widely acclaimed of these has been STAR channel's 'KaunBanegaCrorepati?' Intellectual property rights are granted to each new adaptation andto each separate delivery platform (cable, satellite, videos, Cd, DVD). Thus, 'ringtones' on mobiles based on songs or tunes from films, radio and TV are copyright protected.

3.4.4 Rights of Broadcasters

Copyright is granted to both the first and subsequent authors of adaptations or derived works. However, in film and television the adaptation while being protected by copyright is granted to the producer rather than the author. The two main rights that copyright includes areeconomic rights and moral rights. Economic rights relate to rights of reproduction, broadcasting and public performance. Moral rights, on the other hand, include an author's rights to object to any distortion or other modifications of his work that might be prejudicial to his/her honor or reputation.

'Related Rights' refers to a category of rights granted to performers, Phonogram producers and broadcasters. In the United States, United Kingdom and India, these rights are incorporated under the general public of copyright. But in France and Germany they are termed 'neighboring rights'; the argument is that these works do not meet the same requirement of personal intellectual creativity as literary and artistic works. For instance, the production of a CD or a broadcast program is taken to be an activity of technical and organizational character rather than expression of personal intellectual creativity. But such works need to be protected, so goes the argument, because of their economic value and also because they are easy to imitate.

Following the 1961 Rome International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, Article 14 of TRIPS entitled 'Protection of Performers, Producers of Phonograms (Sound Recordings) and Broadcasting Organizations' spells out what is protected in respect of a fixation of their performance on a phonogram, performers shall have the possibility of preventing the following acts when undertaken without their authorizations:

(i) The fixation of their unfixed performance and the reproduction of such fixation;

(ii) The broadcasting by wireless means and the communication to the public of their live performance.

Producers of phonograms shall enjoy the right to authorize or prohibit the direct or indirect reproduction of their phonograms.

Broadcasting organizations shall have the right to prohibit the fixation, the reproduction of fixations, and the re-broadcasting by wireless means of broadcasts, as well as the communication to the public of television broadcasts of the same.

Provisions of Article 11 in respect of computer programs shall apply mutatis mutandis to producers of phonograms and any other right holders in phonograms.The terms of protection are 50 years to performers and producers of programs and 20 years to broadcasters. (TRIPS Art.14).

In almost the same vein, The Copyright Act (1957) (Chapter VIII) grants every broadcasting organization a special right to be known as 'broadcast reproduction right' in respect of its broadcasts. The broadcast reproduction right shall subsist until twenty five years from the beginning of the calendar year next following the year in which the broadcast is made.

The following acts are listed as infringing the broadcast reproduction right without the license of the owner of the right (S.37):

(a) Re-broadcasting of broadcast, or

(b) Causing the broadcast to be heard or seen by the public on payment of charges, or

(c) Making any sound recording or visual recording of the broadcast, or

(d) Making any reproduction of such sound recording or visual recording, or

(e) Selling or hiring to the public or offering for such sale or hire any such sound recording or visual recording.

3.4.5 Satellite and Cable Broadcasting

Developments in the new technologies such as cable and satellite television have made the protection of 'intellectual property' more complicated. In the existing copyright conventions(the Berne Convention, the Universal Copyright Convention and the Rome Convention) there were no references to the distribution of signals through cable networks or by broadcast satellites since these techniques developed and were deployed after the enactment of the treaties. The question these developments raised related to whether cable and satellite transmission of signals constituted 'broadcasting' and whether the distribution and reproduction of such signals amounted to infringement of copyright. The Brussels Convention (1974) on 'Relating to the Distribution of Programme-Carrying signals Transmitted by Satellite' took up the issue and urged member states to 'take adequate measures to prevent the distribution on or from its territory of any programme-carrying signal by any distributor for whom the signal emitted to or passing through the satellite is not intended'. The Convention provides protection to the signals but not to the messages they carry. A later meeting in March 1985 confirmed that direct broadcasting of works by means of a satellite should be defined as broadcasting in the sense of the copyright conventions and should be thus protected.

3.4.6 Doctrine of Fair Use

'Fair Use' is a vital principle in copyright law. While an original work in art, literature, music, etc. Comes within the ambit of copyright law, the public has to be allowed to freely use segments or parts of copyright materials for purposes of commentary and criticism. The Copyright Act (1975) (VIII.39) allows for this 'private use' with reference to broadcasting. The following acts are therefore not seen as infringing broadcast reproduction right:

- The making of any sound recording or visual recording for the private use of the person making such recording, or solely for purpose of bona fide teaching or research;or
- The use,consistent with fair dealing, of excerpts of a performance or of a broadcast in the reporting of current events or for bona fide review, teaching or research;or
- Such other acts, with any necessary adaptations and modifications which do not constitute infringement of copyright under Sec.52.

Sec.52 spells out rather elaborately 'certain acts' which do not amount to infringement of copyright. The emphasis again is on 'a fair dealing' with literary, dramatic or artistic works, and 'private use' such as for research, criticism or review, the bona fide use by educational institutions, such as in a collection mainly composed of non-copyright matter, or the performance of a literary, dramatic or musical work by staff and students of the institution, or of a cinematographic film or a sound recording if the audience is limited to such staff and students, the parents and guardians of the students and persons directly connected with the activities of the institution, or the communication to such an audience of a cinematograph film or sound recording (52.i)

3.4.7 Home Taping, Rentals, Piracy

The key to understanding recent developments in IPR is by coming to grips with the forces released by 'digitization' and the subsequent 'convergence' of the old one and the new technologies. No more are leisure technologies stand-alone and discrete; digitization has facilitated bundling of technologies and software. Indeed, all information today, whether biological or non-biological, has become digested, for the digital code has brought about the convergence of the old and the new media, and also of information technology with genetics. And, since digital information in varied formats such as voice,

still and moving image and text can be readily stored, processed, retrieved and transferred almost instantly, it can be traded across borders without let or hindrance.

An area of concern for authors, film makers, music composers, playwrights and other creative artists is the 'broadcasting' of their work on a host of delivery platforms: radio, television, the Internet, and more recently over the mobile phone. Further, advances in audio and video recording technologies have facilitated the diffusion of broadcast material through videos,CD and DVDs. However, public screenings of TV programmes, especially to a paying audience, is an infringement of copyright; so is the playing of music and songs from films, radio and TV programmes in concerts, cafes, night clubs, and other public places. And reproduction of copyright material- even for personal use –without permission or a license amounts to 'piracy'.

***(Source:** Kumar Keval J (2011)"Mass Communication in India" Jaico Publishing House, New Delhi)*

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