JLS 742

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Introduction I wish to welcome you to MAC242, Foundations of Broadcasting 3 unit course for postgraduate students in Journalism. The materials for this course have been developed in line with what obtains in Nigeria.

Taking you into the world of electromagnetic spectrum; and

• Acquainting you with the nature of radio and television, the broadcast equipment and personnel that make broadcast transmissions achievable.

Course Objectives

The unit objectives are stated at the beginning of each unit. By meeting the objectives you will also have met the aims of the course.

Define broadcasting

Identify the roles played by the media concerned with broadcasting.

Explain the production process

Course Requirements To complete the course you are required to read the study units and other related materials. You will also need to undertake practical exercises through visiting radio and television studios. The exercises are to aid you in understanding the concepts being presented. At the end of each unit, you will be required to submit written assignments for assessment purposes.

At the end of the course, you will write a final examination. Course Materials Course guide Study units broken down into 25 units iii.

Study Units

There are 25 units incorporated into 5 modules in this course. The modules are listed below.

The Concept of Broadcasting What is Broadcasting?

The Production Process in Broadcasting.

Assessment File

An assessment file will be made available to you. A marking scheme has been provided.

Strategies for Studying the Course

You will be required to study the units on your own. However, arrangements have been made for you to meet with your tutor for tutorials on a regular basis in the study center. Also you can organize interactive sessions with your course mates. Presentation Schedule The dates for submission of all assignments will be communicated to you.

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You will also be told the date of completing the study units and dates for examinations.

How the atmosphere affect broadcast signals. Broadcasting has been defined as the transmission of information through radio waves from a radio or television station, to the audience in far and near places, through their receivers, which help in decoding such information . Similarly, broadcasting can also be defined as the dissemination of information by an organization to a large widely dispersed heterogeneous audience through their radio or television receivers. Similarly, broadcasting, from its definition and meaning, is distinguished from “narrowcasting” – the transmission of special interest programmes too much smaller audiences.

News Function

Broadcast stations survey the environment and give reports or information about things going on in the environment, especially those things that are likely to have impact on people, and those things that are new and of human interest. Broadcast media enable us to know what different segments of the society are thinking. Education function can deal with formal, non-formal and informal learning.

Propaganda Function

Governments have often used radio and television as megaphones to exaggerate performance or make something out of nothing.

Encoding and Decoding Broadcast Information

At the other end, decoding takes place, reproducing the original communication with certain degree of fidelity. The communication channel in the case of sound broadcasting is a group of radio frequencies. Radio, like visible light, is a form of radiant energy, which can travel through space. Radio energy must be generated.

Information must be encoded by modulating the energy and imposing on it an information pattern, such as a pattern of sound energy. The modulated signals must be detected at the receiving end. The signals must be demodulated to recover something approximately the original pattern of information in its original form. It consists of ionized atmosphere, that is, air whose atom have a characteristic electricity property induced by the action of the sun’s radiations.

Natural phenomena such as the ionosphere and bad weather can distort these messages or prevent them from reaching us. Apart from the general functions of broadcasting which are to inform, educate and entertain, radio and television stations perform six main functions.

[...]

After having known what broadcasting is in Unit 1, we now zero-in to radio, which is a major channel of broadcasting. Since radio is a vital instrument for communicating information, it is

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important to know its advantages over other media, its characteristics and how to effectively utilize radio as a veritable means of communication. What radio broadcasting can be used to achieve. Advantages of Radio Radio broadcasting is one of several means of getting a message, to a large number of people at the same time, because it transcends the boundaries of space and time, and also leaps across illiteracy barriers.

In terms of general availability, radio is the leading mass communication medium. Radio stations are comparatively inexpensive to run, after the initial capital outlay of transmitters and receivers. Radio can talk back to its listeners by telephone, where the technical facilities exist, thus putting members of an audience in touch with one another. Radio is flexible, because a scheduled programme can be dropped at short notice and replaced with something more topical or more urgent.

Within limits, radio can persuade effectively influence large audience, thereby contributing substantially to the building of a national consensus. It is a powerful instrument in the area of public enlightenment, on health issues, family planning, cultural re-awakening, business improvement and other social development issues. Radio signals can reach almost all corners of the world, with an instant message. The message can be understood easily.

Radio is very profitable for group listening, because of the discussion which naturally follows. Radio can reach the farthest areas of a country with educational programmes that stimulate the Normal process of learning. More schools and more people can be reached with radio broadcast through careful planning and imaginative programming. Effective programming should take into account the traditional techniques communication in the developing world and apply them to modern radio.

Although radio is dependent only on sound, it follows therefore, that the listeners must be able to hear distinctly and accurately for it to benefit them. The quality of sound in the studio and at the receiver must be of the highest, so that listeners will not lose interest in the message being sent across. Producers of radio programmes should ensure high quality programming, bearing in mind the idiosyncrasies of their audiences. Radio is a vehicle for projecting personality, through which it attracts and holds an audience.

Voice, mannerism, identification with the listener, the things the radio announcer or presenter says and how they are said, are some of the factors that go into making a radio personality. Good personalities heard throughout the day, in every phase programme activity, give a station a personality of its own and help win and hold audiences for the more serious business of broadcasting.

Objective Of Radio Broadcasting

It has evolved from transmitting programmes from the home countries of the colonial masters to what were once colonies. Radio in this sense had been effective in brain-washing the Africans on what their colonial masters were doing to cater for their interests. At independence, the African leaders were to know the effect of broadcasting on the people and so used it as government megaphone. Broadcasting is a medium that could be used for a lot of purpose.

It could help inform people about government orchestrated programmes. It could also help to report the activities of the people for government attention and because of the high illiteracy level, broadcasting is preferred to other media of communication because of its flexibility in programming. Government policies could be translated into languages and broadcast to the people. Over the decades, broadcasting in Africa has served as the channel for government propaganda.

Radio for example has been found to be very useful, because it is popular with the rural population and also enjoys the intimacy which other media of communication lack. In the developed world, radio has been used for developmental purpose. Programmes that are meant to achieve these developmental purposes have been conceived and executed at the various levels of the society. However, in Africa, radio has been seen as a one-way communication channel in which the government communicates to the governed without an appropriate feed-back system.

This is contrary to Budd Hall , who said that communication should be a four way process. That the urban people could communicate to the rural people . That the rural people are also at liberty to communicate with the urban population. Could also communicate amongst themselves Rural-Effective Utilization of Radio Broadcasting Radio is a singular medium that is most effective for mass mobilization.

A number of scholars have discovered that the reason for the failure of past mobilization efforts is that urban broadcasters have designed messages which have no relevance to their audiences, since these programmes are not backed by research. The citizenry could be educated about government policies that really have a bearing on their lives. The radio could be used to introduce illiterates to some formal education, through teaching them some basic hygiene principles, environmental cleanliness and lessons in preventive health care. This could be augmented with simplified literature as follow up.

Tanzania, Uganda, Sudan and to some extent Ghana have been involved in using radio as a medium for mass education. Radio could be used as an instrument for formal education. Radio Nigeria tried this approach in the 60's and early 1970's before the idea was terminated prematurely, either because of lack of funds or ideas. While it lasted, formal schools were informed of time of broadcasts of the various subjects which were meant to prepare students still in school and drop-outs for examination in the General Certificate of Education .

Radio could be used in cultural innovation or diffusion. Radio does not succumb to rigid programming because more urgent issues could be discussed at a moment's notice. Music that softens the nerves could be played to lift the audience from their stressful moods. While the entertainment value of drama is high, it has been discovered that it is a potential tool for development.

Onabajo in a study of the Badagry Local Government area's utilization of the broadcast media did find out that drama was the most preferred programme type by the people of the area.

In what ways can radio be effectively utilized?

It should not just be used as an entertainment medium, but a means of transmitting development messages to Nigerians especially those who reside in rural areas. Radio is the leading mass communication medium in terms of general availability. It can be used effectively for mass education, formal education and in cultural innovation and diffusion. Radio is the most effective for mass mobilization and has a great capacity to disseminate information fastest as well as entertain its audience.

Features of Standard Television Script

You are welcome to the world of television, whose aesthetics make it a medium to relish. The popularity of television is because of its nature of sound and picture and the peculiar broad appeal to all segments of the audience through the various programmes offered.

Know what it entails to write for television

Television is not just a mere transmission device, but it is a medium, which brings its massive audience into a direct relationship with particular sets and values and attitudes. Because of the medium's intimate qualities and the viewing environment, audiences tend to be involved with television stars and personalities in a unique relationship . For actors who portray a role, the intensity of the identification can result in viewers confusing fantasy with reality. The predominance of the close-up shots and the ability of the camera and microphone to detect, capture and magnify the slightest gesture, expression or vocal inflection, means that a performer or presenter, must always behave maturely on screen.

Television is often a high-pressured operation with close deadlines, limited budgets, rushed rehearsals and short production periods. An unexpected technical problem can force sudden changes in the script, revision in the blocking and a reshuffling of rehearsals and shooting schedules.

Writing For Television

Scripting on television aims at establishing a programme format, indicate the programme content, as well as helping to organize important production information. Every production staff should be familiar with script formats and should be able to translate written material into a television script or make inputs into a programme script. Since television is a visual medium, the television script writer must be comfortable working with images and words. Sometimes, script writing deals with very little spoken copy, because the images may convey the message alone, or in combination with appropriate sound effects or music.

The visual quality of television notwithstanding, a television script must be written for the ear and not the eye. Sentences should be kept simple, direct and to the point. It is advisable to write in informal style, as much as possible, sometimes using slangs and colloquial expressions when necessary. Otherwise a stiff formal style may interfere with the audience understanding of the message.

For the viewing public to follow the script, the television producer must establish a clear logical sequence of presentation. The use of language and style in scripting also depends on the

production situation and the intended audience. A news bulletin directed to a local audience will be different in style and presentation from that meant for a national audience. Features of A Standard Television Script A complete television script contains the spoken copy or dialogue, sound and music information, and the major visual elements, which should accompany the audio.

A script should always be typewritten and should be double spaced. Sound effects and music cues should be in capital letters and underlined to separate them from dialogue. The typewritten script is divided into two, the video side and the audio side, is at the right side of the page. The audio side, apart from containing the dialogue, also houses the sound elements of the show.

Performers' stage movements are also included in the audio and are usually capitalized to avoid confusion with spoken copy. The video side is left almost blank to give room for the director's camera shot notations. However, important visual elements such as titles, graphics, special effects, film or videotape inserts, are usually typed in capital letters, opposite the corresponding audio.

What are the components of a complete television script?

Television has a great potential for improving the lots of Nigerians and to justify the confidence the public has in it if it helps promote socialization, education, culture and economic well-being of its audiences. Television is not just a mere transmission device, but an electronic device which brings to us informational, education and entertainment programmes.

Analog versus Digital Transmission

One principal difference is that the new media can be used for interactive communication. In essence, new media technologies provide citizens with the technical apparatus to do more than just receive information. As with the introduction of previous technologies, the new forms of communication have produced often-wild speculation about their social impact. If we are to understand the social significance of the new media, we must look at how their technological properties intersect other social forces.

Rather than focusing on only one causal element, we need to understand the relationship between the "technological drivers," the social psychology of media use, and the economics of the media industries. The new media have technical capabilities that pull in one direction, but social psychological and economic forces pull back hard in the other direction. The short-run outcome will likely be only small social changes, even if opportunities for more significant changes emerge in the long term. In other words, change will be evolutionary, not revolutionary.

The key to understand the new media is that they all connect with one another. These integrated media networks have several key capabilities.

[...]

The new media may pull toward diversity and participation, but other social forces pull toward uniformity and spectatorship. For example, powerful economic actors who have influenced other

media are affecting the development of the Internet as well. 1999, the Web's 50 most popular sites included those run by traditional media giants Disney, CNN/Time Warner, Sony, CBS/Westinghouse, USA Today/Gannett, the New York Times and MTV/Viacom, among others. As the size of the on-line audience grows, the prominent presence of such traditional media conglomerates on the Internet is likely to increase.

Most of us have deeply ingrained media habits that are not likely to change dramatically simply because of new technological capabilities. The impact of technology is limited by how people actually use it. Most people will relate to new forms of media in much the same way they do to the old media. Same people, though, will make use of the full range of capabilities offered by the new media.

New media may even inadvertently expand the gulf between the technological 'haves' and 'have-nots. The shift from broadcast to cable television is a good example of this dynamism. We now have 50 or more channels, but more programming has not meant diverse programming. If we weigh the technological properties of the new media along with media habits and market forces, the Internet is not likely to revolutionize the media environment.

Instead, it is an important supplement to the old media, serving as a key promotional device for extension of print, broadcast, and film. The situation is not static, however. Media habits are likely to change, albeit slowly, and larger numbers of citizens are taking advantage of the internet each year, providing new markets. Indeed, the Internet appears to be important contributor to the continuing fragmentation of the mass audience.

The currently fashionable niche orientation of mass media, driven in large measure by advertisers was already underway before the internet's arrival. But the specific organization and technological capabilities of the Internet is helping to accelerate the pace of audience's segmentation.

To reproduce the human voice in a telephone conversation, a range of about 30Hz to

Consequently, wired telephone communication takes place at certain frequencies, much like unwired radio communication. Many different telephone conversations can take place at the same time. When telephone conversations are sent over the air, they are simply separated and each switched to its own space on the spectrum. Each telephone conversation occupies an available space within the larger space assigned to the telephone company.

Data Communication requires different standards than a typical radio station because they

Our A. M. radio receiver may experience some interference from nearby electrical generator or a thunderstorm, but such interference would play havoc with sensitive computer data. As a result, computer data is transmitted at higher frequencies where line-of-sight transmission takes place, because of the low noise ratio that exist there and because of the available spectrum space.

Analogue Versus Digital Transmission

The transmission is continuous over a given frequency range, and unless the receiver or transmitter is turned off, the sound at the receiver is the same as the sound that was transmitted. A typical telephone conversation may consist of voice vibrations that are turned into analogous electrical vibrations. What a television camera sees is transformed into an analog signal, which creates in the television receiver a picture similar to what the television camera witnessed. The signal consists of a series of on/off pulses transmitted in the same way that information flows in a computer circuit.

With the increased use of computers, digital transmission systems are gaining more and more importance. Since computer data are digital, analog systems that transmit them must convert them first to analog, and then back to digital. Overall, this is an inefficient way to move information. Yet because world telephone systems are significantly analog and considerable money has been spent on analog equipment, in many areas it is the only way to send information.

What is the difference between analogue and digital transmission?

Most people are likely to relate with new forms of media as they do with the old media. Telephone conversations can be examined in terms of their frequencies as in radio and television signals. When telephone conversations are set over the air, they are simply separated and each switched to its own space on the spectrum. Data communication requires different standards than a typical radio station because they Signals in analog transmission are continuous over a given frequency range, while with digital transmission, they are not continuous but broken up into numbers.

NIGERIAN

As part of an experiment by the British Broadcasting Corporation in 1932, the broadcast industry has emerged as the Federal Radio Corporation of Nigeria and Nigerian Television Authority .

2 How regional stations started

What took off as a mere rudimentary, experimental monitoring station, can now boast of direct satellite communication equipment.

The objectives of this innovation by the BBC were

3 To keep British citizens outside Britain informed about happenings back home. Therefore, news, music and other aspects of programming, at the time, were designed towards fulfilling these objectives. On December 1, 1935, radio finally made its debut, when the first Radio Distribution Service , was commissioned in Lagos.

Radio Distribution Services

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All through the war years, the British made good the service of RDS, through which the BBC kept the King's subjects and citizens across the globe informed about the progress of the war against Nazi-Germany. Few years later, Radio distribution Services were opened in Kano, Abeokuta, PortHarcourt, Ijebu Ode, Enugu, Jos, Zaria and Kaduna.

Nigerian Broadcasting Service

On June 1, 1952, colonial governor, Sir John Stuart McPherson commissioned the Nigerian Broadcasting Service . Although at inception, BBC programmes dominated the Nigerian airwaves, efforts were also made to produce programmes that the local population could relate to. The BBC augmented Nigeria's efforts by providing all the needed training and technical equipment. Infact BBC's T. W. Charmes became first director-general of NBS, while his counterpart, J. W. Murray, became the chief engineer.

Nigerian Broadcasting Corporation

Apart from annual government subvention, NBS had few other sources of income. It existed mainly on development loans, repayable with interest. Since the centralization of broadcasting had been thrown out in the 1954 constitution, the response of the regions was to establish broadcasting stations of their own. The government of the defunct Western region blazed the trail when it commissioned the Western Nigeria Television on October 31st, 1959.

In May, 1960, it established its radio station, known as Western Nigeria Broadcasting Service . Their mandate, according to Chief Obafemi Awolowo, then Premier of the Western Region, was to serve as teachers, entertainers and stimuli to all and to transform Nigeria into a modern and prosperous nation. The East and the North soon copied the initiative of the west, with the establishment of the Eastern Nigeria Broadcasting service and the Broadcasting, Company of Northern Nigeria in 1960 and 1962, respectively. Right from inception, it was clear that the three regional stations were mainly instruments for promoting the views of their proprietors.

Each station designed programmes to project the political interests of its owner.

[...]

All past governments have used it as a means of out-manoeuvering their rivals in the struggle for the country's leadership. Consequently this had led to credibility problem and poor image perception of the system by its national audience. It has the National, Zonal, and Provincial broadcasting House , which were primarily established to serve certain large local communities, considered to be of political, cultural and economic importance.

How had past governments utilized the FRCN?

The broadcast media in Nigeria which started as a Federal government parastatal, later as arms of regional and state governments have witnessed private participation through Decree 38 of 1992 which also established the National Broadcasting commission. You will be acquainted with the duties of the NBC in the next module. Broadcasting started in Nigeria as an experiment of

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the British Broadcasting Corporation in 1932. NBC had its name changed to FRCN by Decree 108 of April 1978.

The regional governments first ventured into television broadcasting with Western Region blazing the trail in 1959. The former Eastern Region started television broadcasting in 1960 and the Northern Region in 1962. The Nigerian Television Service went on air in April 1972 and this became the Nigerian Television authority by NTA Act of 1977.

[...]

There is the need for you to know that broadcasting needs the assistance of certain agencies to function effectively. The Federal Ministry of Communication is one of them and its principal function is to ensure that broadcasters act in accordance with stipulated principles as contained in their frequency allocation letter. The aim of the Ministry of Communication is to ensure that sound broadcasters act in accordance with stipulated principles as contained in their frequency allocation letter. One major objective of the Ministry of Communication is to ensure discipline among sound broadcasting operators.

Until recently, the Ministry of Communication was responsible for policy formulation and implementation for sound broadcasting. However the function of policy formulation and implementation has been moved to the Ministry of Information. The Ministry of Communication issues out 530 – 110 bands to stations to operate. There is a section called frequency planning that assigns frequencies to stations and guards against overshot.

An overshot is a situation where a company with the intention of broadcasting between Lagos and Abuja but seeks for licence of operation between Lagos, Ibadan and Ife. The result is an overshot because signals will pass over intended location to the licensed location.

Technical Provisions Before Application

Unless permitted the equipment cannot be used outside its allocated area of operation. The ITU in Geneva is the overall world body responsible for regulating communication policies. National policies are added to those of the ITU. 2 Equipment gets impounded because the users loan equipment when seeking for licence.

This is because some stations are not operating within their jurisdiction. What happens is that the station at fault could be closed down or equipment impounded. Years back, Radio Lagos signals were interfering with the police. Radio Lagos equipment were impounded as a result of the interference.

Very High Frequency is reserved for the NTA only. NTA uses this as its programmes are networked and received in every state of Nigeria.

States and Private Television

Stations use the UHF because of their restricted coverage. What happens is that programmes are sent through telephone lines to magnetic cables and to the antenna for transmission.

Which television stations use VHF and UHF for their transmission?

It does this through technical provisions which applicants must comply with, before they can be allocated frequency to operate. Onabajo, O. Introduction to Broadcasting.

Renewal, Revocation and Transfer Licence

What the FCC was set up to achieve. Role Of FCC As Agency Of Government The Federal communications commission of the United States is the agency of the Federal Government authorized to carry out the law of radio and television. It was specifically established to bring order out of chaos and confusion that seem imminent in the competition for airwaves that are very scarce in face of thousands of privately owned radio and television stations. The FCC in order to make sure that the stations carry out their public commitments and obligations, licenses all the radio and television stations and these licences are renewed every three years.

The FCC was set up to check radio monopoly and to allocate frequencies to broadcasters.

The Communications Acts Of 1934

As defined by the Communications Act, the word “radio” is construed to mean television as well as sound broadcasting.

The communications Act is meant

No person shall use or operate any apparatus for the transmission of energy or communications or signals by radio except under and in accordance with Act and with a license in that behalf granted under the Provision of this Act. The FCC is specifically directed to “encourage the larger and more effective use of radio in the public interest”.

From these provisions we can see that America’s public policy toward radio and television involves the following key ideas

The federal government shall maintain control over all broadcasting channels. Use of these channels is limited to persons licensed by the federal government. Licenses may be issued to persons only when the “pubic interest, convenience, or necessity” will be served thereby. Licenses are good for limited periods of time only.

Radio and television shall be maintained as media for free speech. The Act of 1934 created the Federal Communication Commission to carry out the law. The FCC is an independent regulatory commission, quasi judicial in many of its functions, but primarily administrative and policy making in its day-to-day operations.

The FCC has the following general functions pertaining to radio and television

It advises the State Department in negotiating international radio agreements and acts as the agent of the United States in carrying out the American end of such treaties. Radio waves cross

international borders, and so there must be coordination and agreement in a master allocation plan on a world wide basis to prevent mutual interference. Examples of this allocating function were the decisions, to use the 88 to 108 megacycle bands for FM radio and to add channels 14 to 83 to the television band. The power to issue licenses is supplemented by power to revoke or renew licences and to approve or disapprove transfers of licences.

It determines the location of stations and regulates the kind of apparatus television and radio stations may use. It makes regulations necessary to prevent interference between stations and to carry out the provisions" of the Act. It is authorized to make special regulation applicable to stations engaged in network broadcasting. "to keep such records of programmes, transmissions of energy, communications, or signals, as it may deem desirable".

It ensures that broadcasters stay on their assigned frequencies and that no unauthorized person uses the airwaves. Volunteer groups made up of such people as radio and television repairmen and amateur radio operators assist the FCC in this work. It encourages new uses of radio, particularly those that will promote safety of life and property. It supervises all common carrier telephone, cable, and telegraph services.

The American Telephone and Telegraph Company and other companies whose microwave equipment and telephone lines are used in network broadcasting are regulated by the FCC.

During World War II, the FCC set up a foreign Broadcast

There is considerable agitation in the broadcast industry to amend the law to provide for five years licenses. Applicants for radio or television stations must file written statements describing their citizenship and character and their financial, technical and other qualifications to operate broadcast stations.

Applicant for a licence must set forth

The location of the proposed station. The frequency and power he wants to use The hours of the day during which he proposes to operate the station. The Commission has no direct authority to license or regulate television and radio networks. It does in fact, however, regulate networks through rules directed at stations owned by or affiliated with Network.

List the 5 items an applicant for a licence with the FCC must state in its application.

Renewal, Revocation and Transfer of Licence

At least four months before the expiration of a licence, a station must file a renewal application with the FCC. In this application the station is obliged to provide a statement of the programme service it has broadcast in the last three years. FCC may take this record of actual programme service and compare it with the statement of proposed programme service the station made in its original application for a licence. If the FCC is satisfied that performance reasonably matches the promises, it will renew the application.

In this hearing, the applicant bears the burden of proving that renewal of this licence will serve

the public interest. The FCC has the power to revoke a licence when the station fails to operate in accordance with the law or with FCC regulations, or substantially as it said it would in its application. In revocation proceedings, the FCC bears the burden of proving that the station is not serving the public interest.

When must a broadcast station file a renewal application with the FCC?

The FCC through this function helps bring order into the electro- magnetic spectrum. The FCC was established to bring order into broadcast transmission through the Communications Act of 1934. It is directed to encourage the larger and more effective use of broadcasting in the public interest.

Powers of NCC

We shall continue the examination of agencies concerned with the broadcast media through a close look at the activities of the Nigerian Communications Commission. This will help us understand its relationship with broadcasting in Nigeria.

What is the role of the NCC?

The Nigerian Communication Commission is totally responsible for the issuing of licences to any company that wants to operate a private telecommunication. Organization also facilitates the private sector participation in the telecommunication industry, so as to enhance as many as possible competent operators that will compete favourably for progress in the communication sector. NCC is solely responsible for reporting and giving advice to the minister of communication in formulating telecommunication policies and control of the telecommunication industry. The Nigerian Communications Commission has the objective to encourage massive investment in the telecommunication sector of the Nigerian economy, so as to give room positively.

Nigerian Communications Commission also has the objective of extending the available telecommunication service to all Nigerians. NCC also aims at protecting those licensed and the public from unfair conduct of other providers of telecommunication service with regard to the quality of service and payment of tariffs.

The Nigerian Communication Commission has the power to give written direction to a licencee or authorized carrier in connection with the functions of the commission solely in the interest of the commission, operators, carriers and the consumers. The Commission can also summon any person or business organization to appear before the commission when necessary for the purpose of effectively discharging its duties under the decree setting it up. It has the power to consult where appropriate with the President, commercial industrial organizations, consumers and standard organizations as well as other relevant bodies for the purpose of delivering quality telecommunication services. It has the power to give evidence or produce any document, which is likely to assist the commission or any of its committee under the decree establishing it.

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It can delegate any of its powers to a committee properly constituted by the commission according to the provision of the decree. The Nigerian Communications Commission gets its fund from the sales of application forms and the issuing of licences to telecommunication service operators that wish to operate in Nigeria and another avenue for revenue generation is fees for licence renewal. All telecommunication service operators are required to apply to the NCC for relevant licences by obtaining the commission's relevant application forms and to comply with requirements therein. It is responsible for issuing of licence and allocation of frequency, but these duties have procedure that must be followed.

Basic licence

There are five basic steps that one must follow to be issued an operating licence.

[...]

Step 5 – Recommendation The NCC is in charge of the Nigeria's electromagnetic spectrum and therefore issues frequencies to both broadcast and telecommunication operators and also ensures that specified standards are met and subsequently sustained. The NCC through decree 75 of 1992 is to facilitate the private sector participation in telecommunication service delivery, coordinate and regulate the activities of the operators to ensure availability of service delivery and fair pricing. Name the 5 steps a telecommunication company must follow before being issued an operating license. Onabajo, Olufemi Introduction to Broadcasting.

The National Broadcasting Commission came into existence on

The decree ended the era of government broadcasting and opened the industry to private participation. These requirements help the proper operation of broadcast stations if followed strictly by the operators. The right of reply shall be granted to any person or body with a genuine claim to misrepresentation. Womanhood shall be presented with respect and dignity.

Cruelty, greed, selfishness, drunkenness and other evil acts should not be presented as something desirable. Well functioning transmitters which must be located close to the station. If he meets the requirements of the NBC, he is recommended. He is given a licence which the Federal Government approves.

If the licence is not used after one year, it becomes invalid. But if it is in use, a licence fee is paid periodically to maintain its validity. Revenue for NBC is generated from licence fees, fines donations and budgetary allocation from the Federal government.

The NBC has a monitor room where there are a number of television sets switched to various channels and also a number of radio sets switched to different stations. One person is assigned to a station to monitor properly. They may be suspended from air for a while, or pay fines and many more. If the rules are not followed strictly, they are said to have committed a breach.

Breach is any action or inaction constituting non-compliance with any provision of the code on

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the part of any broadcast operation. Generally, the following rules must be observed strictly, if not, they are penalized. Professionals must be employed. A number of specific programmes have their own laws, which must be followed.

Discussion programmes require that panelists should be of comparable status and shall reflect various viewpoints sports programmes require that adverts should not obstruct or disrupt the essence of the event.

Mention 5 main functions of the NBC

List 5 rules of the NBC code that must be followed by broadcast stations so as not to be penalized.

Telephone Services

Let us take a look at the last major agency concerned with the broadcast media. Nigeria Telecommunication Limited occupies a strategic place of relevance and significance in the telecommunication industry and is particularly useful in the transmission and reception of network programmes on radio and television.

Identify its involvement in transmission

The Nigerian Telecommunications Limited, NITEL, Nigeria's pioneer telecommunications services provider, occupies a strategic place of relevance and significance in the telecommunications industry. NITEL has undergone a series of development lately, which have largely positioned the company to properly compete with other service providers and in response to the changing face of the telecommunications industry in general. The overall objective of the telecommunications industry is to provide efficient telecommunication services to the public at reasonable cost. The company is however not taking its relevance in the industry for granted.

Is therefore taking adequate and appropriate steps in response to changes and the dynamics of the telecommunications industry.

Telephone Service

The satellite has greatly enhanced the preference of telephone service to other media of communication because the quality is as perfect as talking with somebody next door irrespective of distances over continent and seas. This process is done by dialing 171 from anywhere in the country to access the customer to their Lagos or Kaduna exchanges.

Local operators can also connect international call; the customer dials

The telex machine has in-built facility to receive and record messages unattended. Telex service combines both speed and accuracy which are regarded as the cornerstone of any efficient business organization. The telex delivery service is an auxiliary of the telex service and it is developed to meet the needs of Nigerian small-scale businesses. NITEL receives on

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customer's behalf all telex messages on 24 hours basis and deposits them in numbered telex boxes for collection at customers' convenience.

This is also one of the services rendered by NITEL. It was popularly known as cablegram before the advent of high frequency radio and satellite communications. This enables a customer to get in touch with business partners, relations, friends etc when he/she is out of office or home. The telephone coin box booths are installed in strategic locations in major towns of the federation.

All the customer needs is few coins and he is on to the required person. The customer will press the number he requires immediately the red light is off. The town code should be included when making a distant call. The live broadcast of Christmas message by the Pope in Rome, the Hajj, International soccer matches and so on are all received through NITEL satellite system and relayed to domestic TV sets by the Nigerian Television Authority .

NITEL could transmit and or receive any programme "Live" through the satellite on request. The satellite station is equipped with television converter, which converts to any standard required by the customer. Sufficient notice for international link – up to any country in the world required by the customer is the most important thing to link the customer. The live radio broadcast is done by pre- arrangement with the press or broadcasting media.

NITEL offers private leases sometimes referred to as "hotline" telegraph and telephone services. Ships at sea, anywhere on the world oceans, are still within NITEL reach. The Radio telegraphy continues to play telephony and telex-via-satellite which are more instant. Many ships now install the most modern system on board to enable easy communication with the land.

How does radio telegraphy play a dominant role in relaying messages to ships?

The broadcast industry cannot function effectively without NITEL. Live transmission of proceedings from the United Nations, international soccer engagements and many international award ceremonies are all received through NITEL satellite system and relayed to domestic television and radio sets by the Nigerian Television Authority and Federal Radio Corporation of Nigeria. NITEL is involved with the provision of telephone, telex and telegraph services. It is also involved in international and network transmission.

How is NITEL involved in international and network transmission?

Name at least 5 services provided by NITEL at local and international levels. Introduction to Broadcasting.

[...]

You are welcome to the world of the electromagnetic spectrum which consists of radio and electric waves, heat, light, gamma, cosmic and x- rays and which have wavelengths varying from over a mile in length to one millionth of an inch. Radio waves are at the lower end of the spectrum and they consist of low and high frequencies. They help transport programme signals from radio and television stations.

What Is Oscillation?

This gives birth to an alternating current which helps generate radio waves, which are released to the atmosphere. Radio waves travel at the speed of light-about 300 million metres per second and they are used for terrestrial broadcasting.

[...]

Propagation of Radio Waves Radio waves that are of very low frequency or low frequency or medium frequency, usually follow the earth's curvature and move out in all directions as GROUND WAVES. These waves travel for distances, and because of this obvious advantage, they are often used for AM radio broadcasts. The greater the power of the radio transmitter, the further the round waves can travel. Damp loamy soils are preferable in locating transmitters than dry sandy soils because the former conduct ground waves faster and more efficiently.

Reception signals on our sets often clearer and the listening areas increased at night, because there is less atmospheric interference than at day-time.

Radio waves can also move from the transmitter to our receiver sets in form of

The higher the frequency of a radio wave, the more difficult for any of the ionospheric layers to refract and reflect it back to the earth. High frequency waves that are not susceptible to interference by the ionosphere are used in short wave radio broadcasting. Radio waves move in a straight line as direct waves at very high frequency, from the radio mast to the receiving antenna. However, there must be perfect alignment between the transmitting and the receiving antennas.

The line of sight or direct radio wave is a very reliable mode of transmission when there are no absorptive obstacles between the transmitting and receiving antennas and when the atmospheric conditions are not adverse. This is the area in which the ground waves are not subject to objectionable interference or objectionable fading. It is also the portion of the station's signal that is most protected by the Federal Communications Commission , when it licenses other stations that could interfere. This phenomenon is referred to as SKIP, and the distance from the transmitter to where a sky wave touches the earth is the SKIP DISTANCE.

The area in which a radio station's signal is heard clearly because of sky wave proportion is referred to as SECONDARY SERVICE AREA. This is defined as the area served by the sky wave which is not subject to objectionable interference.

The point at which the signal from a station begins to fade as known the INTERMITTENT

SERVICE AREA of the station or that area receiving service from the ground wave but beyond the primary service area and subject to some interference and fading. Ionosphere has different reflective qualities at different times during the day. The sun warms it and decreases its ability to reflect sky waves. Distinguish between Sky waves and Ground waves.

Microwaves

The higher the frequency, the further the electromagnetic waves will travel in a direct line-of-sight path between transmitter and receiver. Because the waves are shorter, many more will fit into the same space on the electromagnetic spectrum. When we realize that an AM radio station is allocated a width of only 10KHZ, it is easy to see how much more information can be transmitted at higher frequencies. We need microwaves in order to view our evening television programmes or to relay satellite pictures across oceans.

However, the current microwave technology has barely scratched the potential of this multiphase and carrier of information, especially in the broadcasting industry.

What is Frequency?

Two radio stations in the same community operate on different frequencies so that they will not interfere with each other. When current is applied to the transmitter of a radio station the antenna emits electromagnetic radiation. Frequency is the number of waves passing a certain point in a given interval of time. In broadcasting the waves are termed Electromagnetic Waves.

When one complete wave passes a given point, it is called a CYCLE.

The term KILOCYCLE or

KILOHERTZ is used to represent 1000 cycles while MEGACYCLE or MEGAHERTZ is used to denote 1, ooo, ooo cycles. Similarly, 535,000 cycles per second is represented as 535 kilocycles. On an AM radio that particular frequency will be at lower end of the dial. Each radio station is assigned a 10-kilocycle range on the electromagnetic spectrum.

Thus the station assigned the lowest frequency is assigned 540 kilocycles which permits it to operate between 535 and 545 kilocycles. Some radios though capable of receiving 540 kilocycles begin numbering their dial at 550 kilocycles or abbreviate it as number 55. The distance between two waves is called WAVELENGTH. Cycle is closely related to wavelength.

The number of waves passing a certain point in one second is called CYCLES PER SECOND. Wavelengths of radio waves can be arrived at by simple division. If 535 kilocycles or 535,000 complete waves pass a given point in one second, the wavelength = 186,000 divided by 535,000 = 0.3477 miles and if converted to feet = 0.3477 x 5280 =1,836feet. When a radio set is tuned from one station to another, the receiver is picking up only those waves that are being transmitted on the same frequency to which one tunes.

Radio waves make broadcasting possible and it is the frequency that differentiates them from other types of waves. In broadcasting radio waves are referred to as electromagnetic waves and they travel at the speed of light which is about 300 million metres per second. This is why programme signals transmitted from a broadcast studio reach your radio or television sets, wherever they are located simultaneously. Radio waves are classified into 8 groups of frequency bands.

They can be of low, medium, high or extremely high frequencies. Their frequencies determine whether they will be useful in telegraphy, sound broadcasting or in cable and satellite transmission. Radio waves that follow the earth's curvature are referred to as ground waves while those that travel in the sky are called sky waves. Radio waves can be classified into 8 groups of frequency bands.

Amplitude Modulation

References/Further/readings Modulation is the process of encoding information into the language of radio energy. A radio or television broadcast transmitter radiates energy continuously as long as the station is turned on, whether or not any information is being transmitted.

What are frequency and Amplitude modulation?

As the modulated signal travels through the atmosphere, it may encounter random charges of electromagnetic energy generated by natural electricity in the atmosphere, which we sometimes see as lightning. These random bits of energy interact with the amplitude modulated radio signal, distorting the original pattern. Once the message is conceived as consisting essentially of an energy pattern, the possibility of translating patterns from one medium to another becomes apparent. The air in the studio, the electrical current in the wires and finally the electromagnetic energy radiated by the transmitter are radically different media, yet each can duplicate an identical pattern of amplitude and frequency.

The audio wave from the studio arrives at the transmitter as electron waves representing the frequency and amplitude of the original sounds. The audio wave is then modulated on the carrier wave which may be altered in either its amplitude or frequency characteristics. Amplitude Modulation AM broadcasting is that portion of the electromagnetic spectrum falling between 535 and 1605 Kilohertz . Amplitude Modulation waves follow the curvature of the earth for some distance and arrive at the antennas of home receiving sets in a fairly direct manner.

Some of the waves go skyward and encounter resistance when they reach the ionosphere, which is an area of active ions surrounding the earth. These waves are then reflected back to earth. Though AM has a wider coverage area than FM, its reception is often impeded by hills, trees, high buildings, and tunnels – AM signals travel in form of a torpedo and are affected by the earth curvatures. Each FM station is allocated a width of 200 KHz .

Between which ranges does FM broadcasting operate to the general public?

One was the development of FM broadcasting.

Another was the development of stereo FM

Within the 200-KHz space allocated to each FM station is ample room for the separation of broadcast signals, room that permits the same station to broadcast on two slightly different frequencies. There is also room for a tone that triggers specially equipped radios to receive this

stereo signal. When the tone is not transmitted, the radio still receives a monophonic signal. Many of us have seen a small light flip on in a stereo FM receiver when we tune it to a station broadcasting in stereo.

This signal tells us that our radio is tuned to a stereo station that the station is broadcasting in stereo and that our receiver is receiving both channels of the stereo system. Stereo broadcasting has grown steadily in popularity. The reproduction of quality music with the added dimensions of space and depth has been the main distinction between stereo FM and standard FM and AM broadcasting. Whatever added dimensions stereo broadcasting brought to FM, quadraphonic doubled.

In quadraphonic systems, four instead of two frequencies are employed. When there is true separation of the four quadraphonic channels, the listener is literally surrounded by sound. AM stereo is now emerging from the experimental stage. For many years, AM broadcasting did not seriously consider stereo beyond laboratory ventures, primarily for two reasons.

The first was the narrow channel width of AM stations – 10 KHz compared with 200 KHz for FM.

Committee of the Electronics Industries Association – began in the mid

First, there is considerable backing for it from the many AM broadcasters who have felt the competitive sting of FM. State 2 reasons why AM broadcasting did not seriously consider broadcasting in stereo for many years. Except radio waves are modulated they cannot transport broadcast signals.

NATURE

This process has many facets which include Transduction, Processing, Storage, Distribution and Reception.

Ii

At this stage, cameras and microphones are used to generate signals, from real life situations in the studio, or in outside locations. These events are reduced to electrical signals, which are processed and channeled through electronic gadgets. The various activities that go on during the signals. The signals coming into the systems after transduction are boosted and stabilized especially in television, and in the process eliminating any electrical noise.

The following equipment are vital in signal processing. They include audio mixers, vision mixers, camera control units, time base correctors, digital video effects unit and synod generator or oscilloscope. Explain the various activities that go on during broadcast signals processing. Here signals are put into a permanent or enduring form for access and use in the future.

The magnetic tape or disc is utilized for storage. It is made to go through a tape of video recorder or the compact disc, which act as the information loader. The signals may be channeled to other stations which form a network with another station or are sent in such a way

as to be made available to potential receivers. There are two major avenues for distributing broadcasting signals.

The demodulated signals are converted back to visual and aural stimuli that are reproductions of the original live sounds and visuals.

How are broadcast signals received by our radio or television sets?

Signals of programmes go through 5 stages of transduction, processing, storage, distribution and reception. What types of cables are used for distribution of signals between 2 radio and 2 television stations.

REFERENCES/FUTHER READING

Essentials of Broadcast Writing Production.

At the end of the unit of study you should be able to know

What Is Transmitter A transmitter is an electronic equipment used in sending signals , over a certain range of distance. Without a transmitter, it will be impossible to get information to people through the television or radio. A transmitter could consist of two complete transmitters – one for picture signal and the other for the accompanying sound. The signals from a transmitter are sent out from an antenna placed on a mast, via connecting cables.

The video transmitter has 5 – 20 times as much power as the audio transmitter, because of the greater load of information the video transmitter has to process. Weather can affect the signals from the transmitter. When it is favourable, signals could travel beyond its usual reach, and could recede when weather becomes awful. The height gained on a very high mast, helps the signals to wade through space at longer time and distance before receding.

Transmitter could be located directly in the premise of the broadcast station and this involves the use of only one transmitter for transmission. But when a transmitter is located at a distant area from the station base, an additional microwave transmitter is required for effective transmission of signals. The Microwave is a mini and unidirectional transmitter, which usually is used to boost signals from origin to the main transmitter in remote areas. Transmitters could be transistorized or valvalised.

The transistorized transmitter is the most modern, while valvalised variety are old fashioned and could be water-cooled or air-cooled. The telephone is a transmitter, so are Orbit Satellites, which are highly specialized and they both receive and send out signals. The signals travel as electromagnetic waves thereby preventing time lag.

What is a transmitter?

Medium wave frequency broadcasting is popular in the developing countries, because relatively large areas can be covered with smaller transmitters.

Wide Band Transmitters are used for long range military, marine and aircraft

There is low power or low voltage transmitters and high power or high voltage transmitters.

Acrodyne and Taylor transmitters while NTA Ikeja Channel 7 used

The transmitter is the basic equipment used in signal transmission. It has inbuilt mixer through which it modulates studio output signals in successive stages before sending the signals via the antenna on the mast to the outside world. Without a transmitter, it will be impossible to get information to people through radio or television. The transmitter is an electronic equipment used in sending audio or video signals or both.

A big transmitter has stages or sections in it and sends programme signals after they have been amplified to the desired frequency. Transmitters could be transistorized or valvalized and have various types that can be put to various uses. Name 4 types of transmitters that a radio station can make use of. **Three-Stage Function of The Transmitter**

In the last unit, you were introduced to the transmitter, its type and uses. Now it is time to know how a transmitter after having modulated programme signals, helps to distribute them. Know what is involved in the transmission of radio and television signals. This is the case in Manhattan in New York, where many Television sets, receive their programmes from wired distribution system, because the large number of high – rise buildings affect radio frequency broadcasts.

However, the most commonly used means of programme distribution, is by broadcasting signals, over the radio frequency spectrum. In radio transmission, there is the signal source, the transmitter, then the antenna system or mast. Signals include the news, music, and other recorded programmes, that are relayed on radio. With these studio equipment, programmes are produced and are sent to the audio console or mixer, in the control room.

The output from the mixer is sent to the transmitter. The transmitter, through the help of its in – built mixer, mixes or modulates the studio output signals, and amplifies the signals in successive stages. A big transmitter has stages or sections in it, and sends the signals, after they have been amplified to the desired frequency, via the antenna on the mast, to the outside world. The demodulated signal is then broadcast as moving pictures and sounds by the set.

How is the transmission of television signals achieved?

In the pre-stage, there is modulating signal and there is carrier signal. The modulating signal is the message you want to send. In this modulating stage, the signals from the control room are modulated to give intermediate frequency . The output from the first or pre-stage is amplified in order for the signal to travel very far.

The output of the second state is fed in the third or Diplexer stage, and the output of the Diplexer stage goes to the antenna, on the mast. From there, the Radio Frequency is carried in wave form, by the carrier signal to the various receiving sets. Transmission of broadcast signals can be carried out through direct wave signals that travel through the atmosphere or the ground

reflected waves that travel via cable or wires along the earth's curvature. Describe briefly two means of distributing audio and video signals to receiving sets.

THE RADIO STUDIO

The studio is the point, where signals are originated. It affords the operational personnel, a comfortable place to carry out their duties. It contains the equipment that convert real life experiences into electronic signals and enables one to control an environment in which broadcast events occur without procedure. The quality of programmmes depends on how well the man in the studio can manipulate other persons, equipment and spaces in the studio.

The Performance Area

Some members of the technical crew may also be found in this area. This helps prevent any sound coming from without. The door must be sufficiently wide to allow for movement of sets in and out of the performance area. The glass windows enable visual communication between the production crew in the performance area and those of the control area.

The walls of the performance area are treated with sound-proof materials to prevent outside sound from coming in. The ceiling of the performance area is shaped to reflect sound optimally. Noiseless air conditioners are provided for the comfort of the performance, as well as to prolong the life-span of studio equipment. Suitable lightings which do not hum must be provided in the performance area.

Name the 2 sections a studio can be divided into. All writings for radio will be in vain, without inputs from the studio suite, for the purpose of production or broadcast of pre-transmission programmes which are recorded in the studio and coordinated by the control room. So also are live programmes on radio. The studio suite is made up of the studio and the control center and both of them constitute the workshop of broadcasting.

The group of studios in a broadcasting center is known as the studio complex. In the continuity system, all programme materials whether from another studio or from tape or from an outside broadcast point, passes through a studio, where an announcer and technical operator, are on continuous duty.

What are the components of the studio suite?

During the days of radio, it was important for directors and audio engineers located inside the control booth, to have a direct view of the performers in the studio. This enabled the director to send hand signals to the performers, while a production was in progress. The studio floor is an open area, which contains the microphones, sets performers and crew. The size of the studio floor, will usually determine the complexity of programming activities that will be carried out by the studio.

Smaller studios restrict equipment, technicians, and performance and tend to limit the size of the set and the number of performers. With so much activity taking place on the floor simultaneously, it is important to keep cable and wires to a bare minimum. Studios are equipped

with powerful air conditioning to keep temperature levels down. The temperature is important both for personnel comfort and especially for the operation of delicate electronic equipment, which require a fairly stable environment, to function properly.

A well-planned studio facility will provide a large area, adjacent to the studio floor for storing props, sets, and equipment. Otherwise, a portion of the studio floor must be used for storage, and this limits the amount of room available for the production.

The Studio Complex

The materials used in constructing their internal walls have special acoustic properties to absorb and reflect sounds at different frequencies. The Announcing Studio is small in size and it is equipped with a bank of turntables. It can also be used for news – reading and rap-talks. The General Purpose Studio is furnished with a table and chairs, suitable for talk shows, personality interviews and discussions.

It may also be used as a dubbing center for assembling documentaries. The Drama Studio is specially constructed to re-create different acoustic environments. Without a broadcast studio, it may be different to eliminate noise and this may lead to poor programme output. The studio complex also permits various shows and performances to be transmitted live or recorded simultaneously.

The studio is provided with certain facilities which eliminate sounds emanating from outside the studio. They include Heavy door with air tight locks Double glass windows with a corridor between performance and control units, studio walls treated with sound- proof materials. The studio floor is where the production actually occurs and it is an open area which contains the microphones, sets, performers and crew.

The studio complex has a central studio and other smaller studios that are interconnected with the central or main studio. It could be made up of the announcing studio, the general purpose studio and the drama studio.

What are the disadvantages of a small studio floor?

Essentials of Broadcast Writing and Production.

Patch bay

Conventional broadcast stations, like Federal Radio Corporation of Nigeria, Ogun State Broadcasting Corporation and some state broadcast stations have radio control rooms. This is because of their complex nature of broadcast programming and transmission.

At the end of this unit of study you should be able to understand the following

Because of the many and various audio production demand in post production, larger stations and independent production houses have still another audio production room or facility. The audio production room usually contains a fairly elaborate audio console, two or more multitrack

audiotape recorders and DAT machines, digital cart and cassette machines, CD players, keyboards and samplers, and a computer system for the creation, modification, and a storage of audio material, for synchronizing video and audio tracks, and for patching.

Output: to route the combined signals to a specific output

Even small studio consoles may have as many as sixteen or more inputs. Although that large number of inputs are rarely used in the average in-house production or broadcast day, they need to be there in the event of having to produce special programmes. Let us now take a closer look at the input section of an audio console. Each of the input modules has a preamp and a volume control, a variety of quality controls, switches that silence all the other inputs when you want to listen to a specific one, and assignment switches that will route the signal to certain control parts of the audio console and to signal outputs.

Volume Control

Some sounds are relatively weak, so there is the need to increase their volume to make them perceptible. Other sounds come in so loud that they overload the audio system and become distorted, or outweigh the weaker ones so much that there is no longer proper balance between the two. The volume control that helps adjust the incoming sound signals to their proper level is usually called a pot or a fader .

Mix

The audio console enables one to combine, or mix, the signals from various inputs, such as two lavaliere mics, background music, and the sound effect of a phone ring. The mix bus combines these various audio signals with the specific volume assigned by the operators. The completed mix is then fed to the line-out.

Equalization

This is the process of controlling the audio signal by emphasizing certain frequencies and eliminating others. It can be accomplished manually or automatically through an equalizer, which works very much like the tone control on a home stereo receiver. It can boost or reduce selected frequencies and thereby influence the character of the sound. For example, you can make a sound more brilliant by boosting the high frequencies or more solid by boosting the lows or you can eliminate a low frequency hum or a high-frequency hiss.

The reverb controls can add an increasing amount of reverberation to each of the selected inputs. Among the additional quality controls on large consoles are switches that allow you to accommodate the relative strengths of incoming sound signals or that prevent input overloads, and others that let you “pan” the stereo sound to a particular spot between the two stereo speakers. Just to make sure that the mixed signals stay within the acceptable volume limits, they are regulated by final volume controls – the master pots – and metered by volume indicators. That way the console is used to control the volume of each input, but the console does not function as a mixing or quality control device.

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In fact, the sound is sent to the tape recorder in its raw state. The mixing quality controls of the various sounds are all done in the postproduction and mixdown sessions. The I/ O circuits allow one to try out and listen to all sorts of mixes and sound manipulations without affecting the original sent to the recorder.

Computer-Assisted Consoles

Many newer consoles contain a computer through which you can present, store, recall and activate many of the audio control functions. For example, you can try out a particular mix with specific volume, equalization, and reverberation values for each of the individual sounds, store all of it in the computer's memory, try something else, and then recall the old set up with the press of the button. An audio mixer differs from a console in that it is small, portable and normally serves as the input and the mixing functions. These few inputs are usually sufficient in that you are simply trying to record the sounds but not mix or otherwise process them.

How does a mixer differ from a console?

Patchbay The primary function of the patchbay or patch panel is connecting and routing audio signals to and from various pieces of equipment. You can accomplish this by using actual wires that establish a specific connection or with a computer that treats the signals as files and simply rearranges them according to your instructions. Whatever method is used, the principle of patching is the same.

Wired Patchbay

All wired patch panels contain rows of holes, called jacks, which represent the various outputs and inputs . The rows of jacks immediately below the output jacks are the input jacks that are connected to the audio console. The connection between output and input is made through the patchcord. Patchbays are usually wired so that the various input jacks are directly below the output jacks.

Computer-Assisted Patching

The audio console is the life wire of the control room because it performs a number of operations on the programme signals that emanate from the studio before the signals are transported to the transmitter. The radio control room usually contains a fairly elaborate audio console, two or more multi-tract audio tape recorders, digital cart and cassette machines, CD players, keyboards and samplers and a computer system for the creation, modification and storage of audio material. The audio console performs input, mix, quality control, output and monitor functions.

TUTOR-MARKED ASSINGMENT

Take a trip to a radio studio and control room and answer the following questions.

Are the radio studio and control room together in the same room?

Which equipment are located in the control room.

Make Up And Dressing Room

Most Studios are rectangular with varying amounts of floor space. The advent of the zoom lens has drastically reduced the need for actual movement of the camera , but room size still greatly affects production complexity and flexibility. Size The larger the studio, the more complex productions can become and the more flexible they will be. If all that is done in the studio is news and an occasional interview, then one may require a little space.

In fact, some news sets are placed right in the middle of the actual newsroom. Other news sets may take up substantial portion of a large studio. The larger the studio, however, the more difficult it is to manage. Medium- sized or even small studios are generally more efficient to run than large studios, but they are not as flexible.

Floor The studio floor must be even and level so that cameras can travel smoothly and freely. It should also be hard enough to withstand the moving about of heavy equipment, scenery, and set properties. Most studios have concrete floors that are polished or covered with linoleum, tiles or hard plastic.

Ceiling Height

Higher ceilings can accommodate even tall scenery. Acoustic Treatment The studio ceiling and walls are usually treated with acoustic material that prevents sound from bouncing indiscriminately about the studio.

Air-Conditioning

Because television studios have no windows, air-conditioning is essential.

What type of doors does a television studio require?

In most small stations, the P.L system is used.

What in your opinion is the use of intercom in television production?

The production crew can see the shots the director has selected and this anticipate their future tasks. Television scenery consists of the three-dimensional elements used in the studio to create a specific environment for the show or show segment. The most common scenic element is the flat, a wood frame covered with soft materials or hardwall . The flat is generally used to stimulate walls.

Furniture, curtains, hanging pictures, lamps, books, desks, and telephones are considered the properties and set dressings. The properties used to make the set functional, such as tables, chairs are the set properties. Items handled by the performers, such as the telephone, are called properties. Pictures, indoor plants, sculptures everything used to dress up the set constitute the set dressings.

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Whatever the purpose of the set, it must allow for good lighting, optimal camera angles and camera and microphone placement or movement, and smooth and logical action of the performers.

Makeup and Dressing Rooms

In smaller production centers, makeup and dressing are done wherever it is convenient. The television studio because of its facilities and floor space can allow for the beginning and conclusion of any programme, without recourse to outside camera shots. Some studios even allow for drive-in and other complicated scenes. Studios are constructed according to the nature and complexity of programmes that will be produced in them.

Because of the heat generated by the lights, there is the need for noiseless and powerful air-conditioning units that will make programme recordings bearable.

The Coordination Function Programme Control

Identify the role of the switcher in the selection and sequencing video images from video sources. The coordination function The control room, a separate room adjacent to the studio, is where all the production activities are coordinated. Here, director, associate director, technical director, and a variety of producers and production assistants make the decisions concerning maximally effective picture and sound sequences, which are to be videotaped or broadcast live.

Programme control

This refers to the equipment the director needs to select and organize the various video and audio inputs so that the end result makes sense to the viewing audience. Even a simple control room holds an amazingly large number of video monitors. There is a preview monitor for each of the studio cameras and separate preview monitors for film chains, videotape recorders, and character generators or other special-effects devices. If one does a live remote or is connected with a network, he needs at least two more monitors to preview the remote and network sources.

Finally, there is the off-the-air monitor – a regular television set that receives off the air what you are telecasting. Speakers for Programme Sound The production personnel in the control room, especially the director, must hear what audio is going on the air. The director has a volume control that can adjust the volume of the monitor speaker without influencing the volume of the line-out audio. In addition to the all-important P. L. intercom that connects the director with all other members of the production crew, there is an additional intercom system called the P. A., or simply the director's studio talkback.

The studio talkback system allows the director to talk directly to the crew or talent in the studio when the show is not in progress. With the I. F. B. system, the director and producers can talk to the talent while the show is on the air.

Clock and Stopwatches

Time is an essential organizing element in television production. Programmes are aired according to a second-by-second schedule called the log. The clock indicates when a certain programme should start or finish. The stopwatch is used for timing inserts, such as a 40-second videotape insert within a news programme.

Most control rooms have a regular clock , a digital clock , and digital stopwatches that can run forward and backward. The advantage of a clock with hands is that one can look forward in time and, for example, actually see how much time left until the end of a programme.

What is programme control in television transmission?

In some stations the director does his or her own switching, but that arrangement has more disadvantages than advantages. The C. G. is also located in the control room. The C. G. operator can then call up the various preprogrammed titles or create new ones even during the show.

What is image control?

The audio control booth can be considered as a small radio station attached to the television control room. The lighting control board can be located in the control room or in a corner of the studio. You will notice that television has both visual and audio qualities and the implication of this is that the audio console which we studied earlier under radio control room is also a main feature in the television control room. The television control room has four major functions which are achieved through a number of equipment located in it.

They include programmer, image, audio and lighting controls. Take a trip to a television studio and control room and answer the following questions. Name 5 items that you can find in a television studio. Identify 5 other items in the control room.

What Is Master Control Master control is the clearing house for all programme material. It receives programme feeds from various sources and ensures that the right programme material with the right technical quality is put on air at the right time. At the end of the study unit, you should be able to explain. What master control is The specific activities of master control.

What Is Master-Control

Master-control is the nerve center of a television station. This means that it has to check all programmes material being aired against technical standards set by the National Broadcasting Commission and by a critical chief engineer. The specific activities of master control consist of programme input, programme storage, and programme retrieval.

These include the following

The live shows are routed immediately to the transmitter for broadcast, but the bulk of the programme material must be stored before being broadcast. A station break is the cluster of commercials, teasers about upcoming programmes, public service announcements, and station

identifications that appear between programmes. In non-broadcast production centers, master control means a room that houses the camera control unit , high-end video-recording equipment, special-effects equipment, largecapacity computers that perform a variety of production functions, and test equipment.

How does programme material come into master-control?

Each programme is given a station code, or house number, for fast identification and retrieval. Although computer retrieval has introduced some commonality in terms, many stations have their own procedures and codes. In general, the log identifies schedule time, length of programme, programme title, video and audio origin , and other pertinent information. The programme log is issued daily, usually one or two days in advance.

It is normally distributed in a printed form that may run into several pages. Although all master control switching is done by computer, all master controls have a regular switcher which looks similar to the studio switcher. When the computer breaks down, the master control operator must take over and use the manual switcher for all on-the-air programme sequences. When all is going well, the computer switching will follow the sequence of events as dictated by the programme log.

What determines programme retrieval in television transmission?

Without the master control all the activities in the studio and control room cannot be properly co-coordinated. There are a number of video and audio sources that have to be previewed and effectively combined before we arrive at the various programmes that reach our television sets at home or in our offices. Every programme that is seen on our home screen has gone through the master control room of a television station.

Know the duties of a producer

Know what every programme proposal should contain. Producers are expected to generate worthwhile ideas on demand and these ideas must be translated into effective video and audio messages. Ideas can be generated by members of the programmes department or programmes implementation committee through a series of brainstorming with the producer coordinating various thought processes. These ideas are then organized such that various elements and activities interact with one another to achieve the desired product.

This helps the producer determine the people he will require, what they would do and the equipment necessary to produce a specific programme. These describe the flow of activities necessary to move from idea to the broadcast message and they help organize the production process as well as facilitate coordination of efforts.

What do production models describe?

A programme proposal is a written document that shows what the producer wants to do. Every programme proposal should contain The programme series title.

Preparing a Budget

As a station producer, the normal personnel and equipment costs are usually included in the overall production budget and one only needs to list special costs such as overtime, expendable supplies, script and artiste fees. Every production process revolves round the producer and it is his knowledge and expertise of the preproduction planning that will help bring every broadcast programme into fruition.

Production Steps

There is the need for an initial production conference which should be attended by the director, writer, art director, artistes and engineering supervisor and coordinated by the producer. This meeting is for the producer to present the objective of the programme series and invite comments on how the idea or script can best be translated into a radio or television programme. The producer and the writer should meet to discuss whether the script generates the process message. If the process message requires an unusual production approach, subsequent meetings with the entire production team should be scheduled.

There is the need for final scheduling even if the producer had previously scheduled various facets of the production. The producer is expected to file out facilities request' and this usually contains information concerning date and time of rehearsal, taping sessions and on-theair transmission, name of director, title of production and all technical facilities such as cameras, microphones, lights, sets graphics, costumes, makeup, VTR, Audio tape recorder, post-production facilities and special production needs. It also lists the studio and control room needed and the location of the outside location if necessary. The producer should supply the traffic department with information such as the title of the show, airdates and airtimes.

All pertinent The Public Relations department should be properly briefed about the upcoming production for adequate publicity, so as to narrow the gap between the potential and the actual audience. The producer hands over the production to the director who will conduct the necessary rehearsals and actual productions.

[...]

Editing can involve two editing systems. Recorders that contain the original material recorded with camera and the record VTR which produces the final edit master tape.

Feedback and Evaluation

There is the need to arrange a viewing date for the client and take notes on the recommendation for changes made by the client. Such a production book should contain the final programme proposal, production schedule, facilities request, production personnel, artistes, shooting script etc. Also he should file a cassette copy of the production for archival purposes. It selects visuals from various video sources and join them through a great variety of transitions, while the event is in progress and creates room for instantaneous editing.

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Any switcher whether simple or complex can perform 3 basic functions

It can select an appropriate video source from several inputs. Some switchers have further provisions for remote start and stop of equipment such as videotape recorders and can automatically switch the programme audio with the video. Each video input on a switcher has its corresponding button. If the video source of the switcher includes a videotape recorder and a character generator the number of buttons will be five.

The row of buttons is called a BUS and production switchers have many buses.

What is the duty of the production switcher?

Name 5 principal production steps that a producer should embark upon in order to produce a good programme.

MICROPHONES AND HOW THEY WORK

Microphones are very essential in both radio and television broadcasting and without them all activities in a broadcast studio will grind to a halt.

What Is A Microphone?

The pick-up of live sounds is done through a variety of microphones. Microphones electronic characteristics include their sound generating elements and their pick-up patterns.

Classification of Microphones All microphones transduce or convert sound waves into electric energy which is amplified and reconverted into sound waves by the loudspeaker. The initial conversion is accomplished by the generating element of the microphone. Because there are three major types of sound-converting systems, microphones can be classified into iii. Contrary to the dynamic microphone, the condenser microphone needs a small battery to power its built-in preamplifier.

Ribbon Microphone

They are strictly used for indoor activities.

Pick-Up Patterns

Any type of microphone can hear sounds from all directions so long as the sounds are within its hearing range.

Operational Characteristics

The mobile microphones include Lavaliere, hand, boom, wireless and headset microphones. The stationary microphones include desk, stand, hanging, hidden and long-

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distance microphones.

Wireless Microphones

Wireless microphones are used in production situations in which complete and unrestricted mobility of the sound source is required. They can be used to record a group of singers who jump around as much as they sing. They come as either hand or lavaliere microphones and their transmitters are built into the microphones themselves. Some models have a short antenna sticking out from the bottom of the microphone but most have the antenna incorporated into the microphone housing.

The receiving station of the wireless microphone system tunes into the frequency of the wireless transmitter and can receive the signals from as far as 330 metres under favourable conditions. The wireless microphone works best in the controlled environment of a studio or stage. There, one can determine the precise range of the performer's movements and find the optimal position for the receiving station or stations.

The Handset Microphones

They are built like ordinary intercom headsets except that they have high quality microphone attached. They are used in productions like sports reporting. The headset microphone consists of a small omnidirectional or unidirectional microphone attached to earphones.

Desk Microphones

These stationary microphones are widely used in panel shows, public hearings, speeches, press conferences and all other programmes where the performer is speaking from behind a desk, table, or lectern. They are usually rugged and able to withstand physical shock. Dynamic omnidirectional microphones are generally used as desk microphones but if a high separation of sound sources is desired, unidirectional microphones are used as well.

Stand Microphones

Hanging Microphones Microphones can be hanged by their cables over any fairly stationary sound source. Most often, hanging microphones are used in dramatic presentations where the action is fully blocked so that the actors are in a precise location for each delivery of lines. The sound source is always relatively far away from the microphone and if the person is not exactly within the sound pool of the microphone, his or her voice is off-mic. They can pick the shuffling of feet and the rumbling of moving camera pedestals almost as well as the voices and their light cables might cause a hum in the audio pick-up.

However, they are also popular in audience participation shows and are easy to set up and when in right positions produce acceptable sound.

Hidden Microphones

Sometimes you may have to hide a small lavaliere microphone in a tuft of flowers, or behind a table decoration. Often one gets a marvelous pick-up of various noises caused by people hitting the table or moving their chairs, but only a poor pick-up of their conversation.

Long Distance Microphones

These are used in the field of sports coverage. The simplest way to pick up the sound in sports events such as lawn tennis is to place normal shotgun microphones at strategic positions and aim them at the main action. A single tennis game may have six or more microphones to pick up the sounds of the players, the judges and the crowd. A parabolic reflector microphone can be used to pick up sounds over fairly long distances.

This consists of a small parabolic dish that has an omnidirectional microphone facing inward right at its focal point. Thus, all incoming sounds are reflected toward and concentrated at the microphone.

SOUND QUALITY

Semi-professional microphones do not have as wide a frequency as high quality microphones. The studio acoustics, the type and combination of instruments used and the aesthetic quality of the desired sound all play important parts in the choice and placement of microphones. Generally, rugged, dynamic omnidirectional or cardioids microphones are used for high volume sound sources such as drums, electric guitar, speakers and some singers, whereas ribbon or condenser microphones are used for the more gentle sound sources such as strings and acoustic guitars.

IMPEDANCE

Impedance is a type of resistance to the signal flow. There could be high or low impedance microphones. A low impedance microphone belongs to the high quality professional variety and can take up to several hundred feet of cable. If one must feed a low impedance recorder with a high impedance microphone or vice versa, an impedance transformer is needed.

Many electric instruments such as an electric guitar have a high impedance output and for them to match-up with other low impedance equipment, they have to be routed through a ‘direct box’ – a box that contains the transformer like electronics that adjust the high impedance signal to a low impedance one.

FREQUENCY RESPONSE

Many high quality microphones are built to hear equally well over the entire frequency range, a feature called FLAT RESPONSE. The balanced line rejects hum and other electronic interference. All balanced microphones and microphone cables use three-pronged connectors called XLR connectors. The problem with unbalanced microphones and lines is that they are much more susceptible to hum and other electronic noise than the balanced microphones and lines.

There are adapters that enable one to connect an XLR to the unbalanced connectors and vice versa.

Special Microphone Use in the Studio

The boom can be tilted up and down and at the same time rotate the microphone in the desired direction. It can be moved easily from one studio to another through narrow doorways because of its low height and narrow wheel-base.

Microphone Set Up For a Live Band

Sound signals of electric instruments such as the electric bass or keyboard are often fed directly to the mixing console without the use of a speaker and microphone. This technique is called 'direction insertion' or direct input. Feedback is the return of the total or partial audio mix from the mixing console to the musicians. Microphones generally can be put into any kind of use depending on their sound generating elements and their pick-up patterns.

They can be omnidirectional or unidirectional.

UNIT 4 THE TELEVISION CAMERA

Reference The television camera works on the same basic principle which involves the conversion of an optical image into electrical signals that are reconverted by a television set into visible screen images.

Identify the three main components of a camera

The CAMERA itself with its imaging or pick up device that converts the optical image as delivered by the lens into electrical signals. The VIEWFINDER which shows a small video image of what the lens is seeing. Television camera works on the same basic principle which involves the conversion of an optical image into electrical signals that are reconverted by a television set into visible screen images.

Many modern television cameras also have small LCDs monitors about 2 inches to

4 inches in size measured diagonally. Some of these cameras do not have viewfinders anymore. The BEAM SPLITTER in the camera consists of various prisms and filters that separate the white light into three light primaries – Red, Green and Blue, usually referred to as RGB. Because these prisms are all contained in a small block, the beam splitter is often called PRISM BLOCK.

In a colour camera, the principal electronic component that converts light into electricity is called the IMAGING DEVICE and it consists of a small solid-state device called CHARGE COUPLED DEVICE or CCD. The CCD contains horizontal and vertical rows of image-sensing elements called PIXELS. The electric charges from all the pixels are then transferred to a storage area and eventually become the video signals for the primary light RGB colours.

On what basic principle does a television camera work?

The Camera Chain A high quality studio camera is connected by a cable to a wall outlet. This cable connects the camera to a chain of equipment necessary to produce quality pictures. The actual camera called the CAMERA HEAD because it is at the head of the chain. The power supply.

During set-up, each camera is adjusted for the correct white balance, the proper contrast range between the brightest and darkest areas of a scene and the brightness steps within this range. Sometimes when the actual operational controls are separated, from the CCU, then we speak of a REMOTE CONTROL UNIT or an OPERATION CONTROL PANEL . The actual CCUs may be located in a master control room, while the OCPs are in the studio control room.

FBQ1: A written piece for radio is called _____

Answer: Bulletin

FBQ2: A written piece for television is called _____

Answer: Script

FBQ3: The three basic and broad purposes of broadcasting include: information, education and -----

Answer: Entertainment

FBQ4: In broadcasting, the encoder is the _____

Answer: Source

FBQ5: Whatsoever impinges communication fidelity is called ---------

Answer: Noise

FBQ6: In broadcasting, the ionosphere does not reflect standard broadcast frequencies well at what hours?

Answer: daylight hours

FBQ7: Broadcasting was deregulated in which year

Answer: 1992

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FBQ8: Which region in Nigeria first experienced television broadcasting? ____

Answer: Western region

FBQ9: The first indigenous TV broadcasting station in Nigeria is ___

Answer: WNTV

FBQ10: In broadcasting, what is the opposite of noise?

Answer: Fidelity

FBQ11: ------- aids broadcasting by reflecting high frequencies waves and boosts long-distance night time reception of standard broadcast signals

Answer: The ionosphere

FBQ12: What medium would you consider most effective for mobilization of rural farmers?

Answer: Radio

FBQ13: Broadcast signal is not continuous but broken up into numbers and the signal consists of a series of on/off pulses which are bits of information in a binary-number code. What type of transmission is described above?

Answer: digital

FBQ14: The British Broadcasting Corporation (BBC) began broadcasting experiments in Nigeria in what year?

Answer: 1932

FBQ15: The coming together of audio, video, print, graphics and electronic text communication which now blurs the distinction between interpersonal and mass communication and between public and private communication is technically referred to as ……..

Answer: Media convergence

FBQ16: Who was the first Director-General of the Nigeria Broadcasting Service

Answer: T. W. Charmes

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FBQ17: In what year was Nigeria Broadcasting Service (NBS) converted to Nigerian Broadcasting Corporation?

Answer: 1957

FBQ18: ___ was rejected and renamed NBC because it was seen merely as the colonial government's megaphone?

Answer: NBS

FBQ19: Which Constitutions first rejected centralization of broadcasting in Nigeria?

Answer: The Littleton Constitution of 1954

FBQ20: Which of the three defunct Nigerian regions pioneered television broadcasting in Nigeria?

Answer: The Western region

FBQ21: Which of the three defunct Nigerian regions pioneered radio broadcasting in Nigeria?

Answer: The Eastern region

FBQ22: The Eastern Nigeria Broadcasting Service (ENBS) was renamed Radio Biafra from 1967 to ____

Answer: 1970

FBQ23: The Broadcasting Company of Northern Nigeria (BCNN) was introduced in what year?

Answer: 1962

FBQ24: In what year was the Broadcasting Organization of Nigeria (BON) set up?

Answer: 1973

FBQ25: State-owned Broadcasting Organizations of Nigeria (SOBON) was a brain-child of which Nigerian Republic?

Answer: Second

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FBQ26: The Nigerian Television Service (NTS) which later metamorphosed into Nigerian Television Authority (NTA) first went on air in

Answer: 1972

FBQ27: The Nigerian Television Authority was established by the NTA Act of what year?

Answer: 1977

FBQ28: In what year was broadcasting deregulated in Nigeria?

Answer: 1992

FBQ29: What is the full meaning of The ITU?

Answer: International Telecommunication Union

FBQ30: The acronym 'UHF' stands for what?

Answer: Universal High Frequency

FBQ31: What agency is charged with the responsibility of monitoring of sound media activities in relation to stipulated policies and in compliance with international best practices?

Answer: The Federal Ministry of Communication

FBQ32: _____ is the overall world body responsible for regulating communication policies

Answer: International Telecommunication Union

FBQ33: Who issues out licenses to broadcast outfits in Nigeria?

Answer: National Broadcasting Commission

FBQ34: What do we call a scenario where a company with the intention of broadcasting in a given area(s) seeks for license of operation beyond his area(s) of broadcast intention?

Answer: Overshot

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FBQ35: The primary cause of stations (both radio and television) signals interference with one another is because some stations not operating within their___

Answer: jurisdiction

FBQ36: The NCC issues two categories of telecom licence. They include:

Answer: Basic and Major

FBQ37: Who issue frequencies to both broadcast and telecommunication operators in Nigeria?

Answer: Nigerian Communication Commission

FBQ38: Any action or inaction constituting non-compliance with any provision of the code of the NBC on the part of broadcast operators is called a _____

Answer: breach

FBQ39: _____ is Nigeria's pioneer telecommunications services provider

Answer: NITEL

FBQ40: The process through which an electric current vibrates and reverses its direction of flow in a regular way resulting in an alternating current that helps generate radio waves is called ___

Answer: Oscillation

FBQ41: The area in which a radio station's signal is heard clearly because of sky wave proportion is referred to as ---------

Answer: Skip Distance

FBQ42: An AM radio station is commonly allocated a width of only -------- KHZ

Answer: 10 KHZ

FBQ43: Another name for 'Kilohertz' is -------

Answer: Kilocycle

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FBQ44: What is the full meaning of ‘AM’ as a portion of the electromagnetic spectrum?

Answer: Amplitude Modulation

FBQ45: How many frequencies are employed in quadraphonic FM?

Answer: Four

FBQ46: What would you consider the most important electronic equipment in a broadcast studio, without which transmission of programme signals is impossible?

Answer: Transmitter

FBQ47: Lavaliere is an example of what?

Answer: Microphone

FBQ48: A camcorder is an example of ----------

Answer: Cameras

FBQ49: Who coordinates all activities on the floor (studio or on- location site) and relays the cues from the director to the artiste?

Answer: Floor manager

FBQ50: The two most important sections in radio productions are ____ and control room

Answer: Studio

MCQ1: ------ best describes the transmission of open access signals from a radio or television source to receiving sets at home.

Answer: Broadcasting

MCQ2: A script is for television, as ------ is for radio.

Answer: Bulletin

MCQ3: Decoder can also be called ------

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Answer: Receiver

MCQ4: In television scheduling in Nigeria, the day bloc from 4pm-6pm is called what?

Answer: Fringe time

MCQ5: What time is prime time in television scheduling in Nigeria?

Answer: 8pm-10pm

MCQ6: In radio scheduling, what do we call the day part between 12-2pm?

Answer: Mid-day drive

MCQ7: One of the following is NOT true of a television script

Answer: It is better to stick to the formal style than informal style

MCQ8: One of the following is not a generic function of the broadcast media

Answer: Entertainment

MCQ9: Which of the following is not a fundamental operation involved in using radio energy for communication?

Answer: The modulated signals must be detected at the sender's end

MCQ10: Which of these is situated within about 50 to 400 km above the surface of the earth?

Answer: The ionosphere

MCQ11: Which of the following belongs to the four ways of communication process as enunciated by Budd Hall?

Answer: Urban- Rural communication

MCQ12: Governments have often used radio and television as megaphones to exaggerate performance or make something out of nothing. This explains which of these functions of broadcasting?

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Answer: Propaganda function

MCQ13: Which of these statements is FALSE of the ionosphere?

Answer: During night, the ionosphere does not reflect standard broadcast frequencies well

MCQ14: It transcends the boundaries of space and time, and also leaps across illiteracy barriers. Which of these media of mass communication is best described above?

Answer: Radio

MCQ15: One of these statements is UNTRUE about radio

Answer: Literacy is the prerequisite for consumption of radio contents.

MCQ16: Which of the following is NOT a characteristic of radio?

Answer: Radio appeals to the eyes and other human faculties, particularly the imagination

MCQ17: A complete television script contains the following, EXCEPT -----

Answer: Unspoken copy or monologue

MCQ18: Features of a standard television script include the following EXCEPT

Answer: Should always be written in Times New Roman font size

MCQ19: One of these was not among the objectives of the BBC in championing the development of broadcasting cause in her colonies?

Answer: To help the colonies develop like the British

MCQ20: Ability to combine sights and sound is an exclusive advantage of

Answer: Television

MCQ21: Which of these would you consider as the greatest communications mechanism ever designed and operated by man?

Answer: Television

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MCQ22: Which medium of mass communication would you consider as the most glamourous?

Answer: Television

MCQ23: Which radio band is richest in music and entertainment?

Answer: FM

MCQ24: When did radio actually made its debut in Nigeria?

Answer: December 1, 1935

MCQ25: Two types of transmission can exist in both wired and over-the-air communication systems. They include -------- and ---------

Answer: analog and digital

MCQ26: If you are approached to prescribe one singular medium that is most effective for mass mobilization, what would your answer be?

Answer: Radio

MCQ27: Which of these would you recommend to be done on a TV script to avoid confusion with spoken copy?

Answer: Capitalize

MCQ28: Which of these agencies allocates frequencies to broadcast stations?

Answer: NBC

MCQ29: When was the Western Nigeria Broadcasting Service (WNBS) established?

Answer: May, 1960

MCQ30: In what year was the Eastern Nigeria Broadcasting Service (ENBS) established?

Answer: 1960

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MCQ31: The Northern Nigeria joined the bandwagon by setting up the Broadcasting Company of Northern Nigeria in what year?

Answer: 1962

MCQ32: Writing for television is called ----

Answer: Scripting

MCQ33: In what type of electronic transmission are the signals restricted and services exclusively available to only those who have decoders?

Answer: Narrow casting

MCQ34: Which radio network in Nigeria brands itself as the largest in Africa?

Answer: Radio Nigeria

MCQ35: All of these agencies regulate broadcasting in one form or the other EXCEPT

Answer: National Agency for Food Drug Administration and Control

MCQ36: A situation where a company with the intention of broadcasting between Lagos and Abuja but seeks for licence of operation between Lagos, Ibadan and Ife can best be described as what?

Answer: Overshot

MCQ37: Where is the International Telecommunication Union (ITU) headquarters located?

Answer: Geneva

MCQ38: One of these is NOT among the factors that affect the approval of broadcast equipment?

Answer: Ethnic and religious affiliations of the licence seeker

MCQ39: Which of these is the chief reason for stations signals interference with one another?

Answer: Failure to operate within allotted jurisdiction

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MCQ40: When the signals of two stations interfere, what is the penalty for the station at fault?

Answer: The station could be closed down or equipment impounded.

MCQ41: The acronym 'VHF' stands for what?

Answer: Very High Frequency

MCQ42: Which of these travels farthest and has the strongest reception in TV broadcasting?

Answer: VHF

MCQ43: One of these reports was associated with media development in Nigeria and English speaking West African countries.

Answer: The Turner-Bryon report

MCQ44: Very High Frequency (VHF) is reserved for -------- alone in Nigeria?

Answer: NTA

MCQ45: Which television stations use UHF for their transmission?

Answer: private and state government owned

MCQ46: The Nigerian Communication Commission (NCC) is modelled after the Federal Communications Commission (FCC) of which country?

Answer: The USA

MCQ47: Which body acts as the national regulatory authority for the telecommunication industry in Nigeria?

Answer: NCC

MCQ48: The laws guiding the FCC stipulates that a station must file a renewal application for how long before expiration of licence?

Answer: at least four months before expiration of a license

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MCQ49: The Nigerian Communications Commission was established by Decree 75 of

Answer: 1992

MCQ50: Which of the following is not among the cardinal objectives of the FRCN?

Answer: To resist any pirate that may attempt to raise its ugly head against the National interest

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