MASTER OF ARTS MASS COMMUNICATION AND JOURNALISM

CENTRE FOR OPEN AND DISTANCE LEARNING (CODL)

MMC 202: RADIO BROADCASTING

BLOCK II

CENTRE FOR OPEN AND DISTANCE LEARNING
TEZPUR UNIVERSITY (A CENTRAL UNIVERSITY)
TEZPUR, ASSAM - 784028
INDIA

Vision

To grow to be a leading centre for human resource development through distance, open and universal learning system.

Mission

To provide quality higher education at door step through barrier-less, flexible and open learning mode in conformity with national priority and societal need.

Objective

- **To offer degree, diploma, certificate level programme of study through distance learning in various emerging subjects across the disciplines.**

- **To offer job oriented and vocational programmes in flexible terms in the line of the national and regional level demand of manpower.**

- **To offer various programmes under lifelong learning contributing to the local and regional level requirements and as per the need of the society at large.**

- **To undertake various research and academic activities for furtherance of distance education in the region.**

- **To contribute to conserve and promote cultural heritage, literature, traditional knowledge and environment conducting short programmes, workshops, seminars and research in interdisciplinary field.**

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MMC-202: RADIO BROADCASTING

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BLOCK II

TABLE OF CONTENT

COURSE INTRODUCTION

In this course, Radio broadcasting (MMC 202) you will understand the different dimensions of radio as a medium of mass communication. Along with the practical aspects of radio broadcasting, this course aims to teach you about the different concepts related to radio. For instance, it includes descriptions of radio broadcasting formats, types of radio broadcasting such as community radio, ham radio, etc. This course is divided into two blocks (Block I & Block II) and each block includes two modules.

The Block I comprises Module I and Module II which further contain topics such as Growth of Radio and Radio Broadcasting respectively. The Module I includes four units which are based on topics including Evolution of Radio worldwide and in India (Unit 1), Radio in North East of India (Unit 2), Characteristics of Radio (Unit 3) and Technology of Radio broadcasting (Unit 4).

On the other hand Module, II combines three units which emphasise on radio broadcasting formats. Unit 5 deals with formats of radio broadcasting (Spoken) and Unit 6 is about radio broadcasting format (Music). The last unit of this module describes different organisational structures which are related to the functions and operations of radio broadcasting in India. For example, from this unit, you will know about Ministry of Information and Broadcasting, India organizational Structure of All India Radio, etc.

In Block II, the Module III and Module IV, are focusing on types of radio broadcasting and radio programmes respectively. Types of radio broadcasting you will know- Community radio stations (Unit 8), Ham radio (Unit 9), FM Radio Stations(Unit 10) and Internet Radio (Unit 11). In Module IV, it comprises topics like writing for radio (Unit 12), sound recording (Unit 13) and news and educational programme (Unit 14). From this module you will learn how to write for radio, for example, writing for commercials, public service announcements, promotions, documentaries, etc. Unit 13 of this module discusses about sound recording for radio broadcasting which includes topics such as room acoustics and sound treatment, digital radio workstations, studio recording, off-air and on-air

studio, audio mixer console, sound effects, etc. The last unit of this course will teach you about different news bulletin structure, interview, and discussion, farm and agricultural broadcasting, phone-in-programme, etc.

MODULE III: TYPES OF RADIO BROADCASTING

UNIT 8: COMMUNITY RADIO STATIONS

UNIT STRUCTURE

8.1 INTRODUCTION

In this unit, we shall discuss about community radio stations and the role that community radio plays in empowering the community. We shall also trace the history of community radio movement in India, and understand the community radio policy here. This unit shall also throw light upon how to acquire license for community radio station and how to set up a station.

8.2 OBJECTIVES

The objectives of this unit are to:

- Trace the history of the community radio movement in India
- State the early initiatives of community radio in India, and the status at present.
- Explain the community radio policy of India

- Describe how to acquire license of community radio in India and how to set up a community radio station.
- Explain the role of community media in empowering the community.

8.3 COMMUNITY RADIO MOVEMENT IN INDIA: EARLY INITIATIVES

Community media, particularly radio, can be used as one of the most effective ways of community participation and building of public dialogue. Through community media, people can define who they are, what they want, and how to get it, while at the same time building long term capacity to solve problems in a manner that can pave the path for sustainable social change and development. Community radio, unlike other forms of broadcasting, is a non-profit service that is owned and managed by a particular community, usually through a trust or a foundation. It is also managed by the community, and its operations rely mainly on the community's own resources. Its programmes are based on audience access and participation and reflect the special interests and needs of the community.

Community radio is not about doing something for the community but about the community doing something for itself, i.e. owning and controlling its own means of communication. (AMARC, 1998)

Louie Tabing defines a community radio station as _one that is operated in the community, for the community and by the community'. According to him, –The community can be territorial or geographical- a township, village, district or island and can also be a group of people with common interests, who are not necessarily living in one defined territory.‖

Thus community radio may be owned and managed by one group or by combined groups. It can also be run by people such as women, children, farmers, fisher folk, ethnic groups or senior citizens (Pavarala & Malik, 2007).

In India, from being a government monopoly to a highly commercialized broadcasting system with new private FM stations, radio entertainment witnessed a revival of sorts as the airwaves broke free from governmental control. The social sector was however, left somewhat dry. No one seemed to listen to the voices from the rural areas that were seeking a _radio of their own‘ for using it as a tool to participate in and further their own development. Though many NGOs and Civil Society organizations campaigned hard to enable rural communities to set up low-cost local radio broadcasting facilities, it was to no avail.

Finally, these demands for non-profit community broadcasting gave birth to the _campus‘ form of community radio which was ensued in the first quarter of 2003 in the Policy Guidelines for Community Radio broadcasting in India. The Guidelines said that _well established‘ educational institutions can set up FM transmitters and run radio stations at their campuses. These campus radio stations which were supposed to air programmes on agriculture, environment, health and development as per the guidelines were labelled as community radios for the sake of obtaining licenses, but it was natural that stations managed by young students cannot be entirely devoted to these issues and fun and entertainment was given more importance.

In more than a decade of struggle by NGOs and media activist groups, several attempts were made to make the Government allow for the setting up of local community stations. Worth mentioning is the campaign by Bangalore based group VOICES that caught the attention of UNESCO which provided them the opportunity to learn more about community radio broadcasting. UNESCO even sponsored for a workshop in Hyderabad in 2000, which urged the Government to change its mind.

In July 2004, Ministry of Information & Broadcasting prepared a draft policy of Community Broadcasting. In October 2005, the draft policy was referred to a group of ministers who took about a year to give its approval of it. In November 2006, the policy was finally cleared by the Union

Cabinet, marking the beginning of a new era of local community broadcasting in India.

The Deccan Development Society (DDS) an NGO working with poor, rural, Dalit women in the Zaheerabad area of Medak district in Andhra Pradesh, for nearly two decades, set up a community radio station with assistance from UNESCO in 1998, where a couple of young Dalit women from the area managed the station, produced programs and narrow casted them in the village.

VOICES/MYRADA started an audio production centre, Namma Dhwani in 2001 at Budhikote in the Kolar district of Karnataka and has been cable casting programmes made by rural men and women. Their licensed community radio centre became operational in 2008.

The Kutch Mahila Vikas Sangathan, Gujarat, an NGO working with rural women on their concerns in the villages of Kutch district, started airing a 30 minute sponsored Kutchi language programme on AIR‘s Radio Bhuj in December 1999 by purchasing a commercial slot. They acquired the AIR slot for two subsequent series and produced series of participatory, local-language radio programmes in technical and creative collaboration with Drishti Media Collective of Ahmedabad. They applied for a CR license in 2007, and have been granted one in 2012.

Similarly, Alternative for India Development (AID), a grassroots NGO, with the strategic and financial backing of the National Foundation for India and in technical collaboration with Manthan Yuva Sansthan had started airing a community radio programme called Chala Ho Gaon Mein on the local AIR-Daltonganj station in the Palamau district of Jharkhand from 5th August, 2001.The NGO received its Wireless Operating License on 31 July 2008 and began transmissions from 15 August, 2008.

Other noteworthy initiatives are the Henval Vaani and Mandakini ki Awaaz set up in the state of Uttarakhand by a media and development NGO, IdeoSync. Also, Bundelkhand Radio, of Development Alternatives, started airing its programmes as the second NGO lead community radio station on October 23, 2008.

The first community-based radio station licensed to an NGO (as distinct from campus-based radio) was launched on 15 October 2008, when Sangham Radio in Pastapur village, Medak district, Andhra Pradesh state went on the air at 11:00 am. Sangham Radio, which broadcasts on 90.4 MHz, is licensed to the Deccan Development Society (DDS) (an NGO which works with women's groups in approximately 75 villages in Andhra Pradesh). The community radio station is managed by General and Algole Narsamma.

The second NGO-led community radio station in India was launched on 23 October 2008 at Taragram in Orchha, Madhya Pradesh state. Named Radio Bundelkhand after the Bundelkhand region of central India where it is located, the radio station is licensed to the Society for Development Alternatives (DA) (a Delhi-based NGO). Radio Bundelkhand also broadcasts on 90.4 MHz for four hours a day (including two hours of repeat broadcasts).

Radio Namaskar, the first Community Radio of Odisha (India) established at KONARK (Internationally renowned tourist place for Sun Temple) to make the common people informative & active participant of the community development process. They started its broadcasting on 12, Feb, 2010. Radio Namaskar is established by Young India, a civil society organisation formed by some National Youth Awardees, Indira Gandhi NSS Awardees & Ex- NSS volunteers those are committed to the cause of social transformation & development.

The Society for Development Alternatives, a Delhi based NGO, received its Wireless Operating License on 31 July 2008 (for a Nomad 50 Watt FM transmitter, the NIN100) and began test transmissions on 15 August. Their CR station is located in the NGO‘s Taragram campus, Orchha, Bundelkhand (Tikamgarh District, Madhya Pradesh), some 12 kilometres from Jhansi. The CRS, which broadcasts on 90.4 MHz, was inaugurated on 23 October 2008 at 11.35am by a community worker, Prabha.

'Gurgaon ki Awaaz' (The Voice of Gurgaon) received its Letter of Intent in July 2008, signed their GOPA in August 2009 and started broadcasting on

19 November 2009. Based in Gurgaon (which, though in the state of Haryana is considered a part of the National Capital Region of Delhi), GKA is the first and so far only civil-society-led community radio station in Delhi NCR. Gurgaon ki Awaaz broadcasts 24X7, in Hindi and Haryanvi. Community Radio Sarang on 107.8 is managed by the Mangalore Jesuit Educational Society (MJES) and run by St. Aloysius College, Mangalore (a coastal town in southern Karnataka). Radio Sarang is a campus radio station but is oriented towards local communities as well. It broadcasts in Konkani, Kannada, Tulu, and English daily, and in Malayalam, Beary (the mother tongue of local Muslims) and Hindi on a weekly basis. It also broadcasts in Punjabi, by request of the local Sikh community. Since 15 June 2010, the CR station broadcasts 14 hours a day from 6:30 to 20:30. Richard Rego, SJ is founder and director of the station

Banasthali Radio was the first campus-based CR station licensed in the state of Rajasthan, primarily covering the north-eastern part of Tonk district. Banasthali Radio has been operating since January 2005 as a campus radio station for students. The transmission reaches 50 villages surrounding the campus.

To create a common platform for the local communities of Supi in Uttarakhand, TERI launched Kumaon vani (a community radio service) on 11 March 2010. Uttarakhand Governor Margaret Alva inaugurated the community radio station, the first in the state. Kumaon Vani airs programmes on the environment, agriculture, culture, weather and education in the local language and with the active participation of the communities. The station covers a radius of 10 km, reaching an audience of almost 2,000 around Mukhteshwar.

Licensed to the Tibetan Children‘s Village School in Dharamsala, Kangra (Himachal Pradesh), Radio Tashi Delek 90.4 FM is believed to be the first licensed community radio station in the Indian Himalayan Region. The Tibetan Community Radio Station was inaugurated by the Dalai Lama on 1 June 2010. Tashi Delek broadcasts from the Tibetan Children's Village

(TCV) in Dharamsala, serving the Tibetan, Indian and expatriate communities of the region with music and local information.

8.4 COMMUNITY RADIO IN NORTH-EAST INDIA

Following the decision of the Supreme Court in 1996 that the ‒airwaves are public property‖, and the implementation of new guidelines for non-governmental organisation (NGO)-owned community radio in November 2006, the movement for community radio has been rapidly gaining momentum in India. As of 2019, there are 251 operational community radio stations in India.

It is frequently stated that community radio is the most relevant form of media for socially excluded groups, due to its lower technological cost (both of the station and receiver sets), low literacy levels required, and therefore, relatively low barriers to entry and participation.

However, it has been seen that out of the 251 community radio stations in India, only 45% of them are actually owned by local communities and the rest function as campus radio run by educational institutions. In the entire North East region, there are only 6 community radio stations- one in Arunachal Pradesh, three in Assam and two in Manipur.

In Assam there are three community radio stations, two of which are campus radio stations. These are Gyan Taranga (90.4 MHz) in the Krishna Kanta Handique State Open University in Guwahati and Radio Luit (90.8 MHz) under the Institute of Distance and Open Learning of Gauhati University. That is, both of these Community radios are run by educational institutions and not by any particular community and neither the neighbouring communities of these two stations have any major role to play or participation in the program creation or broadcasting of these stations. Radio Brahmaputra is the first civil society run Community Radio for serving the local communities in the north eastern part of India. This radio station is run by the Centre for North-East Studies & Policy Research (C-NES) and supported by UNICEF.

The concept of community radio service was started so as to enable culturally and ethnically diverse groups in a state to reflect their own desires and voices. The North East region of India is one such region with great diversity, with more than 350 ethnic and social groups. However, still it is seen that Community Radio has not been able to make its mark in this region. Therefore, it has become a matter of concern.

8.5 COMMUNITY RADIO POLICIES IN INDIA

In December 2002, the Government of India approved a policy for the grant of licenses for setting up of Community Radio Stations at well-established educational institutions including IITs/IIMs.

The existing community radio station guidelines issued in 2006, were silent on licence renewal/extension mechanism. So far, the community radio players were not allowed to air news or current affairs.

In 2017, the Ministry of Information and Broadcasting (I&B) amended the policy guidelines for community radio stations in India, notifying the rules for licence extension/renewal and allowing the players to broadcast news and current affairs, sourced exclusively from state-owned All India Radio (AIR).

The I&B ministry has broadly accepted recommendations of the Telecom Regulatory Authority of India (Trai) submitted in 2014, which had proposed that the period of permission should be extended for five years at a time and the CRS players should be allowed to air news sourced from AIR in its original form or translated into the local language/ dialect.

Furthermore, the ministry has also relaxed ad rate rules for community radio stations which said that a station cannot charge lower than directorate of advertising and visual publicity (DAVP) ad rate of Rs 4 per second from any local advertiser.

According to the existing guidelines, –community radio stations will undertake in writing that DAVP approved rates accepted by them are their lowest rates and exclusive to DAVP and cannot be offered to any other

agency. DAVP reserves the right to review empanelment rates if this condition is violated," the 2006 guidelines said—a clause which now has been removed from the amended guidelines.

–In addition, limited advertising and announcements relating to local events, local businesses and services and employment opportunities shall be allowed. The maximum duration of such limited advertising will be restricted to seven minutes per hour of broadcast," the ministry said in the order.

The ministry has also notified a list of content categories which will classify as non-news and current affairs for community radio players. The list includes information pertaining to traffic, weather, sporting events and coverage of local events among others.

8.6 ACQUIRING LICENSE AND SETTING UP A COMMUNITY RADIO STATION

Getting a license for a community radio station in India is mostly not hard but it can be quite time taking and complicated because of the number of approvals and multi-stage process. So a license is not as a simple as a single permission, but a whole series of permissions.

According to policy guidelines, in India, licenses for setting up a community radio station can be given only to three types of organisations- i.e Educational Institution (College/University), NGO and Krishi Vigyan Kendra (KVK). These bodies should be functional for at least five years. The radio station to be operated by it should be designed to serve a specific well defined local community.

With details of the objective, target audience/community and target area a proposal can be sent to the Ministry of Information and Broadcasting. Applications are invited by the Ministry of I&B once every year through a national advertisement for establishment of Community Radio Stations. However, eligible organisations and educational institutions can apply during the intervening period between the two advertisements also. The

applicants shall be required to apply in the prescribed application form along with a processing fee.

On applying for the license of a CRS, one should also apply for Wireless Operating License (WOL).Once the above-mentioned formalities are fulfilled, the government will send a Grant of Permission Agreement (GOPA) which clarifies target audience, area and basic benefits.

In terms of content regulation and monitoring, the programmes should be of immediate relevance to the community. The emphasis should be on developmental, agricultural, health, educational, environmental, social welfare, community development and cultural programmes. The programming should reflect the special interests and needs of the local community. At least 50% of content shall be generated with the participation of the local community, for which the station has been set up. Programmes should preferably be in the local language and dialect(s).

8.7 ROLE OF COMMUNITY RADIO IN EMPOWERING COMMUNITY

Community media promotes community participation with the intention of changing the society. Their objective is to enlighten the people and give them n opportunity to play an active part in important decisions that have an effect on them. They facilitate the empowerment of vulnerable communities – populations who are isolated geographically, culturally or linguistically and whose representation is generally ignored by mainstream media – such as women for example. The main aim is to create a public social sphere where each person can contribute and raise their voices.

In this context, radio is one of the most important media for such participatory communication in developing countries. It is a source that helps people gain access to information. It is also easily accessible in monetary terms. It is estimated that that over 75% of households in developing countries have access to a radio. Local radio has the potential to

act as an actor for development and as support for the promotion good governance.

Community radio is not driven by profit making but has a social agenda of promoting an inclusive sustainable development. Such radio stations become true social service providers. They involve the populations in decision-making and participation processes, stimulate public debate, promote civic rights and help held authorities accountable towards the citizens. Breeze FM in Zambia is a great example of what can been achieved. Every week their programme –Budget tracking through local radio‖ gives the community the chance to question local officials about how government funding is being used locally (UNESCO, 2018)

Most of the stations benefitting from the UNESCO project are humble, and their transmitters only reach a few districts, but they are enabling isolated communities across Africa to voice their concerns and to access news on issues of local interest. These local stations have the unique ability to inform and educate while being anchored in the community‘s history and traditions.

By broadcasting in local languages, local radio can communicate effectively about the issues that matter most locally. Local voices can be heard discussing health issues, for instance, education, gender equality or even disaster risk reduction.

ASSESS YOUR PROGRESS

1. Discuss the characteristics of community media._____

2. Community media is for the community and by the community. Explain this statement. _____

_____

8.8 SUMMING UP

Community media, particularly radio, can be used as one of the most effective ways of community participation and building of public dialogue. Through community media, people can define who they are, what they want, and how to get it, while at the same time building long term capacity to solve problems in a manner that can pave the path for sustainable social change and development. Community radio is not about doing something for the community but about the community doing something for itself, i.e. owning and controlling its own means of communication. In this context, radio is one of the most important media for such participatory communication in developing countries.

8.9 QUESTIONS

1. Trace the evolution of community radio stations in India.
2. What is the status of community media in the North-East India?
3. What role does community media play in empowering the community?

8.10 REFERENCES AND RECOMMENDED READINGS

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UNIT 9: HAM RADIO

UNIT STRUCTURE

9.1 INTRODUCTION

Here we start with the meaning of Ham Radio or Amateur radio. The distinctness of Ham radio is that its frequency spectrum is minimal as compared to that of other radio frequency and is usually used for exchange of messages that are not driven by commercial purpose. There have been number of ways in which the Ham radio has been used. For instance it can be used as self-training, hobby, radio sport, commuter of internal information of some organisation and also during emergency communication. In this unit you will learn about the characteristics, purposes, transmission and application process of Ham Radio. This unit also discusses different policies related to Ham Radio and also you will know some of the Ham Radio operators.

9.2 OBJECTIVES

A thorough study of this unit shall enable you to

- Define Ham Radio and explain its purpose
- Describe the characteristics of Ham radio
- Illustrate the components and nature of communication
- Explain the transmission and application process of Ham Radio

9.3 DEFINITION OF HAM RADIO

The definition of Ham radio is very dynamic just as its functions. Amateur Radio (ham radio) though considered a popular hobby or service enables people‘s connection through the use of electronics and communication together. Hams radio can work in low power and its radio waves also enable effective communication digitally with a packet radio for exchanging personal messages or vital information in case of emergency.

The Indian Wireless Telegraph (Amateur Service) Amendment Rules, 2009 defines the term Armature Service, Armature Radio Beacon as followed-

Armature Service: It means a service of self-training, inter-communication and technical investigations carried on by amateurs that is, by persons duly authorised under these rules interested in radio technique solely with a personal aim and without pecuniary interest.

Armature Radio Beacon: A station in the Amateur Service having transmitter (s) emitting carrier wave along with identification signals at regular interval. Such beacons can be directional or non-directional.

To understand Ham Radio further, understanding its history and function would be very essential.

9.4 HISTORY OF HAM RADIO

Heinrich Rudolf Hertz was instrumental in inventing waves in 1888 which was adapted into a communication system in the 1890s by the Italian inventor Guglielmo Marconi. The Amateur radio almost started its journey close to that of radio and its progress was gradual and eventful.

The invention of the Amateur radio did not take place all of a sudden. A lot of techno-curious people began experimenting with the ―wireless‖ which led to the Amateur Radio inventing its components one after the other going almost parallel with that of broadcasting and wireless telegraphy.

There have been a number of debates as to why it is called Ham, however one of the most credible explanation seems to be that the word "HAM" came when some amateurs of the Harvard Radio Club namely Albert S. Hyman, Bob Almy and Poogie Murray established the first amateur wireless stations in 1908. ―HYMAN-ALMY-MURRAY" was the name of their station. However in course of time for feasibility, the initials of the names were taken and this eventually led to the name of Ham. In due course of time, Amateur radio users got their licences delivered in the year 1912 and this eventually led to the growth of ―Hams‖ in recent years.

Morse codes were always very popular and amateur airwaves were critical in filling it with voice and radio-teletype signals. Hams with gradual evolution even invented a new form of picture transmission called slow-scan television using regular voice transmitters and receivers. The first satellite built by amateurs, called OSCAR-1, was launched in 1961. A simple Morse message was transmitted back to Earth for several weeks. The next decade saw the amateurs build an extensive network of relay ―repeater‖ stations to provide regional communications through low-power mobile and handheld radios. It is believed that some of the earliest radio stations used ―spark‖ which was a vigorous and noisy electrical arc generating radio waves. The chaotic spark was eventually replaced by effective vacuum tube transmitters and over the course of time voice and

Morse code usage through airwaves were dominant factors of Ham radio. This relatively easier form of communication became quite popular connecting communities and individuals.

9.5 ACTIVITIES AND PURPOSE OF HAM RADIO

Ham Radio is a useful tool and sometimes powerful enough to venture into areas restricted by other mediums mostly due to their limitations. Ham radio that was once a major hobby for a large section of the society is a very useful tool too. Most radios that hams use are made for voice communication. Interestingly even computer-to-computer speech is available on ham radio, connecting towns or perhaps a distant repeater system on another continent.

One popular style is simple ―keyboard-to-keyboard‖ communications similar to mobile-phone texting. Hams also use higher-speed digital systems to transfer files and web pages. Not only are hams sending digital data, they‘re in the process of innovating new ways of sending the code. From strictly restricting to Morse code to its gradual progress into the second century of use, Morse transmissions have proved that they are simple to generate and yet quite efficient in their purpose.

Upgradation of the Ham technology:

Hams are also characteristically distinct in the way they have the build-it-yourself ethic. They use equipment and accessories built by themselves and this may even include high-power, signal boosting amplifiers to a miniature hand-built radio that could fit in pocket-size equipment. Watching Hams have devised many ways of exchanging pictures and videos. Quite interestingly, Hams used teletype to send pictures through text characters. With the progress of technology and various innovative experiments, ham could set up a video camera and transmit pictures that could be at par with the professional video. This is called ATV for amateur television. These ATV transmitters could even fly in model aircraft and balloons that ascend

to the edge of space. Hams could connect with other hams through different modes thousands of miles away.

- The Hams are capable of connecting voice communications between Internet and radio links on different parts of the globe through handheld transmitters requiring very less power
- Hams have created their own wireless data networks, position reporting systems, and even a radio-based e-mail network that enables them to ‒log in‖ from anywhere in the world.
- Amateur radio is as equipped as that of the radio playing a crucial role during war communication and putting the network of the military in order.
- Ham radios have the advantage of being able to operate in very low power which is a major challenge for other forms of communication.

ASSESS YOUR PROGRESS

1. What do you mean by Ham Radio?

_____

_____

2. What are the characteristics of Ham Radio?

_____

_____

3. What are the technological advantages of Ham radio?

_____

_____

9.6. TRANSMISSION

Hams use all sorts of radios and antennas on a wide variety of frequencies to communicate with other hams across town and around the world. While some use ham for personal enjoyment others use it for keeping in touch with friends and family for emergency communications, some are fond of experimenting with radio and its equipment. They communicate using microphones, telegraph or Morse keys, computers, cameras, lasers, and even their own satellites.

Amateur Radio evolved right along with the industry. In the 1980s and 1990s, with the introduction of the microprocessors the capabilities of amateur equipment got a major boost thus ushering in a new era of digital communication. Packet radio, a modified computer network technology, was developed by hams used largely for commercial and public safety communications. The personal computer assisted the Ham radios in terms of design, modelling, station automation, and record-keeping. Internet redefined and redesigned Ham radio and the way it functions. At each step in the development of today‘s communication-intensive world, hams have contributed through its unique abilities or some have even gone beyond and made it look the most feasible and efficient means of communication.

With the advent of digital information that can be sent over the air waves, Ham radio is going through one of the most exciting facets of 21st-century ham radio. Hams can also bounce signals off the upper layers of the atmosphere, making contacts around the globe. This could trigger a whole new communication model in the years to come.

9.7. POLICIES

In India, the establishment of Amateur Radio or Ham radio is regulated as per the Indian Wireless Telegraph (Amateur Service) Rules, 2009. Initially

it was Indian Wireless Telegraph (Amateur Service) Rules, 1978 which listed five categories of licence for establishing Amateur Radio, these were-

i. Advanced Amateur Wireless Telegraph Station License
ii. Amateur Wireless Telegraph Station License, Grade–I
iii. Amateur Wireless Telegraph Station License, Grade–II
iv. Restricted Amateur Wireless Telegraph Station License
v. Short Wave Listener's Amateur Wireless Telegraph Station License

But, after the commencement of Indian Wireless Telegraph (Amateur Service) Rules, 2009, it started providing only two types of licence including Amateur Wireless Telegraph Station Licence (General) and Amateur Wireless Telegraph Station Licence (Restricted). The validity of licence is for a period of 20 years or lifelong which means till the licence holder attains the age of 80 years. The fee structure for both licences is Rs. 1000 for a period of 20 years and Rs. 2000 for life long period.

Now, you need to know how to apply a licence for Ham Radio in India. For the applicants, the Ministry of Communication, Government of India conducts an examination called ―Amateur Station Operators' Examination‖ for approval of licence in order to establish Ham Radio. The qualified Amateur radios will get the license for obtaining and possessing a radio station. The license can be applied by any individual who is a citizen of India and above the age of 18. The examination would include content on

a. Morse Code
b. Communication Procedure
c. Basic Electronics

The officer-in-charge of the Wireless Monitoring Station, Department of Telecommunication, Ministry of Communication, Government of India is the authority who conducts the examination, provided there are sufficient number for applicants. The licences are issued by Wireless Planning and Coordination wing of DOT, Government of India in different categories.

9.8. Case Studies

The usefulness of Ham radio can only be understood in the truest sense if one goes through some of the case studies of the Ham radio.

- **Ham radio and disaster preparedness:** Indian hams were working on 14.210 MHz to contact those affected in Nepal where a massive 7.9 magnitude earthquake has claimed the lives of more than 2000 people in the year 2015. The Amateur Radio Society of India took this initiative to reconnect people in the disaster affected areas and also provide them with necessary items as well as medical aid and expedite the rescue operations. The Bangalore Amateur Radio Club was also doing its bit connecting volunteers and Ham radio enthusiasts with people wanting to contact those stranded in Nepal.

- Hurricane Sandy was one of the largest Atlantic hurricane ever recorded and which caused a huge devastation across the country. The ARRL Amateur Radio Emergency Service (ARES) volunteers were active in ARRL sections from Delaware through Eastern Massachusetts all throughout the different phases of the storm, right from issuing a warning to the people during the storm, letting people know the course of the storm and after the storm engaging in rescue operations. Amateurs worked closely with the National Weather Service and the National Hurricane Center to report on local conditions as the storm moved inland. While mobile and landline telephones, electrical power, cable TV, and Internet service were knocked out, amateur voice and digital links were put to work at EOCs (Emergency Operations Centers), Red Cross shelters, and supporting numerous other agencies and facilities across the region.

- Around 300 Ham radio operators helped in the rescue operations in Kerala which was flood-devastated in the year 2018 by tracking flood marooned people through their last mobile phone location and

sharing this information with officials where communication services were massively severed. The Ham or amateur radio operators are licensed to conduct such communications under specific radio frequencies by the Union Ministry of Communications.

- **Ham Radio and Space:** Taking ham radio to new heights, astronaut Richard Garriott, W5WKQ, operated from aboard the International Space Station (ISS), using the call sign NA1SS. Richard contacted more than 500 different hams from the ISS in a 12-day visit to space. Richard's father Owen, W5LFL, was the first ham in space from aboard the Space Shuttle in 1984. Nearly all of the US and Russian astronauts have ham licenses, contacting both individual hams and students in school classrooms from orbit.

ASSESS YOUR PROGRESS

1. Trace the history of Ham Radio. _____

_____

2. What are the advantages of Ham Radio? _____

_____

9.9 SUMMING UP

From here, we can see that Ham radio which started by amateurs in engaging in communication has come a long way. From Morse codes, to voice connect, computer-mediated connection and eventually even typing, the Ham radio has come a long way.

The Ham radio licensing enables radio enthusiasts to indulge in an interesting hobby. Also considering its utilities and cost-effectiveness, it has empowered

many with the ability to connect with each other. Its strength over other form of airwaves during the period of natural disasters has made it one of the most silent yet proficient means of communication. Over the years the ability of Ham radio to connect in space too has created a number of interesting possibilities. This continuous evolution of the Ham radio has even led to transmission of pictures when digitally connected. It becomes evident from here that this small yet proficient form of communication has both challenges and opportunities in the changing world and would go a long way in the field of developmental communication if processed with diligence.

9.10 QUESTIONS

1. How can the ham radio be used during emergency situation?
2. How can one obtain the license of Ham Radio in India?
3. How can digital information through airwaves re-modify Ham?
4. What are the different applications of the ham radio?

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UNIT 10 : FM RADIO STATIONS

10.1 INTRODUCTION

Frequency modulation or commonly referred to as FM is very high quality transmission medium for radio broadcasting. In the previous units we have discussed the basics of FM technology and this unit is an expansion of it with special reference to FM in India. Because of its high fidelity audio , FM is more popular than the other technology of radio broadcasting. Commercial use of FM has brought a new era of radio broadcasting along with the emergence of concept such as Radio Jockey. Edwin Armstrong, an American engineer was the person behind using Frequency Modulation for radio broadcasting for the first time who launched his own radio station in 1939 to demonstrate the effectiveness of FM.

In this unit we will discuss the history of FM radio broadcasting in India , guidelines for FM Radio Broadcasting in India, station ownership and programming in FM Radio Stations, etc.

10.2 OBJECTIVES

This unit is based on the following objectives-

- To state the history of FM broadcasting in India
- To explain the guidelines for FM Radio Broadcasting in India
- Station ownership and Programming in FM Radio Stations
- To describe the concepts of RJ, Voice Modulation, anchoring and dubbing

10.3 HISTORY OF FM BROADCASTING IN INDIA

History of FM broadcasting in India can be traced back to 1972 when All India Radio first introduced it at Madras and later in 1992 at Jalandhar. Private operators started FM broadcasting after the government of India sold airtime blocks on it FM channels in Madras, Mumbai, Delhi, Kolkata and Goa in the year 1993. In 1999, a liberalised policy came into existence after the government announced a policy for expansion of FM Radio broadcasting through private agencies. This Phase I policy allowed Indian companies to set up private FM radio stations on a licence fee basis. This new policy emphasised on localising content as well as generating employment. In 2001, Radio City Bangalore came into existence which was the India's first private FM station and with this, an era of state broadcasting ended in India that began in 1930.

Introduction of FM in the Indian history of radio broadcasting transformed from state owned AM radio broadcasting to corporate owned private radio broadcasting. In India, this new phase of radio broadcasting was an outcome of the new economic policy of 1991 which was basically promoting liberalisation, privatisation and globalisation (LPG policy, 1991) of the economy. Emergence of the "middle class economy" which was an outcome of this new LPG policy was the core target audience of FM radio broadcasting which was beyond the

nature of the previous state owned AM radio broadcasting in the country. Changes in media policy along with the emerging consumer culture led a boom in FM broadcasting in India. Moreover, in India, growth of FM radio broadcasting can be seen as a transformation from public broadcasting to private broadcasting , from monopoly of All India Radio to competition among the private companies.

Evolution of FM broadcasting in India can be traced back to three phases of government policy of regulations. The Phase I started during the Ninth Five Year Plan i.e. 1997-2002 which emphasised on allowing private ownership of FM radio stations. Launched in 1999, this first phase of FM broadcasting in India aimed at creating local content. This new policy of Govt. of India is based on the following three objectives – (source: Telecom Regulatory Authority of India Recommendations On Licensing Issues Relating to 2nd Phase of Private FM Radio Broadcasting, 2004)

To open up FM broadcasting for entertainment, education and information dissemination by commercial broadcasters;

To make available quality programmes with a localized flavour in terms of content and relevance; to encourage new talent and generate employment opportunities directly and indirectly; and

To supplement the services of All India Radio (AIR) and promote rapid expansion of the broadcast network in the country for the benefit of the Indian populace.

Government fixed an annual licence fee for private FM broadcasters and prohibited broadcasting of news and 31 other non-music programmes. The nature of the contents of FM radio broadcasting was basically all about music and films. This regulation of Indian government was continued till 1998 when the private FM stations could only rebroadcast news aired in All India Radio. Later, the Supreme Court of India gave historical judgment allowing FM stations to broadcast news.

The Phase II of FM broadcasting in India came into existence on July 13, 2005. This new policy in Phase II brought changes to the previous system of fixed

annual license fee and replaced with a revenue share mechanism. Again in 2011, Government of India announced Phase III of FM broadcasting introducing features such as permitted broadcasting of news bulletins of All India Radio (AIR) without altering the content and also allowing airing information related to sporting events, traffic and weather, festivals, coverage of topics pertaining to examinations, results, admissions, career counselling, employment opportunities, public announcements pertaining to civic amenities like electricity, water supply, natural calamities, health alerts, and so on, as provided by the local administration will be treated as non-news and current affairs broadcast and have therefore been permitted.

10. 4 NON-COMMERCIAL AND COMMERCIAL FM BROADCASTING

The key difference between commercial and non-commercial FM broadcasting is that unlike the non-commercial FM broadcasting, the commercial radio broadcasting uses advertising as a source of revenue generation. In other words, the commercial FM broadcasting emphasises on the contents mostly based on entertainment so that it can attract the advertisers. Popular music, information like local traffic alerts, sports news, etc. are the sole area of creating content for the commercial FM broadcasting. Commercial broadcasting is generally easily accessible for people to understand and listen and follow through the programs. Commercial Radio sells advertising using a sales force, charges promotional fees, and involves itself in many ways of profit making business. As the relationship between number of listeners and number of advertisers in the market is directly proportionate , the competition is high amongst the commercial FM channels for earning revenue from the advertisers. Such competition has become a major determinant of selecting content for broadcasting.

In Non-commercial FM stations are similar in practice except that all of their income is turned back into the corporation for station growth, upgrades, repairs, salaries, etc. All income is re-invested into the corporation. Non -commercial differ from commercial FM stations primarily in that they are not permitted to

accept revenue in exchange for broadcasting "spots" (announcements advertising goods and services),yet they may charge for broadcasting programs.

10. 5 GUIDELINES FOR FM RADIO BROADCASTING IN INDIA

The primary criteria for getting permission for setting up FM radio channel is that the company should be registered under the Company's Act, 1956. As per this guideline of Ministry of Information and Broadcasting, only the registered companies are eligible for bidding and obtaining permission for FM radio channels in India. The validity of this permission is for 15 years according to the guidelines of Government of India. The ministry also have clearly mentioned in the regulation about the following types of companies which are not eligible to apply:-

(a) Companies not incorporated in India.

(b) Any company controlled by a person convicted of an offence involving moral turpitude or money laundering/drug trafficking, terrorist activities or declared as insolvent or applied for being declared insolvent;

(c) A company which is an associate of or controlled by a Trust, Society or Non-Profit Organization;

(d) A company controlled by or associated with a religious body;

(e) A company controlled by or associated with a political body;

(f) Subsidiary company of any applicant in the same City;

(g) Holding company of any applicant in the same City;

(h) Companies with the Same Management as that of an applicant in the same City.

i) Companies with the Same Management as that of an applicant in the same City;

(j) More than one Inter-Connected Undertaking in the same City;

(k) A company that has been debarred from taking part in the bidding process or

its holding company or subsidiary or a company with the same management or an interconnected undertaking ;

(l) The defaulters of conditions under Phase-I & Phase-II, who have contested the revocation of their Letters of Intent/License Agreements/ Bank Guarantees, thereby continue to be debarred from participating in any future bidding process.

As per the guidelines issued in the year 2011 by the Ministry of Information and Broadcasting, India, followings are the financial eligible criteria of each applicant company which determines the minimum Net Worth required as per City Category in each region:

D category Cities and cities with population upto 1 lakh: Rs. 50 Lakhs.

C category Cities: Rs. 1 Crore.

B category Cities: Rs. 2 Crore.

A category Cities: Rs. 3 Crore.

A+ category Cities Rs. 3 Crore.

All categories of Cities in all regions: Rs. 10 Crore.

10.6 CONCEPTS OF RADIO JOCKEY (RJ), VOICE MODULATION, ANCHORING

Popularly known as RJ, Radio jockeys are the presenters in a radio station who hosts “on-air” programme in Radio broadcasting. The key skill for this profession is a good quality of voice. Having the ability to modulate voice is important for a RJ as monotonous voice may fail to attract audience’s attention. Communicating with the audience through interactive sessions during live broadcasts requires a sense of spontaneity as nothing is scripted and you as a RJ will have to handle any situation that comes during the live session. You need to be expressive as well as creative enough to keep the audience without making them feel bored with the content. Moreover, clarity of speech and correct pronunciation, sense of humour, being up to date with trends, etc. are some important skills of becoming a RJ. The responsibilities of a Radio Jockey include managing playlists, advertisements, entertains listeners through different

programmes that facilitates audience to take part in a conversation with the RJ. Radio Jockeys also provide news updates, traffic reports and weather conditions for their listeners. They sometimes interview personalities from the entertainment world, encourage audience requests and manage promotional contests.

Now , let's talk about voice modulation as a skill for Radio Jockey. Voice modulation is an art through which you give expression to your voice. You need to learn how to modulate your voice through deciding which particular words you need to emphasise more as well as being aware of when the voice should be loud. To understand voice modulation you need to know about pitch. Pitch refers to the quality of voice which determines the rate of vibration that the sound makes. In other words, pitch is the degree of highness or lowness of sound. Pitch plays an important role in voice modulation, it is the maintaining of pitch that requires for better voice modulation. Depending on the pitch , a RJ maintains his/her voice modulation by making it either louder or softer, faster or slower, dramatic or emotional. It is always preferable to speak in a moderate way that helps get your point across to your audience while stressing on certain words which you think more important to add powerful impact on the audience.

Another concept you need to learn is anchoring. The key difference between radio jockey and radio anchor is that unlike RJ, a radio anchor present news, commercial messages and announcements which is scripted previously. A radio anchor also hosts talk shows or in some cases acts as a announcer and interviewer. A good speaking skill is the key of anchoring.

10.7 RADIO DUBBING

Dubbing is a post-production process in which original sound track or original language of recording is replaced with new dialogue or other sounds to the sound track of a radio program. Dubbing is required in order to reach audience from different languages. Through this dubbing process, a local context is added to the content of the radio programme. Especially, in case of advertising, dubbing is immensely used so that people from a particular locality can

comprehend the commercial in their native language and thereby it expands reach of the advertised product or services. A perfect dubbing makes the dubbed sound natural like the original track through matching timings of it. For that the script used for dubbing should match the word length of the original script. Such a perfect dubbing sometimes makes the audience forget about the original version because of its added authenticity by incorporating the nuances of the original language.

SELF ASSESSMENT

1. Discuss the three phases of FM radio broadcasting in India._____

2. Write the skills of a Radio Jockey ? _____

10.8 SUMMING UP

The journey of FM broadcasting in India is basically a transformation from government owned public broadcasting to privately owned radio broadcasting. The primary criteria for getting permission for setting up FM radio channel is that the company should be registered under the Company's Act, 1956 as per the guideline of Ministry of Information and Broadcasting. After the economic reformation of 1991, privatization of radio stations changed the scenario of radio content in India. It has become more about entertainment focusing more on contents like popular music , cinema , arts , etc. Commercial radio broadcasting has been resulting in market competition as advertising is the principle source of revenue.

From this unit you have understood the difference between Radio Jockey and an anchor. A Radio Jockey is a presenter in a radio station who hosts "on-air"

programme in Radio broadcasting and unlike RJ, an anchor presents news, commercial messages and announcements which is scripted previously. Voice modulation is an important skill for both RJ and Anchor for attracting the listeners. Voice modulation implies changes in the pitch of the voice breaking the monotony of the voice of RJ or an Anchor.

10.9 QUESTIONS

Trace the history of FM broadcasting in India .

Discuss the difference between commercial and non-commercial FM broadcasting.

What are the guidelines of Ministry of Information and Broadcasting in India for setting FM broadcasting in India?

What is voice modulation and pitch?

10.10 REFERENCES AND RECOMMENDATION

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UNIT 11: INTERNET RADIO

UNIT STRUCTURE

11. 1 INTRODUCTION

From the previous units, you are now familiar with different types of Radio Broadcasting**.** This unit emphasizes on discussing internet radio as a type of radio broadcasting. Think of the different types of Internet radio stations you have heard. You would probably remember film songs, phone-in programmes, talks, discussions, news, cricket commentaries etc. in radio stations. This unit will give you an understanding of different formats of internet radio, the concept of HD radio and Satellite radio as well as different aspects of setting up of an online radio station.

11.2 OBJECTIVES

A thorough study of this unit shall enable you to

- Write the definition and formats of Internet Radio
- Explain the concept of HD Radio and Satellite Radio
- Describe Internet radio streaming and setting up an online radio station
- Write about Internet radio ventures in India and aboard

11.3 DEFINITION

Internet radio is an audio facility which is also called webcasting uses the internet for broadcasting. In internet radio, there is live streaming of contents unlike podcasts where content is being pre-recorded. In other words we can say that internet radio broadcasters are entities which provide entertainment to the users which include news content, songs, advertisement etc. through live streaming via the internet.

In literature Internet radio is also referred as Web radio or Net-radio. According to Kolodziejski and Keel (2005), Internet radio is defined as

–(…) the transmission and reception of audio files by streaming over the Internet in real-time. In this sense, Internet radio is both an online business run by traditional radio stations that broadcast in ether program also available live on the web, as well as Internet radio stations operating activities only on the Internet. This should be distinguished from the possibility of downloading files on demand and the ability to play audio files on demand.‖[1]

The term streaming denotes technicality affecting the Internet radio and refers to the transmission of data. It allows direct transmission of files and receiving of audio and visual files live. For sending and receiving files we need special software called streaming player or media player, which allow us to read data in the process of downloading. This streaming is based on combination of data, transmission, compression, and subsequent decompression, now these all are important for the operation of Internet radio.

[1] W. Kolodziejski, P. Keel, Internet Radio, the report of the National Council of Radio and Television, Department of European Policy and International Relations, No. 14/2005, March 2005, p.3

The origin of the Internet and Internet radio dated back in the 90s. The first online live audio broadcasted in March 1992. This event is known as _MBONE Audio Mulicast'[2], which is took place in the United States and its founder was Carl Malamud. The name of first live audio broadcast was _Internet Talk Radio.' The _Radio HK' was the first Internet radio operators, which is also established in United States in 1995. Also in 1995 the first live news was broadcast over the Internet and initiative was taken by the American network _ABC Radio.'

11.3.1 Benefits of Internet Radio

i. One of the advantages of Internet radio is that it gives immense choices for the audience. There are varieties of internet radio stations available that can be accessed without the disturbance of external factors such as changes in weather, etc.
ii. Unlike conventional radio, Internet radio can reach a large number of people beyond geographical boundaries. If you have access to internet, you can listen to any of the internet radio stations.
iii. There is no limitation regarding the radio frequency spectrum in internet radio. As we know, there are government regulations for using the radio spectrum or electromagnetic spectrum, but internet radio is free from such government regulation. It does not need any FM or AM frequencies, it just requires an IP address.
iv. Internet Radio is more engaging as it provides facilities for live chat creating groups for conversation conversations and thereby it creates a strong virtual community.

11.3.2 Other station using Web Radio

In India there are several radio station which using web radio. The examples of these stations are:

[2] http://en.wikipedia.org/wiki/Mbone

a. All India Radio's FM station, FM Gold which is available at *http://allindiaradio.gov.in/Profile/ FM Gold.*

b. Gurgaon Ki Aawaz, it is a community radio station which is based in Gurgaon. This station uses GRINS to broadcast on FM radio as well as Internet Radio. It is available at *http://gurgaonkiawaaz.org/.*

c. Bol Hyderabad, is also a community radio station that runs by University of Hyderabad. It also uses GRINS to broadcast on FM and the Internet radio.

d. The first Internet radio of north east is e-Jnan Taranga, which was started by K K Handiqui State Open University in 2011.

The key difference compared to Gurgaon Ki Aawaz is that they have set up their own streaming server machine. They use Icecast as the server software and the same server machine provides Web Radio to university students as well as the Internet listeners. You can listen to Bol Hyderabad at http://uohyd.ac.in/.

11.4 INTERNET RADIO FORMAT

Do you remember the programmes you have heard on the Internet radio? Try and recall some of them. You may have heard the names of Internet radio stations, from where the programmes are broadcast. Many of you would remember BBC, Voice of America, All India Radio, etc.

According to standard Arbitron guide the definitions of format are to delineate types of radio programming. In Internet radio to examine the different range of formats which are being delivered, it means to provide a sense of diverse programme which is available online. In Internet radio broadcasting much of the concern given to diversity and which is focused on news and information. In Internet radio broadcasting much of emphasis

is given to news and information as compared to music or other entertainment programming.

As we all know most of the words spoken on the radio are written down. Those spoken words on radio called script. Internet radio format can be split into two parts:

1. Spoken words/ Human Voices and written words
2. Music

1. Spoken Words/ Human Voices and Written words
    a. Announcements : These are specifically written clear messages to inform
    b. Radio Talks
    c. Radio interviews
    d. Radio discussions
    e. Radio documentaries /features
    f. Radio drama
    g. Running commentaries
    h. Magazine programmes
    i. News
    j. Live radio
2. Music
    a. Classical Music

There are 3 types of classical music in India.

- Hindustani classical
- Carnatic classical
- Western classical

    b. Contemporary Hits
    c. Country
    d. Jazz
    e. World Music

SEL ASSESSMENT

1. List any five factors that you need to take into account about the listeners before making a radio programme.
2. Write the names of any five programmes you have heard on Internet radio.
3. Fill in the blanks with appropriate word/s:
   i) The only medium to reach the illiterate people to inform,_____and entertain them is the_____.
   ii) A radio station broadcasts programmes like talks, discussions,_____,_____and_____.
   iii) It is important to know the requirements of the listeners to decide —— of broadcast and_____and _____ of programmes.
   iv) Radio programmes are decided on the basis of _____.

11.5 SATELLITE RADIO AND HD RADIO

11.5.1 Satellite Radio

It is an alternative of traditional radio broadcasting. It is a single platform service that provides combination of audio program with technology. In the late 1990s, satellite radio technology was developed but in 2000s it was launched. It promises to give crystal clear sound, digital reception from coast to coast. For satellite radio services, user needs to pay monthly subscriptions fee. The advantage of satellite radio is that it provides more than a hundred stations without commercial ads, uncensored talk and out-of-market collegiate and professional sports.

With traditional radio stations many users were dissatisfied and now they have new choice with satellite radio. Meanwhile, people who feel traditional radio is overly censored can now listen to uncensored music and

talk on satellite radio because satellite radio is not bound by the same content restrictions the FCC requires terrestrial broadcasters to follow.

Initially two different companies name XM Satellite and Sirius Radio, they get merged and started providing satellite radio services. According to Adam Rogers (2001) ‗The technology requires a signal from Sirius XM's headquarters to be beamed to satellites in orbit and sent back down to earth where subscribers are able to receive the content from the satellite radio signal on radio receivers that they purchase.'[3] For satellite radio, we also need to buy accessories such as speakers and a docking unit for home or car, besides a new radio. Users also need to select the plans among several subscriptions options. ‗Sirius XM uses terrestrial-based repeater stations in major cities that allow content to be received via radio frequency to assist receivers that may have interference problems with ground-to-sky reception due to large buildings or other obstructions. '[4] Newer receivers make use of Wi-Fi connections to aid in the delivery of the service.

11.5.2 HD Radio

HD Radio is a digital technology which enables you the experience of AM and FM radio station. It allows radio stations to broadcast analog signals with additional digital content.

People always have some confusion between satellite radio and HD radio, because it seems similar but one is an extension of the terrestrial radio broadcasting technology that has been around for a century, and the other uses newer satellite technology. For HD radio we do not need a subscription and even no need to pay subscription fee. HD radio allows radio stations to continue broadcasting their original analog signals unlike satellite radio, even no need to update your radio hardware.

[3] Adam Rogers, *A Little Space Music*, Newsweek, Vol 138, Issue 20, November 12, 2001.
[4] ―Help/FAQS,‖ Sirius Satellite Radio, accessed May 10, 2009, http://www.sirius.com/faqs.

The technology used for the standard of HD Radio is owned by iBiquity. In the United States, the technology used for HD radio is also iBiquity, which is approved by FCC in 2002. To use iBiquity technology for HD radio format, radio stations required to upgrade their broadcasting equipment and also need to pay licensing fee. Without the upgrade, radio tuners are capable of receiving the old analog signals, but to receive digital content we need new hardware.

To receive HD Radio content we need compatible tuner which is available in most of the prominent market and some vehicles already come with equipped HD Radio receivers. If HD Radio is not available in the market then you can buy a head unit with a digital tuner for that you do not need to buy a special HD Radio antenna.

Before buying a head unit that has a built-in HD Radio tuner, you need to check the stations which are available in your area. There are thousands of stations available in HD Radio, but for your area you will have access to at least one station.

Some of the potential features offered by HD Radio stations include:

- CD-quality audio on FM channels and FM quality audio on AM channels.
- Up to two additional FM channels for each traditional FM channel.
- iTunes tagging that allows you to create playlists from songs you hear on the radio.
- Song titles and artist names displayed on the head unit.
- The ability to pause live radio streams for up to 15 minutes.

11.6 INTERNET RADIO STREAMING

For internet radio streaming you do not need to download the entire broadcast, you just need some players to listen to audio stream such as Media player, iTunes, Winamp etc. In Internet Radio for audio streaming,

first you need streaming software then that software will convert the audio into streaming format that connects to streaming software and all listeners are connected to this streaming server. The streaming server is a kind of remote server in which many listeners can connect at the same time. In data centres that streaming server is located which have high bandwidth. Here I am giving you some examples of streaming server SHOUTcast server, Wowza Server, Windows Media server, Icecast server etc.

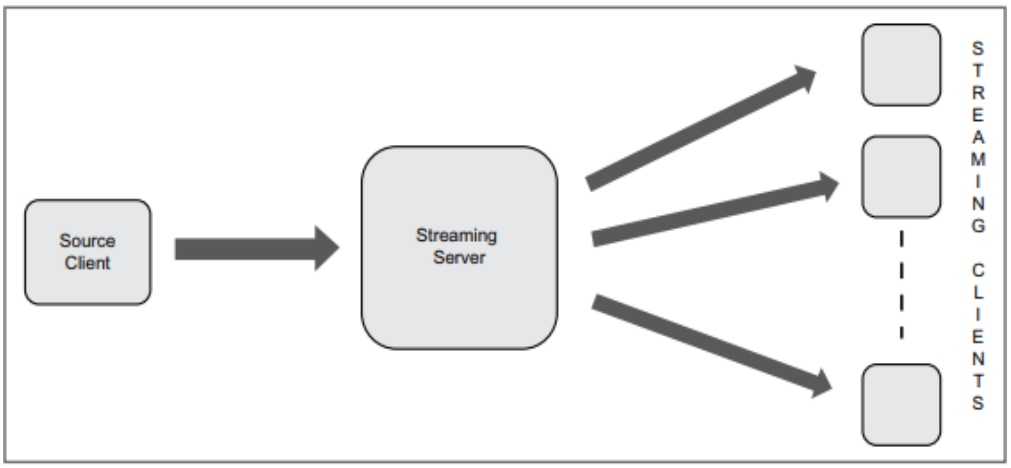

Fig 11.1 Components of Internet radio

Source: Web Radio: A Manual for Streaming Audio on the Web by Zahir Koradia

11.7 SETTING UP OF AN ONLINE RADIO STATIONS

For setting an online radio station, we need to figure out the following things (a) streaming server, (b) source client, and (c) streaming client components for setting up Internet radio. VLC or the latest versions of any of the common browsers can be used as streaming clients, and thus we focus only on the streaming server and source client components.

When setting up an Internet station, you need to make a list of things such as radio format, what kind programs, budget, which listeners you want to reach (national, international, young, old etc.),etc. For Broadcasting time

schedule is a very important element which may include 24/7, weekend only, non-stop, live streams, or any combination of it. The followings are some other important aspects of internet radio streaming that you need to understand before you start setting up an online radio station-

i. What is the cost of Music licenses (www.sena.nl, www.bumastemra.nl).
ii. Which streaming program
iii. Chose the streaming format: mp3, aac+, WMA, mp3pro, OGG Mostly used audio streaming format is mp3 on a SHOUTcast server
iv. Chose the type of stream server (at your streaming provider) mp3 = SHOUTcast, Icecast aac+ = SHOUTcast, Icecast WMA = Windows media streaming mp3pro = SHOUTcast, Icecast OGG = Icecast
v. Chose a reliable streaming provider and its costs
vi. Make a clear and professional website and subscribe to a search engine.
vii. Publish your internet radio station.

Expenditure for setting an internet radio station

Below is an estimate of the costs. Dependent upon your choices of course:

i. Streaming software (radio play-out software)
ii. Music mp3 format on 320kbps
iii. Jingles
iv. Hardware to run your play-out software on
v. Streaming server media hosting
vi. Website + hosting
vii. Internet connection for streaming on location/studio.

11.8 INTERNET RADIO VENTURES IN INDIA AND ABROAD

Now these days Internet radio is globally famous which is also known as web radio. In India the slow growth of the terrestrial form of radio, has proved to be a deterrent to the growth of the web form. Internet radio was

not so popular in India but web has revolutionised the reach and rang of a local medium. Over the years Internet radio has grown well and here we have a list of some famous Internet radio stations.

- SHOUTcast (www.shoutcast.com)
- Last.fm (www.last.fm)
- Mundu Radio (mundu.com)
- Grooveshark (grooveshark.com)
- Radio Paradise (radioverve.com/radio)
- Radioverve (radioverve.com/radio)
- Bellyup4Blues (bellyup4blues.com)
- SKY.fm (www.sky.fm)
- 977 (977music.com)
- Music India Online (www.musicindiaonline.com)

Existing internet radio players like planetradiocity.com, radiowhiskey.com, seem to have trouble monetizing their web radio platforms.

Vineet Singh Hukmani, MD and CEO, Radio One, does consider the internet radio a dead-end business. At present internet radio only amounts to music streaming and since music royalties are overpriced in India.

Nisha Narayanan, COO, Red FM, seems to be banking on internet radio. She sees internet radio emerging into a potent tool for the next level of growth of the terrestrial radio. –With proliferation of bandwidth, terrestrial FM radio will transcendent from a local medium catering for a particular geographic limit, to across the world. Local communities that are limited to an area will enhance their reach and we will see cultural communities galvanize from across the world, to consume local regional programming of their choice.‖

11.9 SUMMING UP

Internet Radio is a live audio streaming facility over the internet, which is also called webcasting. The origin of Internet Radio is dated back in 90s. There are three components of Internet Radio: Source Client, Streaming Server, and Streaming Client. The advantages of Internet Radio are it does not have spectrum limitation, no government regulations, no limitation in reach even you can listen to international radio stations, and you can access it anywhere just you need an internet connection. In this chapter you have learnt how to set up an online radio station, now you can set up your own or university radio station online.

11.10 QUESTIONS

1. Discuss in detail the factors to be taken account before making an Internet radio programme.
2. Explain with examples the different formats of Internet radio programmes.
3. What are the difference between HD Radio and Satellite Radio?
4. Write brief note on history of Internet Radio.

11.11 REFERENCES AND RECOMMENDED READINGS

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UNIT 12: WRITING FOR RADIO

UNIT STRUCTURE

12.1 : INTRODUCTION

The secret for composing radio script is very basic. It‘s as if we are having a discussion with the audience. In spite of the fact that the radio is communicated to several individuals at the same time, a great radio program makes every audience feels as they are being addressed directly. Consequently, the contents should be written in a way so that the audiences feel that they are participating in the discussions or they should feel that

they are directly communicating with the radio jockey. Thus it is advisable to use words which are in everyday use and are readily understood by the majority of people. Sentences should be kept short and also jerky sentences should be avoided. Uses of descriptive words are desirable but use them with care. The radio listener has only words to guide him and to sketch pictures that he would otherwise see with his eyes. For radio script writing, there are two different types of prescription format-full script and partial script. Full script means that the radio drama or radio news are prepared fully before going on air. On the other hand, the partial script is not written completely before going on air, but it is still enough to start the production.

12.2 : OBJECTIVES

After going through this unit, the learners will be able to

- Explain how to write scripts for the radio.
- List the factors to be taken into account for making a radio programme
- Describe the different formats of radio programme

12.3 : BASIC RADIO SCRIPT FORMAT

In the previous units you have learnt about the different formats of radio broadcasting. Before you learn how to write for radio, this unit again gives you an understanding of the different types of radio formats for which you as a scriptwriter need to create content. These are as follows-

- *Announcements* - The announcements are kind of self-advertisements which ensure to grab listeners‘ interest in the programs of the radio channel. Hence announcement is a basic and essential format of radio.

- *Radio Talk* - Radio talk is the main forte of radio jockeys. It is of either 15 minutes or 30 minutes and it is mostly given by an individual who has an expertise over a particular subject.

- *Radio News* – It occupies a special place in radio broadcasting schedule as this segment is a medium through which important news can reach to the listeners even in remote places and is thus vital for radio programme.
- *Radio Interview*- Radio interviews with experts and achievers are done in radio said interview segment although the visual appeal is not available in radio interview section but the listeners can listen to the experts or personalities.

- *Radio Vox Pop* - Vox pop is derived from the term *vox populi* which means the voice of people. In the case of radio vox pop, journalists go and meet people and get their opinions and reactions which is then aired through radio programs.

- *Running commentaries*- It is equivalent to TV‘s live telecast. For example sports programs, religious functions, and sworn-in ceremonies etc. are some of the events provided to listeners. The commentator should be knowledgeable about this field.

- *Radio Drama* -It is generally of 30 to 60 minutes in a day‘s slot but it can go on continuously for weeks. These serialize radio dramas and they tend to bring change in society in a positive way, such type of radio dramas are called serial drama.

- *Radio documentar*y-It is a non-fictional narration on a wide range of topics for example history, cities, personalities, science, and sports in short everything that can be documented on the radio.

- *Radio feature*-These are also non-fictional account. In some countries Radio feature and documentaries are used interchangeably, the main difference is documentary has an investigative and journalistic approach whereas radio feature has a creative approach and human interest angle to it.

- *Docudrama*- Docudrama is a combination of drama and documentary. It conveys an important message to the listeners in a light and interesting way for example in raising awareness.

- *Phone-in*- This format has gained popularity as it gives an invitation to the listeners to make a call to the station. The objective of this format varies from discussing the matter, posing questions to an expert or taking part in games or sometimes it simply involves asking for a favourite song to be played by a listener.

- *Discussion* -Radio discussions take place around a topic of immediate concern to the public for example importance of voting during election time. The discussion takes form of a debate where a moderator conducts the show.

- *Game show*- These games are based on general knowledge, sports, current affairs, and music. Here the participants are invited to the studio or may call for the purpose of game show.

- *Situational comedy*- Situational comedy or sitcom is one of the most entertaining format is a comedy sequences which based on a particular situation.

- *Radio Magazine*-These are combination of different radio formats such as interviews music and radio feature etc.

12.4 : BASIC PRINCIPLES OF WRITING FOR RADIO

Writing scripts for radio, you need to follow some key principles. This discussions on the basic principles of writing for radio will give you some tips to develop contents for different radio programme format, these are discussed below-

Who are you talking to?

The listener is always the priority. Although there is nothing called as ―general listener‖ because for greater reach we classify the audience on the basis of their gender, age, religion, geographical location, ethnicity and socio-economic groups. Thus, the language will be different and so will be the approach of addressing the listeners. Also, writing for ear is very different as it requires directly talking to the listener. One needs to avoid talking *about* their listeners but should directly talk to them. For eg :- write ―if you want to contact us.. ― rather than saying ―listeners if you want to contact us‖. Thus the use of proper words in your scripts can help you to build a strong connection with the listeners. So, it is always better for radio script writers to understand the nature of the audience they are targeting through their radio programmes.

What do you want to say?

After having decided who to say, the focus should be given on what to say. What information to give or what jokes or anecdotes to tell? Start by listing the points to be made and putting them in a logical order. Build on the effect that you want to create for the audience helping them to visualize the message.

It is important to have a strong opening. In scripting, this part often gets written at the last because these are crucial to get listeners attention. In short grab attention in the first sentence and then give information in the second sentence.

Language

As a radio script writer your basic focus should be on creating connectivity with the listeners through your words. Therefore, the language of the script should be in a way that can create a visual effect on the audience. For that you need to keep your sentences simple and easy to understand. Using of sophisticated words should be avoided as you are targeting the heterogeneous group of audiences. However, while writing, one should underline the words which need to be emphasized upon. A special care should be taken about the *homophonic* words, which sound same but have different meanings. Remember, the audience you are talking to cannot see you, they can only feel the words you are using in your scripts.

Structuring and signposting

It is important to have logic in the sequential flow of the script. Giving it a structure gives a flow for the listeners to grasp it properly. Also, signposting is an important technique in oral communication as it gives a proper transition to the sentences that are being spoken. For examples, phrases like, let me explain, lets now take it , for now, etc. can help the audience to grab the flow of the sentences spoken in the radio programme.

12.5 : WRITING SCRIPTS FOR RADIO

In this unit, you learn how to write a script for news, commercials, public service announcements, documentaries and fictional material, etc.

12.5.1 Format of News Script

There is no specific format for radio news writing. It varies and generally, scripts are prepared in all caps and lines are usually double spaced. The basic format follows certain guidelines:-

- One page of dialogue is approximately one minute of air time
- Each scene should be numbered
- Lines are usually double spaced
- Sound and music cues are triple spaced
- Paragraphs are triple spaced
- All cues are capitalized and numbered. Cue numbers start at number 1 on each page
- Notes for pronunciation, physical action, and position of characters are indented
- The script is typed on one side of the paper only to reduce handling noise
- High quality paper is used where possible as it makes less noise than cheap paper.

For writing news script, details to be given as given below-

- Programme title
- Format
- Station
- Airtime
- Date of newscast
- Anchor
- Reporter
- Feel reporter

The new prescription is split into the following segments-

1) station ID – It includes the theme song of the station and an opening line.

2) Times check – It is generally said to establish the time of news bulletin.

3) Introduction – Generally it is an announcement by the news reader.

Intro: [Jingle or Speech Introduction] *(Duration)*
News Reader: "Hello and welcome to the [Insert Radio Station Name or Segment Name] live show. First up is a story about [Insert Story Topic here]." *(Duration)*

News 1: [Title of your story] *(Duration)*
Introduction: [Summary of Story/Anecdote that captures attention of your listeners]
Background: [Tell the bulk of the Story/Anecdote, including any background info]
Conclusion: [End the Story/Anecdote distinctly and memorably]

End segment.

News 2: [Title of your News Story] *(Duration)*
Introduction: [Summary of News Story]
Background: [Tell the bulk of the News Story, including any background info]
Conclusion: [End the News Story distinctly]

End segment.

4) Headlines – the happenings in various fields are brought under concise headlines.

5) Details – The detailed account of headlines are given in this part. The following example will give you an idea about writing script for news in radio-

12.5.2 Writing for commercials

The sole purpose of advertising on the radio is to sell things. It is designed to target audience and to motivate them to buy the products. Most

commercials are made by advertising agencies with collaborative efforts with specific production houses. The advertisement is then aired through radio stations. However, producers are called to stations to make commercials. The effective advertisement will evoke:

- Interest
- Inform
- Involve
- Motivate
- Direct

What a writer should keep in mind while writing script for commercial in radio is an in-depth understanding of the product or service. Before writing the script you need to do the research about it and you need to have an understanding of the service or product you are trying to sell.

Secondly, identifying the target audience of the product or service is significant because the delivery of the radio ad is completely dependent upon the target audience. An ad directed at children and parents will not sound the same as an ad targeting teens and young adults.

After a thorough research, determining ads length is crucial. Radio ads are recorded and made into 15, 30, or 60 second segments. When writing for a 15 second radio ad, you only have enough time to share basic information about the product or service thus it should be kept simple and crisp. The word limit for a 15 second Ad is 30- 40 words. If you are writing for a 30 second Ad then write in a more creative and compelling manner. You may include more details in a 30 second Ad than in a 15 second Ad. This slightly extended time frame allows writing a dialogue, testimonials, or even a short anecdote. The word limit for a 30 second Ad is around 70-80 words.

The one minute slot provides enough time for copywriters to make a complete sales pitch and to grab the listener‘s attention to ensure the sale of

products and services. The sixty seconds slot gives room for the writer to be more thorough in pitching the products sale. The word limit for a 60 second Ad shouldn‘t be more than 160 words.

Selecting a Style for your Ad after the duration has been decided is the next step in making Radio Ad. The copywriters can choose from a straight announcer ad, or a dialogue ad or may even include testimonials as the products or service deems fit to be.

Lastly, the sound effects and background score is essentials as Radio ads rely heavily on it to help listeners visualize a scene. When incorporated into the copy correctly, sound effects and music can elevate and transform an ad.

Check point

Essential to keep in mind while writing for commercials

- The product or service – what is the specific quality to be promoted?
- The target audience – for whom is the message primarily intended?
- The writing –what content and style will be appropriate?
- The voice or voices –who will best reinforce the style?
- The background –is music or sound effects needed?

12.5.3 Writing for Public Service Announcements.

A public service announcement (PSA) is a short, community-oriented message that is aired at no cost in order to serve the public interest. PSAs are a cost-effective way for non-profit organizations to raise awareness

about pressing issues and countering benefits their organizations provide. They are usually recorded in the segment of 30 to 60 seconds.

Although the PSA is cost freely aired by the Radio but to the audience, it is just another commercial.

Following things should be kept in mind while writing for PSA‘s is to get audience to take a specific action. It‘s to motivate the targeted audience to act. The copywriter should keep in mind whether the issue is relevant to the mass audience and how important it is for the target audience. The language should be colloquial, clear, direct, and focused. Examples of PSA are like awareness on health hazards caused by tobacco, awareness on AIDS , etc.

Secondly, the copywriter should use emotions to make an appeal to the conscience of the audience in order to make them react. A PSA is nothing more than a conversation with the audience. Make your message personal to the audience and strike an emotional chord so as to make it easy for them to relate to. While writing a PSA one should ensure that a single core message is being delivered to audience. This is important as it gives one core idea for the audience to understand and to remember. And, you also must make it very clear.

Using background music and sound effects enhances the impact of the message. And at last the sponsoring organization must be identified within the PSA.

Check point

Essential to keep in mind while writing for PSA

- Attract the attention of your target audience
- Speak to the audience in their own language
- Relate to the audience‘s lives
- Deliver a single core message
- Deliver the message with clarity
- Motivate the audience to act.

12.5.4 Writing for Promotions

Promos are brief messages that build your audience and encourage listeners to tune into your program. The opening sentence should immediately identify the setting. This can be greatly helped by well-chosen effects. Creating something visual to produce a memorable image leading to product recall demands great imagination – especially for the more mundane. In a few seconds of airtime the script must gain our interest, make the key point about the product (in the above case, immediacy) and say clearly what action the listener must take to obtain it.

12.5.5. Writing for documentaries and fictional material

The documentary is a combination of document and commentary. It is a record that authenticates something similarly commentary is the description in a spoken format. Thus, the documentary is a description of a place, event, person or phenomenon to the audience with proper evidence. The evidence here is added with the help of public records, personal accounts of victims, interviews and statistics etc. Script preparation in documentary scriptwriting includes the details and available literature which are collected and eventually becomes part of the prescription for the documentary and it involves in-depth research. Similarly writing fictional drama includes creative freedom where the writer has to keep the objective very clear.

12.6 : TERMINOLOGIES OF WRTING SCRIPT FOR RADIO

1. **Actuality –** A live piece of audio from an event recorded as it happens.
2. **Aircheck -** A copy of a broadcast**.**
3. **Atmos-** Background noise or the ambient sound from a location that is later used as sound effects.

4. **Back-anno (Back-announcement)-** Words spoken by a presenter after playing a song or report.
5. **Bed-** Music for talking over.
6. **Bumpers-**these are used between news and commercial breaks to inform the listener.
7. **Bill Brand** – It is generally said after the news to indicate the name of sponsors.
8. **Copy/ Cue-** A script which is to be read by a presenter or voiceover.
9. **FX – Abbreviations for effects.**
10. **Jingle- It is usually a sing along music pieces to identify a station.**
11. **Live read -** A script read on a programme live by a radio presenter.
12. **Log- Account of chronological list of items of daily schedule.**
13. **Outcue-** The final words in a recording.
14. **Soundbite – A piece of audio**
15. **Teaser** – It raises curiosity and hooks the listener to keep listening to the broadcast.
16. **TX -** Short for transmission

12.7 : SUMMING UP

In this unit, you have learned how to write scripts for radio and its basic formats. Further, you read about basic terminologies of Radio script. There was also a detailed analysis on writing for commercials, documentaries and fictional material. Finally you understood the purpose of writing a script is to indicate what to say, in what order, so that nothing gets left. More than this, preparing a script provides an opportunity of thinking more deeply, giving room to improve and expressing ourselves more accurately.

12.8 : QUESTIONS

1. Discuss in detail about different types of radio format?
2. Discuss in detail about a radio discussion and a radio drama? Give suitable examples.
3. Discuss on what measures should be taken for writing a script for commercial?
4. Discuss in detail the factors to be taken account before writing for a radio programme?

12.9 : REFERENCES AND RECOMMENDED READINGS

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UNIT 13: SOUND RECORDING

UNIT STRUCTURE

13.1 : INTRODUCTION

This unit will introduce you to the various methods used in sound recording. It will also deal with room acoustics that is required for noiseless recording. Sound recording is both an art and science. It is an art because it requires a keen ear to recognise the difference between subsequent beats, harmony, effect of certain sounds/music on the audience and so on. It is a science because it requires training for using various equipment related to sound and thorough technical know-how.

13.2 : OBJECTIVES

This unit is based on the following objectives -

- To explain the process of sound recording
- To discuss the functions of sound editing.
- To describe room acoustics and its importance for a good audio production

13.3 : UNDERSTANDING SOUND RECORDING

Sound is produced when an object vibrates on being struck which causes the air around it to move. It then travels in the form of waves. Sound waves require a medium to be propagated, for example, air, water, etc. Sound travels through the air in the form of longitudinal waves and oscillates alternately. Sound waves have the following properties:

1. **Wavelength-** a wavelength is defined as the distance between any two points in a wave. In other words, it is the length of a wave.
2. **Amplitude-** it refers to the strength of a wave signal. The higher the amplitude, the higher is the sound. Hence, the term _amplifier‘ is used for a device that increases the volume of the audio.
3. **Frequency-** it is defined as the number of times a wavelength occurs in one second. The faster the source of the sound vibrates, the higher the frequency.
4. **Loudness-** the loudness of the sounds(s) we hear is dependent on the frequency and the intensity of the sound.

The phase relationship between two waves is important for the production and reception of sound in its original form. When the sound waves are in phase, they add together and produce a stronger wave. Sound waves that

are out of phase, cancel out each other and this principle is used in sound cancelling devices.

The unit used to measure the loudness of sound is *decibel.* The decibel can be defined as the ratio between two sound signals and the voltage gain of a device. ‗Zero level' or 0dB is the nominal reference level used in sound recording for aligning equipment and setting recording levels.

Sound recording is an art as well as science. The earliest form of sound recording was analogue recording consisted of a diaphragm which vibrated along with the sound waves connected to a stylus. It has now advanced from analogue to digital recording and editing technologies. In analogue, the recording was mainly done on magnetic tape recorders, which were susceptible to damage and noise. In analogue, recordings closely resemble the sound waveform. Its replay system is relatively easier as compared to digital recording. But the disadvantage in such recordings is that it is hard to distinguish between wanted and unwanted signals (noise). Any problem during recording manifests itself as clicks and other types of noises in the audio.

Digital recording converts the electrical waveform from the mic into a binary series, records these in the form of codes. These codes allow the replay system to check if the signal that is being replayed is correct or not. Digital recording can be engineered more easily during post-production than that of analogue recording. Digital sound recording is cost-effective and can be set up in the ease of a small room.

In the digital system, the analogue sound signal is converted to a series of digits called *bits.* A higher bit number means a better signal. The process of converting sound signals from analogue to digital involves:

1. **Sampling-** at this stage, samples of sound signals are taken of the analogue waveform. They are taken at a rate which is at least twice the highest frequency intended to be converted. Each sample is then stored while it is measured, and its value is converted to a code.

2. **Quantising-** *quantising* refers to the process of measuring each sample and comparing it against a scale which consists of a number of discrete values called quantising levels. A greater number of quantising levels makes the measurement more accurate. The difference between the amplitude levels of sample and the quantising can be heard as noise in the sound.
3. **Coding-** during coding, quantising levels are converted, usually into a binary code, which represents themselves as composed of _on' _off' signals. The number of quantising levels required for high-quality audio production normally exceeds 1000.

The different types of sound recording require different formats and technology, which are described below:

1. **Transverse recording-** this was the established broadcast format used until recently. It uses the quadruplex transverse recording format. This uses four heads which rotate at right angles. The audio signal cue track and control track are arranged longitudinally along the length of the tape.
2. **Helical scan recording-** in this, the tracks are recorded diagonally with one fold to each track. Was originally designed for the domestic market. They are now also being used professionally.
3. **Digital recording-** with the advent of computer workstations, sound recording has become digitised. It requires a high density, high rate information.

A working understanding of the properties of sound is required along with creativity. He/she has to create the impression of ambiance, understand the position of sound sources, depth, etc. Sound recordings in the past were limited because of factors like, the analogue tape, recording material, and sometimes from the loss suffered by copying and pressing procedures. The concept of sound *fidelity* is of fundamental importance in sound recording. Fidelity can be defined in terms of accuracy and the extent to which technical equipment is capable of accurately capturing, storing and reproducing sounds. The Fidelity of two reproductions should measure the

similarity between them.

13.4 : ACOUSTICS

The design of sound systems, sound recording studio requires knowledge of room acoustics, and electronics and acoustic devices. A wave that propagates through a vibrating medium such as metal, water, air, etc, is called an *acoustic wave.* when physically short acoustic waves are radiated into large rooms, there can be adverse effects from reflections. Thus the understanding of *architectural acoustics* is important for a sound artist/engineer. Architectural acoustics refers to the study of the behaviour of sound waves in enclosed spaces.

13.5 ROOM ACOUSTIC AND SOUND TREATMENT

Acoustics refers to the properties of a room that determine the transmission of sound in it. It is also concerned with the productions, reception and effects of sound. In recording studios, home theatres, etc., acoustics refers to the management of reflections, which either need to be eliminated or creatively induced to enhance the experience of listeners.

It is important to choose/arrange the correct acoustic environment to produce a good audio recording. Most studios have many musical

combinations. A room that is used regularly for recording should have its acoustics measured and adjusted. Its reverberation should be plotted for all frequencies. Acoustics in such a room can be adjusted by panel absorption units. The most widely used type is the wide band absorber which combines porous absorption for high frequencies with membrane absorption for the bass. These are porous absorbers which include natural fibres, like cotton, etc., or mineral fibres, like, foams, fabrics, carpets, soft plasters, etc. Perforated metal and plastic coverings can also be used for acoustic treatment of the studio/room.

Closed-cell foams are often used as acoustical absorbers. They can be easily cut and sculpted into shapes. Carpets and draperies of different types have different sound absorption characteristics. The heavier the carpet, the more sound it absorbs.

There different types of acoustic treatment are:

1. **Soft Absorbers-** soft absorbers are porous materials that are applied to the walls of a studio. They are used in acoustic treatment as the sound energy of the room gets trapped in the interstices of foam, etc, when the air vibrates. It works well at high and middle frequencies.
2. **Helmholtz resonators-** these are used when the interior is damped.
3. **Membrane absorbers-** these are used to treat low frequencies.

13.6 STUDIO

Any good studio requires good acoustics, with layout, acoustic treatment and furnishings, which aid in a good audio production. A basic studio will mostly reflect the sound that strikes it. When some typical furnishings are placed in the studio, they act as *sound absorbers,* for example, carpets, thick curtains, etc. Sound in such an enclosed space is reflected many times over and a part of the sound is absorbed in each such reflection. The rate at which this happens is called *reverberation*, which is an important feature of any studio.

13.7 DIGITAL AUDIO WORKSTATIONS

Digital Audio Workstations (DAW) software was earlier referred to as computer-based digital audio recording. The first DAW was released in 1978 by a company called Soundstream and used hard disks for storage. It allowed the basic editing of the recorded audio. There were many limitations to this earlier version of digital audio workstation in terms of technology and weren‘t overly user-friendly either. A better user interface

was required at this nascent stage. With gradual developments in computer technology, digital audio workstations also developed. DAW is now used visual related objects and icons in the interface, which makes it even more user-friendly. By the late 1980s, affordable computer platforms had come which had software packages pre-installed that allowed the control and recording of MIDI instruments. The most common of such platforms then were Atari ST, Apple Macintosh, Amiga, Atari and PC. In 1989, Digidesign released the software *SoundTool,* which evolved into *Pro Tools* software later. In 1990, the company OSC, which was distributed by Digidesign released its Deck software, whose functions were similar to that of SoundTools, the difference being that Deck allowed four simultaneous tracks instead of two.

Digital audio workstation software is mostly about real-time playback and editing. Most studios today use the DAW system. It has many advantages over the multi-track recorders:

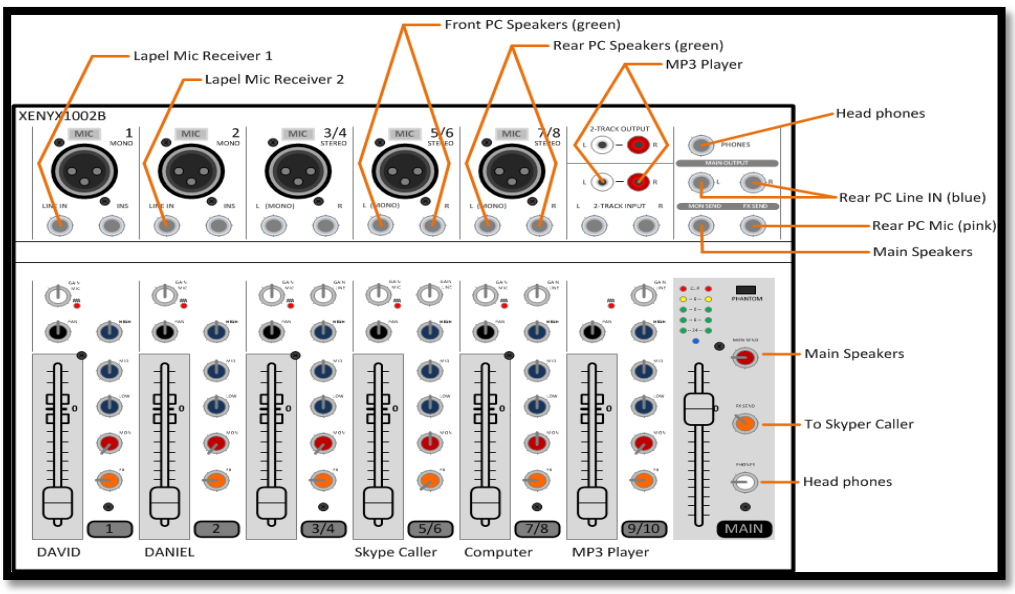
a. DAW software gives greater freedom of how to use basic recordings than did the earlier version of digital multi-track recorders.
b. Cutting and pasting of content have become easier.
c. When working on the bars and beats scale, the DAW software can be set up in a manner that the position of any cuts that were automatically moved to the next bar. When working on a time-based scale, the cuts can be snapped to the nearest second/frame.
d. It offers automation and recall facilities. Automation data is often linked to the underlying audio so that, if we move or copy audio, the automation data also moves with it.
e. The greatest advantage of DAW software is its graphic overview of the recordings and editing.

13.8 AUDIO MIXER CONSOLE

Audio mixer is a generic term used for a console. It is an equipment to which all the sources in the studio and transmission booth (microphones, tape decks, etc.) are connected. Audio consoles are used for recording, monitoring and editing. Audio mixers are usually described in terms of the number of channels they have, which are the route through which each audio file reaches the console during recording/production. The more the channels, the more flexibility a console offers. A mixer can have 12, 16 or even 24 channels. A standard, professional audio/console mixer used in studios has the following features:

1. It has at least eight channels, i.e., 3-4 channels for microphones, for the CD player, tape deck, etc.
2. Each of the channel should be able to perform equalisation, _pre-fade' listening, a fader.
3. A master fader should be there to control all audio sources. Channels faders control individual sources.
4. Auxiliary features such as monitoring, cuing amplifiers, etc.

Fig 13.1 : View of a standard audio console.



The controls available on a mixer channel are listed below:

a. **Attenuation-** input gain or attenuation refers to the audio signal when it enters the channel. In most mixers, a potentiometer knob adjusts the level of audio gain from all input sources. Input gain is one of the first controls where the signal enters the mixer. It is a knob that adjusts the audio signal level before it reaches the other parts of the channel. It is usually set once and kept at the same level. Adjustments in volume after this, is made by the channel fader rather than the input gain.
b. **Equalisation (EQ)-** most mixers have two equalisation controls, one each for high and low frequency. It is mostly used to correct signals The most basic type of equalisation is the treble/bass control. Treble controls high frequencies and bass adjusts low frequencies. The different types of equalisation are:
    i. **Graphic Equaliser-** in this equaliser, separate slider controls are available for different frequencies. Each slider is used to adjust one frequency band.
    ii. **Bell equalisation-** it boosts a range of frequencies around a certain point. Frequencies that are farther from this central point are affected less.
    iii. **Shelving equalisation-** in this type of equalisation, frequencies that are below or above a certain point are boosted with the same measure.
    iv. **Parametric Equaliser-** it uses bell equalisation. Usually with knobs for different quantities.
c. **Auxiliary channels-** they are also called *aux* channels and are used to route a copy of an audio signal somewhere else.
d. **Pan-** each mixer channel can be panned left or right.
e. **Mute-** also called *solo* or *PFL* is only used to monitor a channel.
f. **Slider-** it is used to set the channel signal.

13.9 AUDIO EFFECT

Audio effect or sound effects is an artificially created sound that is used to create an artistic experience in an audio production. They are used in radio ads, drama, films, theatre productions, TV shows, etc. Sound effects are used to create mood, express emotions, produce ambient sounds, like, door opening, birds chirping, and so on. Sound effects can be created by recording natural sounds or digitally using the software. The purpose of audio effects is not to create but to *suggest* reality. The most common types of audio effects are discussed below.

Reverb was one of the first effects that was used in audio recording, as early as the 1930s. The prolongation of any sound signal due to reflection is called reverberation. It can be created in an enclosed space. It is used to give more fullness to an audio signal.

Chorus effect is used to make an audio signal sound like it was produced by multiple sources. It works by adding many short delays to the signal, with variable lengths.

Phasing effect is used to create a sweeping, whooshing effect. It is created by mixing the original signal with another version of itself.

Flanger is an audio effect that creates sounds like that of a jet engine. It is related to musical notes.

The term _foley‘ in sound effects refers to the sound effects recorded live for an audio production or added during post-production. Foleys make the sound effects more realistic. They are mostly background sounds.

Sound effects can be categorised into the following:

1. **Spot Effects-** these are effects that are created live. They are usually produced at the time when a performance is happening, to match the action. These include sounds like footsteps, telephone ringing, etc.

2. **Recorded Effects-** these are effects that cannot be produced in the studio, for example, sounds of cars, song of birds. A radio/audio production requires both recorded and spot effects.
3. **Library Effects-** these effects are already available in an external storage.
4. **Surrealistic Effects-** surrealistic effects are exaggerated and are often different from other ordinary effects.

13.10 SUMMING UP

Sound recording technology has come a long way since its inception. The tools and equipment for recording and editing have become easier and much more can be done with even more cost-effective computer workstations. Studio consoles now have a vast range of controls that allow editing of damaged files. Restoring old recordings, re-mastering them to suit the present audience is gaining prominence. Even home computers can be used for recording and editing purposes. Sound editing software now use graphic interface which displays the audio information in wave form.

13.11 QUESTIONS

1. What is sound recording? Explain the process in brief.
2. Explain the significance of digital audio workstation.
3. What are some of the common sound effects used in radio studios?

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UNIT 14: NEWS AND EDUCATIONAL PROGRAMMES

UNIT STRUCTURE

14.1 INTRODUCTION

Radio, like any other medium – whether mass, traditional or social, has a major responsibility to render to the very society of which it is a part of. To fulfil this obligation, news and educational programmes must be given adequate prominence. This will ensure that a balance between these on one side and pure entertainment and infotainment programmes are maintained for the ultimate benefit of the target audience – the masses in the society.

Radio broadcasting in our country is basically services from AIR till about two decades ago. It has been maintaining this balance in a judicious manner winning the heart of all concerned. It is a common saying that media is an

_open platform‘ or _open university‘ which has to put up any and every issue concerning the society and show the masses the way forward. Taking a cue from this aspect, AIR has provided quality services in these two sectors over the decades till date.

14.2: OBJECTIVES

After thoroughly going through this unit, you shall be able-

- To explain the significance of broadcasting of news and educational programmes
- To describe the importance of background study or research for developing this sort of programme formats

14.3: RADIO NEWS

–The activities of the media should be an input in the nation-building tasks. They must strengthen the confidence of the people, promote the concept of self-reliance and encourage forces of unity and National harmony‖, Policy Guidelines on News by Union Government of India, 1980 (Baruah, 1983).The purpose of news and educational services programmes of AIR can be easily understood from this statement.

The importance of news can hardly be over emphasized ever. Specially, during the days when there were hardly any convenient and wider existence of newspapers – around the 1930s in the country. So, delivering news about happenings around the world and also a country of truly continental proportions in those days was a yeoman‘s service from radio. According to the All India Radio website radio news service started much before AIR with the first-ever bulletin broadcast on July 23, 1927 by a private

broadcaster. In August same year, another bulletin in Bengali was started. So the long journey began with a small step. From March, 1937 broadcasting as a whole became a Government of India operation designated as the Indian State Broadcasting Service (ISBS) to be renamed All India Radio on June 8, 1936. (Please refer to Annexure I for details).

News services received major impetus in 1936 when – –the *first news bulletin from the Delhi Station went on air on January 19, 1936 coinciding with the starting of its transmission. Besides, news bulletins in English and Hindustani, talks on current affairs were also started from the station in both the languages. (Ann. I).Further, the advent of the World War II facilitated its growth along with launching of the External Service Division".*

In addition to news services, quite a few educational programmes in different areas of life have been the major characteristics of AIR over its journey of more than eight long decades till date since 1936. It will suffice to say that the educational aspects of the programme contents were much more important than entertainment for the founders of the organization in those days which is still going intact in spite of many challenges.

It may be mentioned here that the Community and Campus Community Radio stations are not allowed to broadcast news and current affairs programmes. However, they are allowed to broadcast news bulletins of AIR if they want to do so.

14. 4: NEWS BULLETIN

Simply speaking, a news bulletin for radio is a collection of most important happenings of the day targeted for its audience. Being a spoken word medium, the bulletin is to be heard, to be taken by the ear (AIR NSD Style Book). –It is a spoken word medium that enjoins us the need to write in the spoken word style, as though we were conversing with someone.

The usual speed for the news reader at which it would be soothing and

convenient for the listener is approximately 100-120 words per minute. This makes it about 600 words for a five-minute bulletin or 1200 for a ten-minute bulletin. Experienced newsreaders with long years in the job may further squeeze in a some more words of course.

When we compare radio with print media, few important difference crop us.

Such as,

- Print or newspapers / magazines have a huge amount of space at their disposal enabling them to accommodate so much of news, views etc. on an everyday basis. But a radio bulletin has the capacity to accommodate just about one per cent of the usual number of news items in a newspaper. Hence, only very important news items depending upon various factors can be chosen to be included in the bulletin.
- The language has to be very crisp, short and to the point. There is no luxury of an elaborate and literary language to be given in a radio bulletin. This would take up a lot of space and distract the listener from the actual point of news.
- While a newspaper usually has a 24-hour or 12-hour cycle, radio has the advantage of broadcasting a bulletin every hour (if necessary) though it is usually done in gaps of several hours. Hence, there is a lot of scope for periodically updating any developing news item if needed on an hourly or bulletin-to-bulletin basis.
- Like TV, radio also has the advantage of broadcasting _voice over' messages within the bulletin itself. This is additional information from its correspondents or journalists at the site or spot of any happening and directly reporting about new developments and events. This gives a freshness and urgency to the news bulletin about any important event.
- Of course, in this regard, it must be kept in mind that the journalist

at the site in must not repeat any of the information already delivered by the news reader. The journalist should provide only newer information or development. Otherwise the credit of the bulletin would go down and things would become repetitive.

- News items should be read-only in ‗present tense' as far as possible to give a sense of immediacy.
- At times of special events like presentation of country's or state's budget, elections, major festivals etc. the duration of the bulletin may be increased to accommodate more news items on the event. Here also, the same logic and principles of news compilation shall apply without any exception.
- While we read a newspaper or magazine space or gap in between the words may not bother us much. However, in radio, a gap of even one second or half a second gives our ears a jerk which is not at all advisable. Thus, the newsreader should take every possible measure to deliver the contents without such hiccups.

For the convenience of news broadcasting, the News Services Division of AIR has established several Regional News Units (RNUs) at different places of the country. These units prepare and broadcast news bulletins of different duration in regional languages and also weekly commentaries on current affairs etc. on a regular basis. Besides, these units also provide news contents on important and emergent issues to the national news bulletins from AIR NSD head office. The General News Room there is open round-the-clock everyday which keeps a record of all important news items happening around the country and the world. The NSD receives its news feeds from AIR's own correspondents, part-time correspondents and the several foreign correspondents posted at different strategically- important locations of the world for a better news service.

In addition to proper news services, quite a few commentaries, spotlights on many specific, topical and timely issues are broadcast from the AIR stations on a daily and weekly basis for enlightening the listeners to the maximum possible extent.

Facts –

The News Services Division (NSD) of All India Radio disseminates news and comments to listeners in India and abroad. From 27 news bulletins in 1939-40, AIR today puts more than 510 bulletins daily around 52 hours in 82 languages/dialects in the Home, Regional and External Services.Out of these, 89 bulletins are broadcast daily from Delhi in the Home Service in English, Hindi and other Indian languages. The 44 Regional News Units (RNUs) put out 355 daily news bulletins in 67 languages. In addition to the daily news bulletins, the NSD also mounts everyday a number of news-based programmes on topical subjects from Delhi and some other RNUs."

{Source - www.allindiaradio.gov.in

14.5: EDUCATIONAL PROGRAMMES OF RADIO

–The educational role of radio – its ability to bridge the literacy barrier was seen early enough. While the accent of all programmes – whether for the general listener, or specific groups like farmers, women, children, students, teachers, or industrial workers, is on education in the widest sense, some programmes are planned with a specific educational objective. Broadcasts specifically for schools started as early as November, 1937 from the erstwhile Kolkata station on interests shown by Calcutta University and Dept. of Education of Bengal of those days,‖ Baruah, 1983.

The post-SITE experiments have demonstrated that radio had the potential for brightening up the primary school environment and also reduce drop outs So the policy at that point of time was to put more emphasis upon broadcasting for primary schools without giving up on other higher levels of the school system. (Baruah, 1983).

It may be mentioned here that for boosting the educational programmes, AIR identified 65 of its stations across the nation in the 1960s for setting up a special unit for this purpose which included – six from NER. These included all the capital AIR stations in the states of Assam, Manipur,

Meghalaya, Nagaland and Tripura and also Dibrugarh (Assam).

The role of AIR was so important and substantial in this field that even as early as 1975, it provided a strong support to 1,20,000 teachers of Kerala for an in-service training in a first of its kind of radio-cum-correspondence course. Further, support has also been provided to the BA correspondence programme of Delhi University since 1966. Many of these programmes are continuing even today with the adequate and enthusiastic participation of all concerned. Even in the field of non formal education the synergy between this medium and the educational programmes is increasing on an ever-growing manner. This is a highly encouraging and positive development for all concerned.

14.6 : INTERVIEW

An interview with a prominent person from any field deemed significant and relevant is also an important component of educational programme segment for radio broadcasting. In this regard the following points need to be kept in mind while preparing for the activity –

* Select such a personality from a list of similar persons in a field which is relevant considering factors like – his or her contribution to the society or profession, importance of the activity for the society at that point of time etc.

* The questions to be asked should be composed only after properly studying the background of the person with aspects like his or her achievements in that field, current relevance, long term contribution to the field etc.

* For doing this, a detailed study of the person‘s background is necessary so that no important details are left out.

* However, the real challenge is to prepare a concise interview for the listeners which should be interesting, crisp, lively devoid of any unwanted

language, reference to something unpleasant etc. so that no bad feelings crop up during the process.

* The anchor person or interviewer should think of or try to visualize all possible negative or unwanted developments which the conversation might lead to so that controversies can always be avoided.

* Further, always keep some room for a few spontaneous developments which you may not have foreseen while preparing the background. Something unusual that the person may reveal which would be a pleasant addition to the already-acquired facts and figures. This shall give a different colour to your efforts in a positive way.

* You may be working on a regular or contractual or part-time basis and has the responsibility of the interviews section. Then you must keep your eyes and ears open at any moment of time for catching hold of any prominent personality, celebrity coming to the city on some business. This shall help you catching up with the person and try to take an appointment for an interview. While it may not materialize on every occasion, it is sure that you would achieve success at least on a few of them. If you can take interviews of such prominent personalities, of course with prior permission your superior authority, it would be to your credit.

14.7: DISCUSSION

A discussion is another kind of educational programme in radio broadcasting which has a lot of impact on the listeners in any field. Under normal circumstances, a discussion is carried out in the studio on a particular topic of importance from the society‘s point of view inviting well-known experts in that specific area. An anchor person coordinates the discussion and tries to elicit advises and opinions from the experts which would be of interest to the listeners concerned far and wide.

Sometimes, a programme called _radio bridge‘ is also conducted. In this

programme, experts in the field are requested beforehand to be ready at studios of different AIR stations for a discussion on some specific issue. And at the appointed time, all of them are connected to discussions on the given topic. This enables people with expertise in that area from various places to express and exchange opinions for guiding the listeners towards meaningful learning of tips and skills.

At times of crisis situations like the development of communicable diseases, floods, various problems of social relevance etc., experts from these fields are invited to the studio for advising the people about steps and precautions to be taken to tide over the situation. Topics for discussion can be anything under the sun. The only criterion is that it should be relevant to the society at that point of time having the potential to offer something positive and encouraging the listeners.

It is to be noted that every person may be an expert in a certain area of profession or trade. But when a group of such experts meet together at a common platform it is usually expected that many more interesting and important knowledge bits would emerge out of such discussion forums. These would facilitate the common persons as listeners to pick up the right kind of advise. And thereby adopt it in their lifestyle so that it can be improved further along the way.

14.8: FARM/AGRICULTURAL PROGRAMME

–If Akashvani may take credit for its role as an agent of social change, it can justly do so in the field of rural and farm broadcasting‖, Baruah.

Ours being a primarily agricultural country, it is only natural that agricultural or farm programmes covering all of these areas should have an important place in the overall broadcasting scenario of the society. And living true to this saying, AIR, in reality, has been providing many programmes in an unending series of such activities throughout the years till date.

The famous green revolution of the country could not have been so successful without the prominent support of radio – AIR. In fact, its role was so significant and overwhelming that a special hybrid variety of rice - ADT-27 became so popular that later on this seed came to be known as Radio Rice only across the country. The history of this specific genre of broadcasting began way back in 1935 when it was experimented in the North West Frontier Province of pre-Independent India. This decades-old association continues till date with more and more meaningful effect every passing year.

Programmes in these fields are produced in different formats and styles. Such as, in some programmes, experts from universities, colleges and institutions offering academic programmes in agriculture, veterinary, horticulture etc. are invited to the studio. They offer relevant advises about problems faced by the farmers while farming their land. Here, the members of the farmers' community write letters to the person concerned in the radio station and after compiling their questions, the station gets in touch with relevant experts for advice.

Many a times, radio personnel visit particular villages or farming areas for identifying any specific problem confronting the farming community there and later facilitate contact with experts for solving those issues.

The AIR stations of Guwahati and Dibrugarh had broadcast a very popular programme called _Letter to the Father'. In this slot, a person posing as a farmer would write a letter advising the son to adopt particular steps for farming for a specific crop or system of farming. This has been one of the very highly popular programmes so far with these radio stations.

Sometimes, well-established and reputed farmers who have been successful in any area of farming, fishery or livestock would be invited for answering queries and offer advice to inquisitive entrepreneurial farmers.

Most of the full-fledged AIR stations would have a Programme Executive specifically assigned for _agriculture / farming' areas.

Looking at the importance of the subject and emerging popularity, UNESCO also chipped in with AIR in setting up Rural Radio Forums. These were groups of rural radio listeners who would listen to such broadcasts in groups and discuss amongst themselves for a better understanding of whatever instructions were being issued.

Keeping up with this trait, AIR also established the Farm School which arranged short term training sessions for farmers in various aspects of the profession in different locations of the country. They were successful in infusing important improvisation and better skills for developing their lot in reality.

14.9: EMPLOYMENT NEWS

This is one area which is important in the area of radio broadcasting. AIR Dibrugarh used to broadcast a few employment new capsules immediately after the morning Assamese news bulletin daily. This was done so that it could get a better spread of listeners than at any other time of the day or night. Radio being a prompt service compared to print media, it proves to be very convenient to broadcast employment news through this medium. It ensures better reach and clarity for the targeted audience.

The idea is that a major portion of the radio‘s listeners comprises the youths among whom the need for landing a job is so important. That is why this segment of broadcasting through radio also is so important in terms of facilitating so many thousands of youths to look for a job in a proper manner.

It is to be noted that being an organization under Prasar Bharati, AIR broadcasts employment news mostly from government departments or public sector undertakings etc. rather than those from the private sector.

Also, the authenticity of the organizations on whose behalf these employment news are broadcast is assured because AIR is providing the information.

14.10: MANN KI BAAT

This is a specific tailor-made programme of addressing the citizens of the country by the Prime Minister Narendra Modi once a month primarily through AIR. First launched on October 3, 2014 it has been continuing with adequate popularity over the years. The prime minister talks about the different issues and aspects of public interest and government‘s plans for the people in general through these episodes. A few important characteristics of this programme can be identified as ---

- The Prime Minister himself addressing the masses on a regular basis gives a lot of

encouragement to the masses for whom this office is the highest in terms of any authority. It is quite re-assuring for them to listen to the practical head of the state than anyone else talking to them and showing concern for the latter‘s grievances.

- The language chosen being Hindi for the broadcast is another major factor of its popularity as a

majority portion of the country is comfortable with this language.

- The Prime Minister picks up interesting and encouraging success stories, anecdotes, good deeds from amongst the people of the country and refers to them in the speeches or discussions. This can also be loosely termed as an effort in _Development Communication‘ (Deorais, 2017). This step enables the sharing of positive developments which is supposed to enthuse more people to take these as role models for furthering the development of their lifestyle.
- Choosing of radio rather than any other medium also points out to an important aspect. This is the medium of the masses as a huge majority of the people of the country have to reach and are also

accessing it than any other medium. This ensures a far better are reach and access of the messages by so many people than anything else.

- The medium of radio also allowed an important privilege in terms of facilitating receiving the Prime Minister‘s voice directly without filtering or gate-keeping by any editorial person in between as it happens in case of the print media – newspapers and magazines. This allows the people to have a direct connection with their leader – the Prime Minister.
- In addition to fulfilling its own perspective, the medium of radio is also receiving a major boost to its fortunes as it is also gaining in terms of popularity with the discussions.

In this regard, a parallel can be drawn to a somewhat similar broadcasting series by former US President Franklin D Roosevelt for a few years from 1933 onwards. Popularly known as the _Fireside Chats‘ the former President discussed various issues in connection with the Great Depression of that country around the late 1920s and early 1930s, World War II among others. These broadcasts have become widely popular. The popularity and access that these chats received can be gauged from the fact that starting with 41 % cities of the USA having a radio broadcasting station in 1932, within five years, the number of cities having access to radio increased to 90 %, bolstering the former President‘s popularity to a new high along with public confidence.

Maan ki Baat is also proving to be hugely popular over the years and is set to be on a steady path of growth in the near and distant future also.

The team behind this programme select issues and events to be discussed in each episode of the programme keeping up with latest developments in different fields of life from across the country. And also those issues with which people can connect and identify with in a convenient manner. Also those that people can take a lesson from and apply in their own life for improving their general standard of living.

A few examples would make it clear. E.g., congratulating a ragpicker‘s son for clearing the entrance examination for undergraduate medical programme at AIIMS, extending his heart-felt concerns with the devastating floods in Kerala, welcoming the new India youths among others. All these techniques make the programme a major success from all counts.

It can be said that this new experiment of the programme is a novel and interesting one which should be encouraged and taken to newer heights in the times to come.

–On the other hand the programme is open to new issues, discussions, problems and ideas that are put forth by the people for whom the programme is devised. It is a popular form of development communication. It involves both diffusion of innovations as well as the participatory model. Also, the show has led to the revival of AIR,‖ Deorais, 2017.

14.11: PHONE-IN PROGRAMME

This is another educational programme of AIR which has been proving to be extremely popular with every passing year since its launch. The uniqueness of this programme is that here any listener can make a phone call to a specific number already advertised and request for a particular service.

Radio being a mass-oriented medium of communication, this is a great opportunity for the medium to increase its footprint or popularity among the masses cutting across barriers of all kinds at all.

When a person or listener calls the station‘s number, the radio personnel starts a conversation with the caller for some moments during which the person‘s choice of items are traced in the library and made ready for broadcasting. This also increases the belongingness of the person with the radio station because of the conversation.

This is also useful for a majority of the programmes including agriculture / farm issues, youth affairs, woman‘s issues, health, news etc. what not.

The huge popularity of this format is also because any person can request for any programme (within the feasible limit only) and also his or her name is broadcast which becomes known to many who would care.

As it is obvious that a huge number of listeners try to call the radio station at that particular spot of time, there occurs a major rush for getting the line and sometimes to mitigate this problem, two or three separate phone lines are kept open for the purpose.

Looking at the big popularity of this format, it would be good to have this programme remain intact in the radio broadcasting scenario of the country for the future so that maximum number of people can get its benefit.

The AIR maxim of _Bahujana Sukhaya, Bahujana Hitaya‘ can acquire a new meaning under this programme format.

Today, AIR broadcasts news bulletins and other developmental and educational programmes in all the major languages of the country and some dialects. Some of these may not even be included in the Schedule VIII of the Constitution of India. This reflects the commitment and prime contribution of the medium towards the nation relentlessly since the last more than eight decades.

ASSES YOUR PROGRESS

1. If you possess a radio set at your home it is welcome. Even if you do not posses, then hire or procure one for yourself.
   Now, carefully listen to all the types of programmes described here above and find out their special characteristics. Following this, also try to prepare or at least plan for preparing such programmes on your own so that you can have a feel of the programme.

14.12: SUMMING UP

In this unit we have discussed in details about the news and educational programmes of radio which should allow you to have good grasp of their significance and manner of preparations. Radio news, discussions, interviews, farm and agricultural programmes, employment news, Maan ki Baat all these specific programmes have huge potential for the future to attract as well as inform and make the masses literate and educated. Hence, there also lies a great responsibility on the shoulders of the people preparing them in the radio stations. This is because they need to be very particular about making ready an end product which is error-free and also perfect from all aspects. This medium enjoys an enormous following and potential for reaching out to innumerable masses through its broadcasts. Hence, it is very necessary to treat the activity in a serious manner. The responsibility is to make sure that no mistake or deterioration of quality under any circumstance is allowed. This shall lead towards causing a major dent in public‘s confidence in the medium. All these programme formats also present us with a far-reaching potential for maximizing our connection with the masses like never before. Thus, you must take these lessons as a way of preparing crisp, lively, effective and meaningful programmes in the future so that the worth of this medium is proved beyond doubt at all.

14.13: QUESTIONS

What is your understanding of a radio news bulletin and how can it be prepared ?

2. What is _Educational Programmes of Radio ? Give a few examples. If you are given responsibility of producing such a programme, how would you proceed for this purpose ?

3. What is the significance of an interview in radio ? Pick up one prominent personality from any field of life and prepare a questionnaire for interviewing that person.

4. Why are the Discussions relevant and important for radio ? Suggest a topic for such a discussion and a few experts in this field for this purpose. Also draw up a few questions for setting the discussion rolling at the initial stage.

5. What is the importance of programmes on the Farm or Agricultural sectors for a country like ours ? Give examples.

6. What is Employment news ? What significance it carries for radio and the listeners ?

7. What do you know about the Mann ki Baat programme ? Discuss.

8. Why is the Phone-in programme format becoming more and more popular over the years ?

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