Radio Journalism & Production
Introduction to Radio Journalism
Gathering; Processing and Production of News for Radio and Television; ENG-Comparison with Practices in Print Journalism; News and Current Affairs; Broadcasting Code; Broadcasting Policy; Chanda Committee Report; Varghese Committee Report; Joshi Group on Television Software.

Radio Broadcasting in India
History and Development; All India Radio Services; Vividh Bharati; Radio Genres: E.G. News Bulletins, Radio, Features/Documentaries, Talks, Interviews, Disc Jockey Programme, Quiz; Organization and Management of AIR; Audience Research Units; International Radio Broadcasting: BBC, VOA, etc.; Writing Radio Reviews.

Radio Interview
Panel Discussions and Features; Planning and Conducting Various Types of Interviews; Factual, Opinions and Ideas; Emotional Responsibility; Factuality and Credibility; Music; Spoken Word; Talks; Discussions; Radio-Plays and Features; Specific Audience; Programmes; for Children and Women; External Broadcasts; Radio Commentary on Events; Vividh Bharati; FM Radio and its Urban Impact.

Elementary Study

Suggested Readings:


2. Broadcast Journalism, K M Shrivastava, New Dawn Press Group

3. Handbook of Journalism and Mass Communication, Vir Bala Aggarwal, V. S. Gupta, Concept Publishing Company

4. Radio Production, Robert McLeish, Focal Press
The module is an introduction to conventional practices in the audio industry. This unit aims to develop the skills, which students need in order to produce acceptable news stories for radio. It will introduce students to definitions of news and the principles of sourcing news through contacts and appropriate research. Students will learn news-writing and presentation techniques as well as script writing for various radio genres.
Objectives:
To reveal the students how to collect information for electronic media and the process of news meant especially for radio as compared with newspapers.

SPECIFIC
The students should know-

• Background of Radio and its evolution
• News gathering for audio broadcasting
• Language style for radio broadcasting
• Production techniques of Radio

History of news reporting:
Serious live coverage of news events was far less profitable than standard, sponsored, commercial network broadcasts- with the significant exception of sporting events. The fact also remains that, from the early 20s onwards, the magnificent men with their wireless machines broadcast the news from everywhere: from miles high in stratosphere balloons to submarine bathyspheres, from the floor of political convention halls to the battle fields of World War II. Some broadcasters, like Ted Husing and Graham McNamee, talked, shouted, yelled and laughed themselves into sickbeds covering political conventions and events of state. Some, like Maurice Hindus and William Shirer, went on to notable careers in fields outside radio broadcasting. Some, like Tom Traynor, were killed in the war. Others rose to a stature unique in the history of news reporting. Is it unfitting to compare the broadcasts of Edward R. Murrow during the London blitzkrieg of 1941 with the photographs of Mathew Brady depicting the American Civil War? Both men were reporters, using their unique talents in relatively new media to bring vivid pictures of warfare to a public that would otherwise have remained ignorant of the quality of the era in which they were living. Both men directed teams of other reporters who learned their craft from inventive and talented innovators; and both men preserved more than a surface façade of humility as their eyes beheld the terror and impact of the world around them which they attempted to report as accurately and meaningfully as possible.

The structure of remote on-the-spot news coverage evolved out of the trials and errors of the radio broadcasters who manned the news microphones of the networks during the great commercial age of broadcasting. No man was responsible for the development or techniques allied to this kind of coverage. Trials were many and the errors were frequent.

When a great on the spot broadcast did occur like James Bowen’s description of the scuttling of the German battleship Graf Spee in Montevideo on December 14, 1939, it frequently happened more or less by accident. A reporter with sufficient equipment, sometimes no more than a telephone connection, was at the right place at the right time, happened to a young journalist by the name of Eric Savarind who found himself capable of broadcasting to the United States when the Germans were matching into the city of Paris, France, on June 9, 1940. His first and last report from that conquered area not only became a broadcasting legend, but was also to become one of the many fine examples of how broadcasters to the audience an accurate, immediate description of news as it was happening. Severeid’s name is just one of many whose voices the public heard from the battlefronts, newsfronts and disaster areas of the world during the great years of radio broadcasting.

Not all radio history is made directly in front of the microphone. Managers and executives were also responsible for the growth of on-the-spot radio broadcasting in equal measure with the reporters themselves. Most of these innovators have been lost in the shuffle of history, but their basic motive was a response to crisis that, oddly enough, had begun in the front offices of newspaper wire services and in the editorial rooms of daily newspapers across the nation.

By the time the major networks were organised, it had become sufficiently clear to all concerned that radio broadcasting was a potentially powerful information medium. The publishers of leading newspapers became frightened. Would the public stop or cut down the reading of papers? They felt was little sense in talking a chance and accordingly cut off the legitimate supply of news via the wire services to radio broadcasters, services upon which the newspapers themselves were vitally dependent. A network, a station, was literally barred from membership in the Associated Press, United Press or International News Services, among others.
The managers of the broadcasting outlets had a choice. They were obviously involved in a war with the press, a war which had, by the 1930s, reached such bitter dimensions that newspapers frequently refused to publish the daily list of entertainment programmes (to say nothing of news broadcasts) presented on radio stations. Broadcasters, had they wished, could have accepted defeat and — at first glance, to their own advantage- gone out of the news business entirely, concentrating on the more highly profitable producing of comedy shows, soap operas, musical programs and other forms of pure entertainment.

But they chose to stand and fight the newspapers for three reasons. First, since the first broadcasts in the early 1920s by Pittsburgh's pioneer station KDJA, radio innovators had clearly demonstrated that they could often news coverage of a type that printed newspaper could not. Radio was a faster medium than the printed media, it could spread a news story to communities or across the nation in seconds while newspapers took hours. It could also bring the listener to the place where news was happening; its on the spot broadcasts were a type of coverage impossible for newspapers even picture newspaper to duplicate. Second, the public had demonstrated that it wanted news broadcasts. Early news analytic like Lowell Thomas became figures of renown overnight, and it was obvious that millions of listeners were literally glued to their radio sets at political convention time, for major prizefights and baseball games and to listen to speeches of statesmen and visiting foreign leaders as well as heroes. Third, the communications Act of 1934, a law of U.S. Congress setting up a commission for control of broadcasting in the United States, clearly stated that all commercial broadcasters were bound by legislation to act in the 'public interest, convenience and necessity'. How could they accomplish this directive and ignore the news of the day in their broadcasting?

The broadcasters, however, did not give up the unique news gathering services they developed in the years that they had been excluded from the wire services by the newspaper journalists. What they were forced to do, of course, was to develop new and effective ways to gather and report news, and they were not inclined to unlearn the insights they had gained, methods they had evolved and highly skilled staffs of radio reporters they had trained. The combined talents of all broadcasters as well as newspaper journalists and wire service personnel were needed to cover the far-flung action during World War II.

In the early days of TV, newscaster like John Cameron Swayze, Douglas Edwards and Drew Pearson as well as familiar radio figures like Robert Trout and George Hicks attempted to deliver 'illustrious lecturers' concerning the news of the day, using as many 'audiovisual aids' as they could get into a TV studio. Their programmes were replete with so many graphs, charts, maps, photographs (projected behind, above and below them), props, drawings and other paraphernalia that their newscasts frequently looked like junk shops.

An attempt was also made to provide as much filmed material as possible to get the camera away from the studio and on to the focal action of a news story. But where to find newsfilm? Since the VT broadcasters themselves were not equipped to shoot and develop their own movies, they were forces to buy from establish newsreel firms. Their methods of preparing one or two reels were far too slow and antiquated for a rapid fire medium like TV, which gobbled up news as quickly as it was made and hungered for newscrips minutes after (or during) the march of events.

One answer was the formation of relatively small but fast and flexible news films like Telenews, whose man asset was speed. Providing a written script instead of a sound on film narration, for TV stations, these newsreel firms would ship their hastily edited films and scripts to TV station before daily deadlines. The movie clips would give the newscasters something to narrate which was more dramatic and to the point than a map or photograph.

**Remote TV Relays:**

Another solution was the use of remote TV relays, either by means of coaxial cable or by microwaves (beams). Where this was possible, it worked wonderfully. The cables that carried TV signals in the early days were more costly and complex than the telephone lines, which radio broadcasters so frequently used. Worse, the microwave relay beam, which carried remote TV broadcasts, travelled only in straight lines like a beam of light and thereby could send only to a reception point as far as the horizon, at which point it had to be re-energized and retransmitted. Radio short waves, on the other hand, followed the contours of the earth far beyond the horizon and were easy to transmit over great distances. Problems of transmission bothered for long the TV engineers. The use of space satellites, to deflect TV signals headed out into space back to earth (thereby allowing them to travel far beyond the horizon) was one solution that worked. Satellites were, however, to be located in exactly the right position for effective transmission, and some engineers claim that even at present they do not appear to be living up to their previously expected technical potential.

**Radio News Today:**

Thus if there is any one area which radio must support and strengthen in order to hold its own in the growing electronic competition, it is in the field of news. Rock and roll sells the kids. Carefully programmed music and informational programs can sell to the adults. A reputation for ethical, carefully written, thoughtfully presented, balanced news can do more to hold a quality image than any other one ingredient.

With the advent of the easily portable tape recorder and the acquisition of 'beeper' recording equipment by every radio station, there was a boom in coverage of news stories by radio staffs. However, because of the death of true reportorial talent, not only has the caliber of radio news coverage been dropping in the past few years, but quantity also. The program director or station manager should manager should be able to see the value in a careful, probing intierview
of a personage who has something to say, if the news man is smart enough to bring it out. In order to do so, however, he has to be a dedicated newsman- not interested in presenting just a ‘show’, but interested also in stimulating his interviewee to answer, questions for the purpose of informing his listeners. News is not, cannot, must not be contrived, distorted, changed to any degree from its inherent, factual, informational integrity for the sake of showmanship. It must not, cannot ethically, be made funny when it is inherently tragic. It cannot be made “human interest” whatever that may be, if it is general interest. It cannot be made clean and light and happy if it is dirty, deep and bitter- if it is. If one tries- with gimmicks, gadgets, and inflections to make it what it is not, then one is a liar. That one is despicable and not deserving of the title of newsman. A competent broadcast newsman has to go to the scene, interviews expertly, write skillfully, voice fluently all under pressure, the newspaper reporter has never experienced. And, because he can instantly identified by his interviewees and his listeners as the one man in between, he has to take the brunt of all the criticism which may be stimulated by any worthwhile story. To a good newsman there can be but one religion it is the creed of accuracy and unswerving dedication to the ideal of complete news coverage of every newsworthy person and event in your city. One thing will drive him away. Meddling in that creed in the name of ‘showmanship’ one of the nastiest words to a newsman that was ever coined. There is another thing which can drive him away. That is being pushed constantly to do more than he can possibly accomplish properly. What does a good, minimum metropolitan news department need in the way of manpower and equipment. A news director one with experience, ambition, consistency and imagination and one man inside and two outside for each shift covered.

**Fancy Equipments for News Coverage:**
The need for fancy equipment varies inversely with the ability and imagination of your news department. There are certain basic tools, however. A beeper tape recording device for recording from the telephone and a minimum of three portable tape recorders for the outside men two going, one in reserve. This news department must have access without restriction to full dubbing facilities for editing tapes and preparing them for broadcast. The department also should be equipped with the necessary radios for receiving all your local emergency broadcasts- fire, police, sheriff, state patrol or what have you. No department should be without at least one mobile unit equipped with some sort of two way communication with the newsroom and with a radio tuned to the local police frequently. Elementary but often overlooked is the need for a private telephone line direct to the newsroom with an unlisted number. Both news wires are also a necessity.

**Source of Radio News:**
There is no place in news format for gimmicks, showmanship or anything other than factual informative news reporting. The news we attempting to provide for our audience is designed to give them something they can get nowhere else or at least in greater depth and detail than anywhere else. In this area, we feel we are doing a good job and find that more and more people look to us for not the first story but the most knowledgeable story. We like to believe that a great deal of the respect we have earned is due to our lack of gimmicks and our concentration on factual, informative reporting. When our bulletin intro is used, it means something of something of startling import has happened on the national or international scene, a matter of wide concern on the regional scene, or a tragedy on the local scene.

**The Telephone and Tape Recorder:**
aptly demonstrate the immediacy and impact that is radio alone. No other medium can provide direct, on the scene report as quickly, factually and with greater drama than radio. The telephone and tape recorder are probably the most under estimated facilities, at the disposal of a station. If news is people and your news department, is nothing more than one or two men trying to fill in with news as well as selling, announcing or whatever else they required to do, what greater expenditure is required to use the voices of people who make the news rather than your own? If a radio station wants to grow, it should learn how to move and motivate its community not just in getting ratings, but also in getting action, in becoming a power. It must latch into those needs and issues, which present themselves, and it should get cracking.

**For further reading**
2. Baruah U.L,*This is all India Radio: A handbook of radio broadcasting in India*. New Delhi, Publications Division, 1983

**NOTES:**
Objectives:
To develop in the student the skills, techniques and art of capturing visual news through sight sound and motion. It is a "hands-on" course teaching the use of the hand held camera and the editing equipment used to create the short inserts used in normal studio news programs.

SPECIFIC
The students should know-

A) the difference and similarities between print and broadcast journalism
B) Electronic News Gathering (E.N.G.); know its' definition and contribution to the televised news program
C) Know how to use remote equipment, especially the Camcorder
D) Know the technique of one-camera shooting, in-camera-editing
E) Know the techniques of video tape editing (video & audio), especially for use in television news.

In May 1977 the Japanese ENG coverage of the London economic summit was beamed back to Tokyo by satellite, and BBC used these pictures as part of its domestic output. BBC opened 12 the month trial of the new system on october 10,1977 with an interview of Margaret Thatcher, then leader of the Conservation Opposition. This interview was recorded at the House of Commons and shown on the lunch time news. The ITN began experimenting with ENG during April-May 1979 with the coverage of the general elections. By 1980 the switch from film to ENG was going ahead in Europe and other areas.

In India Doordarshan started colour transmission and its news services started using ENG from August 15, 1982. Using INSAT-1A Doordarshan news showed ENG pictures throughout the network on that Independence day. In the Ninth Asian Games, 1982. Doordarshan made full use of ENG and OB vans. The then Information and Broadcasting Minister Vasant Sathe to face strong opposition to the switchover from black and white to colour, within and outside Parliament, on the ground that the funds to be used in this process should go to anti-poverty programmes.

ENG, also known as EJ(Electronic Journalism) or ECC(Electronic Camera Coverage), has now become an universally accepted mode of television news gathering. It consists of a portable camera and a portable video cassette machine on which picture and sound are recorded. The two pieces of equipment, usually linked together by a cable are operated separately by a cameraman and a sound recording.

Advantage of ENG is eliminating of the process department and possibility of instant replay as well as instant transmission using microwave or satellite uplink from a site far away from the base. This versatility of the ENG is highly useful in television news work and has become the order of the day. Further miniaturization of cameras in going on with further developments in CCD technology and with 1/2 and 1/4-inch formats of recording tape.

ENG
Electronic News Gathering is the base upon which all electronic journalists and news directors build their product. The resources below offer some insight and information as to how we can build a better product—more safely and under the law.

New Products: ENG corders

Beam Me Up: New Technology and Safety Features ENG Cameras and Camcorders

Doing More With Less
ENG and SNG systems have become more flexible
Live & Local: What's new in the ENG and SNG markets for broadcasters

ENG Accessories: Products that will help keep your live shots headache-free

TRADE SECRETS
ENG CAMCORDERS
New lineup of high-definition cameras
This spring brought some of the biggest changes in camcorder technologies since the advent of digital formats several years ago.

Hand-held HD
Hold on to your 16:9 screen. JVC says it has the world's first hand-held high-definition camcorder. Only a few newsrooms contemplate shooting HD news anytime soon, but this may change as the prices of digital television sets decline, as regulators require more DTV sets to be manufactured, and as cable systems and programmers carry more HD. Here are the specifics: Priced at less than $5,000, the HY-HD10U has some economics, including a single, 1/3-inch CCD with 1.18 million pixels. Its new design, however, is supposed to improve color sampling and resolution. The camcorder records three resolution modes: HD at 720 scan lines, 30 frames, progressive; standard definition (SD) 480/60p; SD 480/60 interlaced. The progressive scan modes use 16:9 from the CCD with MPEG-2 compression, while SD interlaced is 4:3 with DV compression. The camcorder records on standard MiniDV videotape. It can up- or down-convert to-not from-most formats, including
1080/6, 480/60p, and 480/60i, so it can play most formats on any display with component input. The MPEG-2 is compatible with JVC's D-VHS. JVC says it has a nonlinear editor for the MPEG-2 video and that more are on the way. Other features include an image stabilizer, two XLR adapter audio inputs and IEEE 1394 interface for D-VHS or a computer.

**Optical Pro**

Another big development is Sony's new Optical Disc Recording System for broadcast use. The system-scheduled for release in the fall-includes two new camcorders and three decks. It records high-resolution original material and a lower-resolution, frame-synchronized proxy version. A technician can quickly transfer the proxy version to a laptop editor or to a studio at up to 30 times faster than real time, so writers immediately see the proxy to write scripts. Based on the scripts, technicians can transfer selected high-resolution video as a video feed or a data feed over an IP network. The system offers recording using the DVCAM codec at 25 Mbs per second or MPEG IMX at up to 50 Mbs. Transfers of high-resolution video can be four or more times faster than real time, depending on the bit rate. Optical decks output a variety of analog and digital signals including Ethernet and IEEE 1394. Rewritable disks hold 90 minutes of DVCAM or 45 minutes of MPEG IMX.

What are your experiences with new products?

**BEAM ME UP**

New technology and safety features are making ENG/SNG vehicles cheaper, easier to operate and more powerful. A lot has been happening in the ENG/SNG vehicle market over the past few years. Increased awareness and a rash of high-profile accidents have focused more attention on safety standards and equipment for ENG crews, and new technologies are allowing cheaper, smaller and better options for gathering news in the field.

**Safety First**

Safety has long been an issue with ENG trucks, given the potential for electrical accidents. In California, safety regulations are being considered by the Occupational Safety and Health Standards Board that would require ENG vehicles to have:

- Switches that require constant pressure to raise the mast and allow direct overhead view.
- Level indicators to assist the crew in making sure the vehicle is on level ground.
- Proper illumination, in the form of spotlights or similar devices, that can light up the area above and around the vehicle.
- Audio and visual warning indicators to prevent moving the vehicle while the mast is raised.
- Warning signs documenting possible dangers.
- A single safety manual documenting safety procedures.

Additionally, the regulations propose annual training for ENG crews—including anyone who works in or near an ENG truck as well as those who supervise them—and quarterly safety inspections. The California commission drafting the guidelines worked with industry vendors and news managers to estimate it will cost $1,500 to outfit new vehicles to standard, and $3,000 to retrofit existing vehicles. Another round of meetings and discussion is slated for mid-July. Vendors, however, already are gearing up to meet or exceed those requirements. Bob King, international sales manager for Frontline Communications, says all of its new vehicles will be compliant. Many of the recommended features were already standard for new ENG trucks from most vendors, and the only rapid change was adjusting the warning signs to size and verbiage specifications. One minor holdback is the position for the level indicators. The best method is mounting an indicator to the ENG mast, with a remote indicator. Will-Burt, the main supplier of telescoping masts, is currently adapting an expensive leveling indicator used on its military mast systems to be more cost-effective for ENG vehicles. King says the new system should be ready before the California regulations go into effect. Another safety feature becoming popular is the current detector, that can warn operators of nearby power lines. These can be mounted on the ENG mast, and can either provide a warning alarm, or even cut power to the mast to prevent an electrical accident. Two of the more popular products come from SIGALARM (www.sigaralarminc.com) and the Will-Burt Company (www.will-burt.com). Current detectors are not required under the new regulations, however.

**New Methods**

Recent technology advancements have drastically altered the ENG landscape. Most vendors are now offering hybrid ENG/SNG trucks that dramatically lower the cost of having SNG capability in the field. Jack Vines Jr., sales manager for Television Engineering Corporation, says the new hybrid vehicles can give stations remote uplink capability for less than half the up-front cost of older, larger satellite trucks, with reduced maintenance and operating fees to boot. The trucks also provide a smaller and more mobile solution for stations that have coverage areas exceeding the limitations of microwave ENG. The smaller, compact SNG capability has been available since mid-1996, but in recent years cost has dropped and the technology has been refined. "This is the first year that we've done as many hybrid proposals as regular ENG-type trucks with mast only," says Vines. Another advancement is digital transmission of microwave signals, called COFDM. This technology allows for improved signal strength on microwave masts by reducing the need for line-of-sight. Camera crews can get shots from locations where microwave alone wouldn't work, as well as broadcast more clearly while the truck is moving. Vines say most
customers are taking the interim step right now of buying a vehicle that has a digital-ready transmitter, instead of buying the full package with a digital encoder. Beyond moving to a digital transmitter at some later date, a digital-ready vehicle will help adapt to any spectrum changes for ENG coming down the pike.

**The communication companies offering services: BAF Communications?**
- Manufacturer and integrator of specialty vehicles, including broadcasting, communications, medical, cellular, banking. From smallest crew cabs to ENG to SNV to production trailers and OB vans.
- Freightliner Sprinter DSNG/ENG combo combines compact platform with excellent weight capacity and internal space. The longtime worldwide favorite is now available domestically.
- New/Used/Reconditioned

**Frontline Communications Corporation**
- Frontline builds ENG, SNG, DSNG and EFP vehicles for the broadcast world. Our products range from microwave vans to HDTV expanding-side trailers.
- Frontline is the leader in safety provisions built into Broadcast vehicles, most pointedly ENG vans. Frontline offers, as standard, safety systems that were adopted by CAL/OSHA requirements for ENG safety. Additionally, Frontline offers aftermarket power line detector systems at the choice of customers. Frontline is the benchmark for ENG safety.
- New/Used/Reconditioned
- Cost-effective airborne ENG solutions. We have experience with a wide range of aircraft and equipment-not just the basic JetRanger-regardless of your needs.
- Multisensor gyro stabilized cameras with both infrared and visual cameras, we also specialize in complete turnkey solutions, including flight crew, camera crew, and even talent. We also provide a cost-effective airborne ENG package to be shared among multiple users (both traditional broadcast and nontraditional) to significantly reduce cost and increase utilization.
- New/Used/Reconditioned

**Microwave Radio Communications**
- Leading manufacturer of digital and analog video microwave systems for portable and fixed broadcast operations: STL, TSL, ENG, Outside Broadcast, intercity relays, satellite backhaul, regional networks.
- CodeRunner: COFDM and 4.2.0/4.2.2 MPEG II with remote control software in 2RU for ENG applications. Agile audio sub-carriers and frequency agile functionality for customized channel plans. News cars and SUVs use a 13dB directional antenna or a 5dB Omni Antenna. In most cases a mast is not needed. FCC proof.
- New

**N Systems Inc.**
- NSI manufactures ENG transmit and receive antenna systems, the MC5 PC-based touchscreen remote control system, and Cam Pac remote camera systems for weather and site observation.
- Auto Link™: an advanced feature of the NSI MC5 remote control system that closes the loop for microwave antenna alignment by enabling the operator at the studio to control both ends of the microwave link. NuPod was selected as the best new product in the ENG microwave category at B2002.
- New

**Nucomm Inc.**
- Nucomm Inc. is introducing its new COFDM modulator and MPEG II Encoder, the NEWSCODER-TX1. It employs the latest DVB-T COFDM technology. The unit occupies only one RU of rack space and can be integrated into existing digital-ready ENG trucks and/or helicopters or “built in” the 1RU NEWSCASTER VT1 series truck transmitters.
- New

**Shook Mobile Technology**
- Shook Mobile Technology is fast becoming the industry leader in live microwave and digital satellite news vehicles.
- Shook Mobile Technology Roadrunner II series vans have been completely redesigned to be the most rugged and reliable on the road. Additionally, we have incorporated the most sought-after features suggested by more than 30 chief engineers and directors we interviewed over the past two years.
- New/Used/Reconditioned

**Television Engineering Corporation**
- Designer and builder of custom ENG and DSNG mobile solutions for newsgathering as well as the Eagle Eye news camera system.
- The TEC MicroSat ENG/DSNG unit represents a new way of thinking about covering breaking news. Smaller trucks—utilizing compact digital satellite systems—allow you to get on the scene faster and with more versatility. Features include an automatic satellite locating interface, a custom edit suite and the Eagle Eye camera system.
- New/Used/Reconditioned

**U.S. Helicopters Inc.**
- U.S. Helicopters Inc. is a nationwide provider of custom ENG helicopter programs, operating the Bell 206 JetRanger, Longranger, and Eurocopter AS350 Astar helicopters.
- U.S. Helicopters Inc. has been operating ENG helicopters for two decades and is one of the largest providers of ENG helicopters in the nation. U.S. Helicopters is also the only national provider of ENG helicopters that is an approved service facility for both Bell Helicopter Textron and American Eurocopter Corporation.
- New/Used/Reconditioned

**Winemiller Communications Inc.**
- WCI is the nation’s largest provider of remanufactured ENG/SNG vehicles, including sales, rentals and comprehensive repair and rebuilding services for customer-owned trucks.
An evolution in shooting Will videotape become a thing of the past? It's too early to say, but at least one vendor now offers the option to record quality video on DVD rather than tape. Meanwhile, another new camcorder is designed as much for video streaming as traditional broadcast. On the high end, look for more choice in digital cameras, as well as some advantages previously found only in film cameras: higher data rates, high-definition resolution, and even variable frame rates.

**DVD Cam**

Hitachi is introducing a line of tapeless camcorders. Although Hitachi has sold one-CCD DVD camcorders for more than a year, the new professional DVD products include a one-piece, three-CCD camcorder and a dockable DVD recorder. The products record MPEG-2 video on a reusable DVD-RAM cartridge with a capacity of 60 minutes. Hitachi includes software to edit the media with a laptop PC, or the recorder or camcorder can edit and transfer to a server for processing. Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.

**Vary the Frame Rate**

Hitachi says plug-ins will be available for popular editors such as Avid Express or Apple Final Cut Pro to handle the video, too. Especially useful will be the ability to quickly assemble clips and e-mail them to another location. The recorder can loop, so a camcorder operator can continuously shoot without running out of recording media—a feature especially useful for stakeout assignments. Hitachi says the camcorder creates thumbnail images of the start of each scene to help index the video on the disk. Hitachi plans to start shipping the recorder in the fourth quarter of this year.

**About the frame rate**

Panasonic, the AK-HC900. The 720-line, progressive-scan interlaced and 30 progressive fields per second. Sony says the camcorder completes its system of MPEG 50-megabit production equipment from acquisition to transmission. The camcorder can switch between modes of 60 interlaced and 30 progressive fields per second.
Older But Better
With capital budgets limited these days, the refurbishing option is growing in popularity. Winemiller Communications says its used vehicles sell for about half the price of new ones. Its refurbishing process reinstallso engines and transmissions with three-year/75,000-mile warranties, as well as renovates interiors and exteriors. Company president says refurbish orders in 2001 were up 50 percent over 2000. “We see a mix in the budgeting of new and refurbished trucks,” she says.

Doing More With Less
ENG and SNG systems have become more flexible

The Telecast CopperHead multiplexer operates on camcorder battery power.

ENG and SNG systems are increasingly flexible, especially in two areas. First, new digital COFDM (coded orthogonal frequency division multiplexing) ENG systems send signals from places where no one would dare a few years ago. Second, many products, especially SNG packs, are now more compact and portable.

Fiber-Optic Cables Make the Load Even Lighter
Remember the days of lugging rolls of heavy and expensive camera cable? A few years ago, Camplex lightened the load by multiplexing all the necessary ENG signals on one coaxial cable. Now there’s a system by Telecast Fiber Systems called CopperHead to multiplex all the necessary signals on a single fiber-optic cable that weighs a fraction of coax, but relays signals 30 times farther, including two-way program video and audio, intercom audio, and returns black burst, color, audio, camera, tally and control data. The 1.5-pound unit that multiplexes all these signals fits on the back of a camcorder and receives power from its battery. Single- or multi-mode fiber links the multiplexer with a rack-mounted base station in the ENG vehicle. The price is about $10,000. Telecast: 508.754.4858 or Broadcast Microwave Services. It’s a COFDM wireless video transmitter that links an ENG camera with a receiver in a van or wherever you want to put it. As with most COFDM systems, it is robust even for mobile operation.

Switchable Antenna Makes Live Shots Easier
Microwave Radio Communications says its new switchable sector ENG transmitting antenna, called MRC Quad Sector, and offers the advantages of both an omni-directional antenna and a high-gain steerable antenna. It should be especially useful for quickly establishing a signal at the scene of a breaking story. At 15 pounds, it’s more appropriate for lighter ENG vehicles or dual-mode ENG/SNG vehicles.

ENG Link Fits in a Backpack
Expedio, a portable digital ENG link from Moseley, is taking the flexibility of COFDM another step. It only takes 12 DC volts to power the unit, and the company says you can even carry it in a backpack and transport it on a motorcycle. Expedio can operate in the 1.9-2.7 GHz band at MPEG rates from 4 to 32 Mbps. If you don’t recognize the name Moseley, perhaps you recognize Microwave Data Systems. Moseley recently purchased MDS from Adaptive Broadband Corporation.

AvL’s Fly & Drive is one of several new SNG antenna systems that are easier to move and use.

SNG Systems That Are Simpler and Lighter
There are many new, simpler and lighter portable, and usually digital, SNG antenna configurations. Some are fly-aways, small enough to be handled as airline luggage. Other models are drive-aways that mount atop a vehicle like a luggage rack. AvL Technologies has a model that does both, the Fly & Drive, for $50,000.

All the portable SNG antenna systems are available in a range of dish sizes, prices, and electronics options:

What’s New in the ENG and SNG Markets
News managers are focused on electronic and satellite newsgathering for several reasons. First, there are the safety issues. At least five people have died in accidents involving masts in the United States and Canada since the mid-1980s. California is considering changes in occupational safety regulations that cover masts. In addition, recent reports of vehicle rollover accidents, especially of sport-utility vehicles, raise questions about the likelihood of news vehicle rollovers given the additional equipment weight. Separately, there’s the expected reassignment of some frequencies for ENG microwave transmission. Finally, digital microwave is coming on the market, especially welcome because it’s lighter, more compact and transmits better.

Safety Devices
Two manufacturers report a big increase in sales of warning devices for ENG masts in the last six months. One device,
called Sigalarm, detects the electrostatic fields of power lines and alerts mast operators of hazards with both audible and visual warnings.

Anticipating more orders, Will-Burt has lowered the price of its warning system, D-TEC, to $2,850. D-TEC has multiple ways to detect power lines or other hazards to raising ENG masts, including power field detection, sonar, tilt sensing and illumination.

**Vehicles**

Television Engineering Corporation says its new TEC-14BX MicroSat, built on an ambulance-style truck, meets the need for smaller vehicles, reduced costs and easier operation. The truck seats six, but could be staffed by just a reporter and photographer.

Television Engineering's newest ENG truck, called NewsRunner, is based on a Ford Excursion sport-utility vehicle with a V-10 engine.

Frontline Communications has introduced an SNG truck, called NT-5, that is based on a Ford F-550 diesel truck chassis, with a gross vehicle weight rating of 19,000 pounds. It can house a digital or analog uplink, a small carbon fiber antenna, or a full 2.4-meter antenna. Frontline Communications: 727.573.0400 or www.frontlinecom.com

Wolf Coach's latest product is a digital SNG/ENG hybrid version of the company's Benchmark 3 van. Wolf was concerned about the weight and cost of digital SNG vans. Since smaller units are less expensive and less regulated, company engineers improved the design and construction to eliminate hundreds of pounds from the base weight. Wolf Coach: 508.791.1950 or www.wolfcoach.com

BAF Communications has a smaller SNG/ENG vehicle based on a Ford E-450 chassis. The gross vehicle weight rating is 14,050 pounds and length is 22 feet.

Shook Electronics has an all-terrain vehicle with a fixed 1.5-meter antenna for digital SNG. When the ATV is not used, the versatile system allows the SNG electronics to be removed and used as a flyaway unit with a portable antenna.

Winemiller Communications specializes in refurbishing ENG/SNG vehicles to maximize ENG budgets. Its engineers can design, install and train in the use of ENG or SNG systems, including help for stations affected when the FCC reallocations use of the 2 Ghz microwave spectrum.

**Digital Connection**

CONUS says its new Digital Communications Package for the first time gives stations total communication capability through a single satellite connection. This includes telephone, fax, high-speed Internet and network service. The unit is available only to CONUS members

**Suggested Readings**


**NOTES:**
LESSON: 3
NEW AND CURRENT AFFAIRS

Objectives
This lesson is to give an idea on News and Current Affairs Programmes and their importance on various channels of Radio.

SPECIFIC
* The students should assess-
* The need for current affairs programmes.
* The importance of the programme
* What is broadcast (the content) in those programmes

News and Current Affairs
It is at once dangerous and necessary to summarise research findings. Danger resides in the inevitable gloss over explanations that otherwise come from rich, detailed data. The necessity is that effective communication of any research requires simple and general statements about that research. With this in mind, this chapter seeks to summarise this research and, in doing so, to minimize reduction and to maximise clarity and explanation. This chapter will also review the overall research program reported here and undertaken for Stage Two of the ABA study on sources of news and current affairs.

The most poignant findings are these:
Half of Australian adults spend at least one hour a day watching, listening to and reading news and current affairs. Free to air television remains the most used source for news and current affairs with nearly 88 per cent of Australians using it followed by 76 per cent listening to the radio and 76 per cent reading newspapers. National Nine News is the leader amongst free to air viewers, ABC Radio News in its various forms is the most attended by radio listeners, newspapers are predictably popular within their own city, state or territory. The ABC 7.30 Report presenter, Kerry O’Brien is the most preferred journalist, reporter, presenter, columnist; he is followed by Mike Munro from Channel Nine’s A Current Affair. Both were named as most credible as well, in the same order and both of their programs appeared in the top three most credible programs. Ten per cent watch pay TV and 11.3 per cent use the Internet for news and current affairs. Australian audiences believe that the business interests of media organisations are the greatest source of influence on what they read, hear or see in news and current affairs. Australians use their preferred source of news or current affairs because of the quality of coverage it provides, although many admit that timing in the exhibition of content and convenience are the main reasons why they read, listen or watch. Most Australians believe the news and current affairs media are credible although many feel they are not as credible as they should be. The most credible sources are the public broadcasters while the least credible are the commercial broadcasters with other media sandwiched between them. Nearly all Australians believe that their preferred source of news and current affairs has at least some influence on public opinion and about half attributed their preferred source with a moderate to high level of influence. Those Australians who report preferring and mainly watching commercial free to air television for their news and current affairs have more conservative social and political attitudes than those who prefer and most often use public free to air television. The most conservative attitudes are found among those who watch A Current Affair and 60 Minutes whereas the least conservative are found among those who watch SBS World News. Economic attitudes do not differ in relation to the sources of news and current affairs used by Australians. Of most concern to Australians is sensationalised reporting in news and current affairs. Intrusive reporting ranks as the second highest concern followed by biased content and then inaccurate reporting. Nevertheless, sensationalised reporting is recognised as an effective tool to draw their attention to particular services. Three-quarters of Australians believe the media cover local news and current affairs less adequately than they could and attribute inadequate coverage of local events and issues to a general lack of community and media interest in local matters. It is clear from these results that Australians are avid news and current affairs consumers. Not surprisingly, both survey and focus group participants had a lot to say about news and current affairs in this country. A less than precise, but general observation about the results presented in this report is that they resonate with indicators that the tripartite relationship among audiences, providers and content of news and current affairs is changing. Not surprisingly, nowhere in the focus group transcripts or the tabular data of the national survey is the nature of this transformation explicit. Nevertheless, one might infer from the totality of findings presented herein that what both audiences and providers want in news and current affairs content is not traditional hard news; nor do they find desirable the recent formulation of questionable current affairs content. Indeed, both audience and industry are seeking a new formula, one that will meet the needs of public policy and the public good; and no doubt, one that will enrich the news and current affairs organisation that introduces and dominates it. The policy
challenge will be to assist in the equitable realisation of the new formula.

The Today programme
This refers to the BBC Today programme, for the NBC Today Show
Today, commonly referred to as The Today programme in order to avoid ambiguity, is BBC Radio 4's long-running early morning news and current affairs programme, which is now broadcast from 6 a.m. to 9 a.m. from Monday to Friday and from 7 a.m. to 9 a.m. on Saturdays. It consists of regular news bulletins, serious political interviews and in-depth reports. Today was launched on the BBC's Home Service on October 28, 1957 as a programme of “topical talks” to give listeners a morning alternative to light music. It was initially broadcast as two 20-minute editions slotted in around the existing news bulletins and religious items. In 1963, it became part of the BBC's Current Affairs department, and it started to become more news-oriented. The two editions also became longer, and by the end of the 1960s, it had become a single two-hour long programme that enveloped the news bulletins and the religious talk that had become “Thought For The Day”. It was cut back to two parts in 1976-1978, but was swiftly returned to its former position. Jack de Manio became its principal presenter in 1958. He became notorious for on-air gaffes. In 1970 the programme format was changed so that there were two presenters each day. De Manio left in 1971, and by 1975 the team of John Timpson and Brian Redhead was well established. This arrangement lasted until Timpson's retirement in 1986, when John Humphrys and Sue MacGregor joined the rotating list of presenters. After Redhead’s untimely death in late 1993, James Naughtie became a member of the team. Sarah Montague replaced MacGregor in 2002.

The show reached a peak in terms of influence in the 1980s, when prime minister Margaret Thatcher was a noted listener. Ministers thus became keen to go on the programme and be heard by their leader; but the tough, confrontational interviewing style they encountered led to accusations that the BBC was biased. Criticism was particularly directed against Redhead, who was widely seen as being on the left. The style of the male interviewers was analysed and contrasted with that of McGregor, who was alleged to be giving subjects an easier time. The “big 8.10” interview that follows the 8 o’clock news remains an important institution of British politics to this day.

Today regularly holds an end-of-year poll. For many years this took the form of write-in votes for the Man and Woman of the Year. This was stopped after an episode of organised vote-rigging in 1990, but was soon revived as a telephone vote for a single Personality of the Year. A further episode of vote-rigging, in favour of Tony Blair in 1996, forced the programme makers to consider more innovative polling questions. Since 1970 the programme has featured Thought for the Day, in which a speaker reflects on topical issues from a theological viewpoint. Notable contributors to the slot include Rabbi Lionel Blue and Richard Harries, the Bishop of Oxford. Over the years the slot has featured an increasing number of speakers from religions other than Christianity, though Christian speakers remain in a substantial majority.

Today found itself in the midst of controversy again in 2002, when its editor Rod Liddle wrote a column in The Guardian that was extremely critical of the Countryside Alliance. He eventually resigned from his post on Today. Journalist and historian Peter Hennessy has asserted in two books that one of the tests that the commander of a British nuclear-missile submarine must use to determine whether the UK has been the target of a nuclear attack (in which case he has sealed orders which may authorise him to fire his nuclear missiles in retaliation) is to listen for the presence of Today on Radio 4's frequencies. If a certain number of days pass without the programme being broadcast, that is to be taken as evidence that the envelope may be opened. The true conditions are of course secret, and Hennessy has never revealed his sources for this story, leading Paul Donovan, author of a book about Today, to express some scepticism about it.

NOTES:
LESSON: 4
BROADCASTING CODE—BROADCASTING POLICY

Objectives
This lesson discusses the Broadcasting system in the country and policy of the governments in implementing the code. This gives a detailed analysis on the broadcasting autonomy case.

AIR Code

Broadcast on All India Radio by individuals will not permit:

1. Criticism of friendly countries;
2. Attack on religions or communities;
3. Anything obscene or defamatory;
4. Incitement to violence or anything against maintenance of law and order;
5. Anything amounting to contempt of court;
6. Aspersions against the integrity of the President, Governors and the Judiciary.
7. Attack on a political party by name;
8. Hostile criticism of any State or the Center;
9. Anything showing disrespect to the Constitution or advocating change in the Constitution by violence; but advocating changes in a constitutional way should not be debarred.
10. Appeal for funds except for the Prime Minister’s National Relief Fund, at a time of External Emergency or if the Country is faced with a natural calamity such as floods, earthquake or cyclone.
11. Direct publicity for or on behalf of an individual or organization which is likely to benefit only that individual or organization.
12. Trade names in broadcasts which amount to advertising directly (except in Commercial Services).

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

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

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

CODE OF CONDUCT FOR TELEVISION/RADIO BROADCASTS IN CONNECTION WITH ELECTIONS

1. The Election Commission (EC) recognises the significance of television and radio in the coverage of elections. Their reach is widespread and impact substantial. On the one hand, the electronic media can be misused to favour one party or another. But on the other hand, the EC recognises that electronic media can, if used properly be an important source of information for voters across the country. It can provide the widest first hand education for voters on political parties, their symbols, various leaders and different issues in the election. This is why electronic media all over the world is the single biggest source of information of voters in terms of debates, campaign, coverage etc.

2. It is essential therefore that a model code of conduct is established for electronic media both to ensure that it is not misused as well as to ensure that it be used in the best interest of democracy and the voter.

3. Listed below are the Dos and Don’ts for election coverage on electronic media.

a) DON'Ts

1) There should be no coverage of any election speeches or other material that incites violence, against one religion, against one language, against one group etc.

2) In any constituency, only one candidate should not be projected. While it is not necessary to cover every single candidate (as some constituencies may have several candidates), at least the more important candidates should be covered in any reports from a constituency.

3) The following could be covered in a balanced and fair manner:-
   - Campaigning and excerpts from campaign speeches.
   - Symbols, banners, flags and other campaign materials of parties.
   - Results of opinion polls by non-political, professional organizations with a proven track record.
   - Party manifestoes (critical analysis of which is also perfectly legitimate.)
- Candidates and their views in different constituencies across the country.
- The positions taken by the main parties on different issues important to the electorate.
- Debates between major parties and candidates.
- Analysis of previous voting patterns, victory margins, swings etc.

4) By 'balanced and fair' it is meant that among the major political parties:
- No political parties should be given substantially more coverage than others. The 'balance' need not be achieved in any single day or in a single story, but over a reasonable period of time, say one week.
- Balance does not mean each party must get exactly the same air time to the last second, but parties should be given broadly the same amount of time.
- Balance implies that no reasonable person should it appear that one political party is being projected to the exclusion of others.

5) Procedures:
- All producers must record a copy of their programme off air for use as reference in case of any disputes.
- The EC shall be the final arbiter in any dispute.

6) The final interpretation of any disputed passage or story should be with The Election Commission .In Case of disagreement with the roadcaster, one authority could be nominated by the Election Commission who could take a decision immediately when approached.

*Subsequent clarifications -
Opinion/Gallop Polls are not to be published/broadcast during the period 48hrs before each phase of polling till the completion of the phase of polling.
Exit poll results are not to be published/broadcast before the completion of each phase of polling.

Media reform in India: Legitimising community media

While the direction of media reform in India has often been viewed in the context of demand and supply, its exclusionary and piece meal characteristics would appear to have negated to the background. These have significant fall-outs in terms of media democratization in the country. Even a cursory look at the pace of decentralization would take cognizance of its selective and reactive characteristics. If the first is predictable under a 'market is the mantra' regime, the latter is worrying as it raises a larger question: Does the course of the reforms conform to a larger and coherent media policy, or are they symptomatic of a crisis – management and reactive culture? While there are no easy answers, community would appear to have paid the heaviest price in an ambivalent and unlevelled media playing field.

In a county of daunting socio-economic divides accompanied by a formidable diversity of languages, dialects and cultures, the potential for community media should have assumed critical significance. Unfortunately, the gap between potential and practices would appear to have widened, judged by the media trends. Community voices, if at all, struggle at the periphery of a contrasting and often iniquitous media landscape. In contrast to the government's efforts to bridge the digital divide and take information technology to the masses, the colonial and fossilised Indian Telegraph Act of 1885 continues to hold sway over the broadcasting arena. On the one hand, the Supreme Court Judgement of 1995 has endorsed that 'airwaves are public property.' However, in the practical realm, lines between public and privately remain conveniently blurred. While Private Radio has made an entry into the Indian broadcast arena, community radio remains to find legitimacy by the law of the land, notwithstanding New Delhi's recent New Year gift enabling residential educational institutions to be eligible for 'campus community radio.' In many ways, the traditions of the Indian media fall between these two pendulum ends. In his essay on the Great Indian Media Bazaar, noted journalist and editor, N Ram has outlined the role of two media traditions in the country's democratic process: An older tradition of a diverse, pluralistic and relatively independent press which has its roots in the Indian independence movement; a broadcasting tradition which has been vulnerable to manipulation and which began with the appearance of radio as a prop of the British colonial state. The last two decades of the 20th century saw the flowering of private media – especially in the broadcast and cyber media arena – under the umbrella of globalisation and liberalization. Underlying these media traditions has been the growth of small autonomous media outfits of subaltern groups and their organizations. These initiatives, while small in number, demonstrate the transformative power of community and participatory media. Unfortunately, in many cases, they remain isolated initiatives struggling to receive legitimacy and recognition from the State. There is no doubt that in terms of reach and access, India's print and broadcast media manifest very substantially - the characteristics of mass media. While newspapers elsewhere struggle to hold readers, Indian daily circulation has increased by close to 500% in 20 years. Two all-India readership surveys conducted in 1999-2000, estimate that the press as a whole reaches between something 200 and 240 million persons. Translated in terms of percentages this means that about 60% of urban Indians and 25% of rural Indians read print media regularly. Radio's reach is even more comprehensive covering about 96% of the country. But, notwithstanding this growth in terms of reach, media's impact on development and governance remains, at best, tenuous. In fact there would appear to remain a substantial gap between potential and experience.

Bridging the development gap

Paradoxically, in terms of need, the role of media in bridging the development gap is more keenly felt today than ever before. The 1990s, especially in the socio-economic context, yields a
disquieting picture. Globalisation’s impact on the poverty map leaves much to be desired. Even World Bank percentage proved to be more or less representative in terms of coverage in many other daily’s. Media’s relationship with governance is equally tenuous. Media coverage of the recent communal strife in Gujarat has, in the main, been positive. But disparities do exist. As Mukul Sharma points out, ‘both media and governance in India suffer from serious problems, which at times, even feed into each other. Suspension of civil liberties, excessive militarisation, communal assertions and omogenising tendencies have too often spelled doom for Indian democracy. In this context, it is imperative that media become more sensitive on issues of democratic governance, people’s struggle against social injustice, and so on...’This, however, is only part of the picture. If the media are effectively to mirror society, then ‘the role of people’s organisations, social movements, voluntary organisations and other civil society formations in monitoring the functioning of the media and making it more people centred is critical.’ It is here, that the rub comes.

Community activism needed

Unlike the government or political parties and sections of the corporate sector who have developed their own press and media channels, voluntary organisations, social groups and activists, have not been able to develop their own press and television channels in a sustained manner. The exceptions that exist are usually journals/newsletters of development organisations which cannot in terms of size or scope make a sustained dent at the macro level. What is required is an active tradition of community/peoples media. Unfortunately, we do not appear to be moving in that direction. The promise of media reform which gathered momentum in the 1980s and 90s unfortunately did not actualize into performance. The journey from the Broadcast Bill to the Convergence Bill generated considerable expectations in the public domain – only to fritter away into cynicism. While the Broadcast Bill suffered an untimely death, the Convergence Bill (notwithstanding the hype it initially evoked) remains to be tabled in the Lok Sabha despite the passage of three years. Clearly, an overt lesson would indicate a reluctance, at the policy level, to ‘walk the talk’.

This weakness in political will towards media reform per se becomes more evident in taking a closer look at broadcast legislation. The Prasar Bharati Act (1990), which in many ways provides a watershed in media legislation in the country, demonstrates this substantially. While the Bill was based on the Verghese Committee Report of 1978 there were significant differences. The Verghese Committee had favoured the creation of a ‘Trust’ in the service of the public, as against the Prasar Bharati Bill which proposed a Corporation which did not have the same statutory dignity and power. While the objectives of the corporation are virtually the same as the Verghese Committee’s objectives for the National Broadcast Trust, they would appear to fall short of the Verghese Report’s recommendations, which wanted the Ministry of Information and Broadcasting to shed its responsibility for broadcasting altogether. The Bill has provisions for a representative of the MIB as a part time Governor which is at variance with the ‘full autonomy’ suggested by the Verghese Committee. The Verghese Committee Report also underlined the need for a decentralized structure with powers delegated at regional and local levels. In sharp contrast, the Prasar Bharati bill says little about the devolution of the powers of the Government of India and executive boards. Consequently, despite obtaining ‘autonomous status’ under this Act, the Prasar Bharati Corporations’s functioning has been described as ‘de facto under the influence of the Government of India’ in various ways. For instance, the Ministry of Information and Broadcasting has the ability to intervene and provide inputs to Prasar Bharati. The Convergence Bill, however, vests powers of regulation and licensing for communications in a Communications Commission. In doing so, it would, in effect, take away those very powers from the Ministry of Information and Broadcasting. But it would be unrealistic to discuss these implications, given that the bill has yet to be tabled in Parliament.

In many ways, the radio broadcasting scenario in the country provides an apt benchmark to view the case for community media reform. Unlike India’s neighbours, - Sri Lanka and Nepal – community radio broadcasting remains outside the pale of legitimacy. Despite advocacy initiatives which have articulated the need for a three-tiered media structure – public (government), private and community – the latter remains to be endorsed by law. After a virtual decade of lobbying, in early 2003 the Government allowed residential educational institutions to apply for licenses to operationalise what it defined as community radio stations. It took nearly a year before the government upheld one of the licence applicants. At the end of 2003, community Anna University was given the green light by the Government of India to implement the country’s first ‘campus community’ radio programme. Reportedly, the Indian Institute of Technology, Kanpur, is likely to closely follow on Anna University’s heels. So far, so good. But a closer look would indicate that it is far too early to cheer the new year gift. For instance, New Delhi’s decision to allow residential educational institutions recognized by the state and central governments to apply for licenses to broadcast would appear to have completely overlooked the proven credentials of community based NGOs and CBOs who have demonstrated the viability and impact of community participation in radio. It needs stressing, that in terms of grassroots experience these NGO and Community based initiatives are demonstrably ahead of the educational institutions that have no tradition or practical experience of community broadcasting. Further, many of these initiatives have applied for licenses as early as 2000, long before the campus community initiative was conceptualized.

Community radio initiatives

One of the reasons cited by official quarters for the absence of community radio legislation is the lack of demand. While it is true that community radio advocacy needs to go beyond preaching to the converted, it is not realistic to restrict it to a clutch of initiatives any longer. Post New Delhi’s campus radio initiative in early 2003, there have been several universities across the country which have not only evinced interest, but introduced community radio as a part of their media pedagogy. These include Anna University in Tamil Nadu, Indira Gandhi National Open University, Jamia Millia and the Indian Institute...
of Mass Communications in New Delhi. At the same time, several development NGOs at the grassroots level have initiated or facilitated endeavours which demonstrate community participation in radio. Some of their experiences are articulated in the following voices: We can’t use government radio. It is used as a tool for propaganda. They will go to a village and say that they have given so many buffaloes to this village, we have given so much land to this village... that kind of radio will not allow poor women to discuss their own problems and issues... (Mentalukuta Susilamma – from Pastapur village in Andhra Pradesh). ‘You people often come to shoot work on the Gene Bank in our village. But there are seasons when it is impossible to shoot and you are not able to come. Maybe we can do our own recording and give it to you.’ (Laxmamma). ‘We want people outside to know about issues that concern us.’ (Ipappally Malamm from Pastapur). ‘My experience in Namma Dhwani community audio production is huge. Because of this we are reaching 22 villages and thousands of villagers...’ (Balu, from Boodikote village, Karnataka). These are a few of the many underprivileged voices from rural India where more than 60% of the country’s population resides. They also represent communities who notwithstanding their exclusion from the media mainstream are actively engaged in building and developing community media of their own. Initiatives like the Pastapur media centre in Andhra Pradesh and the Namma Dhwani project in Karnataka demonstrate not only the relevance, but also viability of community media centres and their impact of development and governance in the country. But in the face of exclusion by law, it is worth reflecting how long they will continue to wait in the wings. Their denial of legitimacy stands in sharp contrast to the private radio scenario. While restrictions continue to handicap the pace and viability of commercial broadcasting in the country, their growth in the recent past has been impressive. The recent recommendations of the Radio Broadcast Policy Committee in October 2003 – if endorsed by New Delhi – could dramatically improve their fortunes. These could reportedly permit big broadcasters ‘to own one third of the radio stations in the city or 25% of all frequencies in the country.’ This apart, the recommendations have advocated the lifting of restrictions on news and current affairs with the provision that the AIR code of conduct is followed. There are provisions which also call for non-commercial channels and strengthening niche channels through fiscal incentives. But what these imply for community media – if at all – remains unclear. Notwithstanding the need for the recommendations to receive the official stamp of approval, their provisions palpably demonstrate the contrast between private and community broadcasting. These, in turn, effectively mirror the overall media climate in the country.

The Broadcasting Bill

Reviewing concerns

If the writing on the media reform wall is clear, it also needs reiteration if community voices are to move from the margins towards the centre: 1. The current media climate needs to be reviewed in the context of not only strengthening the public domain, but bringing community into the centre stage. This calls for a closer and more interactive link between media and development in the country which in turn warrants an appraisal not only of processes in the existing media traditions, but also widening the scope and legitimacy of media democratisation in the country. If deregulation is the buzzword, we need to ensure that its vision goes beyond the pale of strategic mergers and corporatisation. This, in turn, demands a review of the notion of access. Access without inclusiveness could be akin to information without communication and handicap the development and governance process. Inclusion of Community Media would demonstrate a way forward. 2. The two tiers of public (government) and private media are already a legitimate part of media processes in the country. However, a third tier – that of community media – needs to be legitimized. A community media tradition has, unfortunately, not been firmly rooted in the Indian landscape. Priority needs to be given in issuing of community broadcasting licenses to rural areas and other regions and communities that are least developed in terms of various socio-economic indicators. This is also based on the fact that the least developed regions and communities of the country are also least served by media. 3. While the crux of the problem in several instances might lie with a reluctant state, civil society needs to get its act together. This, in turn, demands a review of the demand-supply equation. For instance, the observation that the demand for community radio is restricted needs to be questioned and dispelled by effective documentation, networking, capacity building, strategic alliance building. Specifically, this could mean: collaborations between universities and community media advocates/practitioners to ensure that community media is part of the curriculum and pedagogy; capacity building awareness programmes to widen the relevance of community media in the country in general and the social sector in particular; using traditional and new media to document and disseminate best practices. 4. Synergise the Right to Information with the Right to Communicate as enshrined in Article 19 of the Universal Declaration of Human Rights. The recent endorsement of a freedom of information act by the Lok Sabha and the increasing popularity of the movement across the country (five states already have the Right to Information Act in place) needs to be integrated into community media advocacy agendas. If the denial of information aggravates the poverty gap, information without communication could be dead wood. Producers of information need to be able to communicate it in a manner they deem appropriate.

The Broadcasting Bill

Whose Airwaves?

The Broadcasting Bill drafted secretly, discussed belatedly in the Parliamentary consultative committee, has now been cleared by a Cabinet sub-committee. After objections in the Cabinet, primarily by the CPIs Chaturanan Mishra, a sub-committee of the I&B Minister C.M. Ibrahim, Finance Minister P. Chidambaram, Communications Minister Beni Prasad Verma and Law Minister Ramakant Khalap was set up with a mandate to report back within three weeks. Since these worthies have scarcely changed the draft, any careful observer may well wonder to what extent they applied their minds to this vital subject. The Bill represents a major deviation from the earlier national consensus against foreign control ownership of the electronic media, reflected in the Verghese Committee on TV and Radio
The Supreme Court unequivocally ruled that, "The question to be controlled and regulated by a public authority in the last financial year received more than half its income from public bodies which are either "(e) Governments or local authorities"

agency, from obtaining broadcasting and TV licenses. Public municipalities, panchayats, cooperatives, universities, or any bodies including other Union Ministries like the Human
municipalities, panchayats, cooperatives, universities, or any such a wider choice and plurality of views can be facilitated only by promoting private broadcasting in the country...Additionally, licensing and auction of channels would bring in much needed revenues required for developing and improving the quality of public broadcasting". [para. 4]

• Virtually complete private, including foreign, ownership of radio\TV channels is justified through deliberate misrepresentation of a Supreme Court judgement on media autonomy. The Court ruled that, “The broadcasting media should be under the control of the public as distinct from Government. This is the command implicit in Article 19(1)(a)”. [This Article deals with the Fundamental Right to the freedom of speech and expression]. This is distorted to contend that, “As a corollary of this principle, Government, local authorities, political parties, largely publicly funded bodies should not be eligible for broadcast licenses. Under Prasar Bharati Act, AIR and DD (Public Service Broadcaster) are proposed to be converted into an autonomous statutory Corporation with their own sources of funds. Therefore, they would not fall in any of the foregoing categories. Even then, it is proposed to give special status to the Public Service Broadcaster under the Broadcasting Law by exempting them from licensing provisions”. [para. 6(b)]

On these flimsy grounds, the Bill debars all publicly funded bodies including other Union Ministries like the Human Resource Development Ministry which may like to telecast\broadcast educational material, State governments, municipalities, panchayats, cooperatives, universities, or any agency, from obtaining broadcasting and TV licenses. Public bodies which are either “(c) Governments or local authorities” or “3 (a) a body (other than a local authority) which has in its last financial year received more than half its income from public funds” are debarred. [Part I, 1(c) & 3(a)]

In fact the Supreme Court ruled quite differently. It noted that, “The airwaves or frequencies are a public property. Their use has to be controlled and regulated by a public authority in the interests of the public and to prevent the invasion of their rights”. The Court unequivocally ruled that, "The question whether to permit private broadcasting or not is a matter of policy for the Parliament to decide. If it decides to permit it, it is for the Parliament to decide, subject to what conditions and restrictions should it be permitted. Private broadcasting, even if allowed, should not be left to market forces, in the interest of ensuring that a wide variety of voices enjoy access to it". The Supreme Court even advocated regulation to guard against "the potential danger flowing from the concentration of the right to broadcast\telecast in the hands either of a central agency or of a few affluent broadcasters".[Part I, 6(ii),(iii)]

The Supreme Court logic is therefore quite contrary to that of the Bill. The Court has ruled in favor of public control of the electronic media, against private sector monopolies. Even the right of the private sector to enter into the electronic media was left to Parliament to decide.

The Bill's blanket ban on State Governments and local authorities having licensed radio\TV channels militates against the federal principle of State\local authorities\Union Government sharing public broadcast) television facilities. Such an action is clearly contrary to the CMP and the federal basis of the UE.

The drafters of the Bill have made no effort to explain the reversal of policy in allowing foreign equity participation. Reasons for such a major policy shift should at least have been explained. In the Schedule dealing with “Restrictions on the Holding of Licenses” is it laid down that foreign equity not exceeding 25 per cent “in case of (radio) broadcast services” and “foreign equity (not) exceeding 49% in case of non-domestic satellite broadcast services and local delivery services” will be permitted. The drafters must be aware of the universal practice of not allowing substantial foreign equity in domestic radio\TV channels. The USA, European Union, Japan and most countries do not allow such levels of foreign ownership. France prohibits any foreign participation.

Foreign ownership upto 49 per cent in TV channels, would give foreign media virtual control, if shareholdings are dispersed, or if benami shareholdings exist. And if 49% foreign equity is allowed today, 51% and then 74% may be allowed later, as has happened in other sectors. In the advanced capitalist countries there are public broadcasting\TV channels, largely autonomous of Government, which represent the plurality of interest groups and social interests. This Bill because of its exclusive reliance on the private sector, both Indian and foreign, would rule out such public channels, against the earlier national consensus, and all earlier, publicly debated public policy.

Most strikingly, this Bill is quite contrary to consistent Government policy on the print media. The ban on foreign entry in the print media, on which the Cabinet decided as early as 1955, and which the UF Government and its predecessor reiterated, now must be open to question. If foreign media can be permitted into the increasingly influential and lucrative electronic media, how can it be denied in the print media?

The Supreme Court recognized the particular importance of the electronic media: "...the electronic media is the most powerful media both because of its audio visual impact, and its widest reach covering the section of society where the print media does not reach. The right to use airwaves and the content of programs, therefore, needs regulation for balancing it and as
well as to prevent monopoly of information and views relayed which is a potential danger..."[Para. 6(ii)].

The proposed Broadcast Authority of India is not the “independent autonomous public authority representative of all sections and interests in society to control and regulate the use of airwaves” directed by the Supreme Court. The Authority consists of: (i) one whole time Chairman; (ii) four whole time members; (iii) six part time members; (iv) three ex-officio members: Secretary, Ministry of Information & Broadcasting; Secretary, Dept. of Telecommunication; & Secretary, Dept. of Space. These members will be appointed by the President on the recommendation of a 3 person selection committee including the Chairman of the Rajya Sabha, i.e. the Vice President, who shall chair the committee; the Chairman of the Press Council; and a nominee of the President of India. So, at least two of the three selectors will be represent state interests. The key executive member of the Authority: the Secretary General shall be a Secretary of the Government of India. Through these mechanisms of appointment and executive authority, the Union Government will ensure its control over this Authority.

While the accounts and report of the Authority will be submitted to Parliament, the actual accountability of this body to Parliament or its committees, is not spelt out. In view of the influence the Union Government will have on the Authority, the extensive powers that the Authority has been invested with, the importance of the electronic media, and the extent of foreign and other private sector control of radio-TV, this lack of accountability is likely to have serious consequences. The restrictions on cross-media holdings are legally ambiguous. Part III of the Bill lays down that, “No proprietor of a newspaper shall be a participant with more than 20% interest in a body corporate which is a holder of a license” under this Act. Similarly, no licensee can hold “more than 20% interest in a body corporate which runs a newspaper”. The proprietor is defined as a person who must “control a body which is the proprietor of such a newspaper”. This definition of ‘control’ would permit legal loopholes and exceptions in cases of multiple owners’ proprietors, including benami shareholders of newspapers.

Though this draft Broadcasting Bill has yet to be placed before Parliament, it is far too important a matter to be left to the political class alone. The secretive way it has been drafted, the systematic misrepresentation of the Supreme Court’s views, the confidential manner of its scrutiny, and above all the inexplicable reversal of the earlier publicly debated national consensus on national ownership of the media, make open public debate on this issue a national imperative

**BROADCASTING**

**Autonomy in prospect**

The Prasar Bharati Act comes into force, marking a new chapter in Indian broadcasting.
recommendations of the selection committee headed by the Vice-President. A 22-member parliamentary committee would oversee the functioning of the Prasar Bharati Corporation and a 15-member Broadcasting Council, an ombudsman-like body, would address public complaints. A complicated procedure does exist to allow the government to supersede the board but only with the assent of Parliament.

The Act of 1990 was not without its critics. The Left, for example, argued that further parliamentary accountability was essential if publicly funded television was to serve its raison d’etre. The experience of the Rajiv Gandhi years underlined these demands, illustrating how easily state-run television could in fact be subverted to serve commercial interests. These arguments, however, had nothing to do with the future progress, or rather lack of it, made in liberating Indian broadcasting. During the less-than-illustrious term in office of K.P. Singh Deo, Minister for Information and Broadcasting for the first half of Prime Minister P.V. Narasimha Rao’s term, Prasar Bharati, never notified, was dragged to the market for slaughter. After founding and then promptly killing the Air Time Committee of India, an experimental alternative to Prasar Bharati, the Information and Broadcasting Ministry’s mandarins insisted the Act had been rendered obsolete by events. An expanding private sector was used to justify continued state control over public broadcasting. Private broadcasters, unsurprisingly, were delighted with this bizarre argument.

Prasar Bharati was, however, rescued from violent death by Supreme Court intervention. The Supreme Court order of February 9, 1995 in Union of India vs Cricket Association of Bengal held that the air waves were public property, not assets of the state to be disposed of as it wished. The bench consisting of Justices P.B. Sawant, S. Mohan and B.P. Jeevan Reddy had, in Cricket Association of Bengal, interpreted Article 19(1) of the Constitution (which guarantees citizens the right of freedom of speech) and 19(2) (which guarantees the right to practice a trade or profession) to mean that all interests and groups would be given access to the broadcast media. Indeed this was the principal thrust of Prasar Bharati.

While directing the Government to set up an independent broadcasting authority that would give access to all interests and groups, the Judges made clear that indiscriminate privatisation and euthanising public broadcasting would not be acceptable. “Private broadcasting, even if allowed,” the court held, “should not be left to market forces.” This, the Judges said, was because of the evident “danger flowing from the concentration of the right to broadcast/telecast in the hands of (either) a central agency or of a few private affluent broadcasters.”

Prasar Bharati comes into being ahead of the perhaps inevitable passing of the controversial Broadcasting Bill during the winter session of Parliament. By the time issues of staff transfers and the selection of the Board are finalised, more time would have elapsed. The Broadcasting Bill, tabled by Information and Broadcasting Minister S. Jaipal Reddy, will enable Indian and foreign private broadcasters to provide services in India legally. It will also legalise Direct-To-Home (DTH) satellite broadcasting, a technology that will give international media conglomerates, notably Rupert Murdoch’s STAR TV, near-monopoly control over an emerging area of television broadcasting. The growing and legally sanctioned presence of multinationals on the Indian broadcasting landscape will make Prasar Bharati’s role vital in ensuring broadcasting that addresses the diverse needs of those millions of viewers who are not on the agenda of advertising-driven commercial channels.

Yet, as Jaipal Reddy has pointed out, such restrictions by their nature are unlikely to be widely deployed. A more worrying issue, perhaps, is what interpretation the Broadcasting Corporation will give to its sector commitments. In an already highly competitive television scene, where several channels have recently announced cut-backs and retrenchments, pressure on Doordarshan to retain its profitability could be intense, leading to a glut of market-driven commercial shows, and relatively little alternative programming. Just how successful Prasar Bharati will be in ensuring plurality and democracy in the broadcast media will obviously be dependent on the Board to be selected. In the final analysis, the future of Indian public television will depend on those who run it. The President’s nominee for the Prasar Bharati selection committee will be seen as a standard bearer of the Government’s intentions for Indian public broadcasting as a whole.

The recent controversy over the defection of top Doordarshan figures like Ratikant Basu to STAR, and reports that top production houses connived with bureaucrats to swallow large sums of public money from state television, illustrates just how easily and in how many ways the integrity of public institutions can be eroded. The real question that may emerge over the first years of Prasar Bharati may not be its independence from government, but from private sector and multinational monopolies.

Notes:
Objectives:
After Independence, the Government set up a number of commissions or high-powered committees to examine the organisation and management of different aspects of India society.

When Mrs Indira Gandhi joined the central government for the first time in 1964, she assumed responsibility for the Ministry of Information and Broadcasting, with cabinet rank. Broadcasting had been through a decade and more of rigid control while B.V.Keshar was at the helm of affairs as Minister of State, that is, without cabinet rank. Mrs Gandhi felt that broadcasting needed a breath of fresh air, and it was she who set up the first Enquiry Committee into All India Radio.

The Chanda Enquiry Committee Report-1966
This enquiry was headed by A.K.Chanda, a distinguished administrator and former Auditor-General of India. The Chanda Committee, as it is popularly known, made three major recommendations in its report which was published in 1966. It suggested that AIR be converted into a corporation run by a Board of Governors on the BBC model, that television be separated from radio and given a twenty-year development plan; and that the Vividh Bharati channel be commericalised and its profits ploughed back into radio for the improvement of programmes. After four years, the government rejected the first recommendation on the grounds that the time was not ripe for AIR to be converted into a corporation. While Government did not prepare a long-range plan for the development of Television, it did agree that the country needed Television and that it should be expanded within the available resources. Separation was effected only a decade late. During the Nehru era, government had taken the stand that India would do without TV because it was expensive. The Chanda Committee's proposal to commercialise the Vividh Bharati channel was accepted and brought into effect in 1967, though here also it took nearly ten years before the profits were actually made available to AIR.

The Verghese Working Group Report-1978
It was in this context that the Janata Party proposed, as a major plank in its election manifesto, to give autonomy to AIR and Doordarshan. In August 1977, therefore, the government set up a Working Group under the Chairmanship of George Verghese, a distinguises journalist, to work out proposals giving full autonomy to AIR and Doordarshan, consistent with accountability to Parliament. The Working Group was called upon to make recommendations on the form and structure of the autonomous organisation(s), finance, staffing and other allied matters. The Working Group submitted its Report in February 1978 in two volumes, the first containing the Group's sixty-five recommendations and the second the appendices of the extensive data collected during the course of the enquiry.

The Working Group recommended that AIR and Doordarshan should function under a single trust to be called Akash Bharati or the National Broadcast Trust. The autonomy of the Trust and is independent from Government should be entrenched in the Constitution itself. The trust should consist of a Chairman and trustees to be appointed by the President from a list of names proposed by the Chief Justice of India, the Chairman of the Union Public Service Commission and the Lok Pal(ombudsman). In effect a Lok Pal does not yet exist: legislation to create the position has yet to be passed by Parliament. While a single Trust was envisaged for the whole country, the Working Group recommended a decentralised structure at the management level to facilitate quick decision-making and sensitivity to regional and local problems.

The Controller-General of Akash Bharati would be ex-officio Secretary of the Board of Trustees, and head of the Central Executive Board which would be responsible for the management of Akash Bharati. Thus a two-tier system was proposed with the controller-General of Broadcasting providing an organic link between the two. The Chairman and three members of the Board of Trustees would be full-time workers. The Trust was required to report to Parliament through its budget and to present an annual report together with its accounts and the auditor's comments on them. The report said that while Members of Parliament have the inherent right to ask questions, it was hoped that they would refrain from doing so on day-to-day issues.

Among other things, the report gave the Trust the powers to licence educational institutions to run what were described as franchise stations. Such stations would not be authorised to broadcast news to accept commercial advertisement. It also recommended the setting up of a complaints board, a quasi-judicial body which would deal with complaints from the public provided the right of recourse to the Courts were waived.

On 6 December 1982, Mrs. Gandhi's government set up a Working Group to enquire into and report on the requirements of software for Doordarshan. The Group was asked to prepare a software Plan taking into consideration the main objectives of Television of assisting in the process of social and economic development of the country and to act as an effective medium for providing information, education, and entertainment. The Working Group was headed by
Dr. P.C. Joshi, Director of the Institute of Economic Growth, Delhi, and included thirteen members who were drawn from the fields of journalism, development and rural communication, education and science, the arts, and those concerned with women's and children's welfare. One member, a filmmaker, had considerable experience as a producer in Doordarshan. The Additional Director General of Doordarshan, an old AIR hand who had been trained in television at the BBC, was member-secretary. The Working Group was asked to report in four months but actually took a year. Government sat on the report for some eighteen months and it was placed on the table of the Lok Sabha, the Lower House of the Indian Parliament on 12 August 1985. Although it is now a public document and should be widely distributed, the Government has not done so. Copies of the report are still not available.

The report is a sociological and economic study of India as it is today beset with problems of poverty and illiteracy, especially in the rural area, inspired by a vision of its future as a socialist democracy with a definite personality of its own derived from its many-faceted culture. It is in this setting that the report defines the role which communication, especially television, can play in the modernising egalitarian process.

In order to restore Doordarshan's original purpose of promoting social education and development the report recommends that each transmitter of the network be equipped with studios and facilities to produce programmes in the language or dialect of the local audience which are of relevance to them.

The Group emphasises the importance of education through entertainment. It comes down heavily on the bick of Doordarshan's entertainment programmes which are films or film-based. Most Indian films, which find their way on to the Television screen, are described as an assault on aesthetic sensibility, which have a vulgarising and brutalizing effect on viewers.

The report recommended the reduction of feature films by one per week at all centres.

The Group have recommended the creation of an Ombudsman as a constitutional safeguard against misuse of the government-owned media on the lines of the Press Council. The Ombudsman would prevent or minimise bias in programmes and protect Doordarshan's news personnel from unfair criticism.

The Group suggests that the Ministry of Information and Broadcasting should be reorganised on the lines of the Railway Board and like it, should be manned by officers who have grown up in Television and not by birds of passage drawn from the IAS. The Minister should be assisted by a body designated the National Doordarshan Council. The Minister would be the Chairman of the Council and the Director-General, convener.

International Scenario

This is an uncharted and neglected area of research in radio and the chasm needs to be filled. The political and cultural block on alternative radio news in the UK from 1922 to 1973 was unjustifiable and represents a form of economic and political censorship. Close analysis of Royal Commissions and Parliamentary committees of enquiry into broadcasting suggest that competitive motives were responsible for the lack of progress. The newspaper interests in Britain feared a drain on the existing scale of advertising. A public sector broadcasting system funded by tax was a limited threat. The BBC became a very powerful lobby and its parliamentary influence cannot be underestimated.

Scientific ignorance also played a part. Politicians were persuaded that the spectrum for radio broadcasting was finite, although now it is difficult to understand how BBC engineers could sustain the argument that BBC transmission waves were so large that there was no room for anyone else. Ignorance and prejudice against foreign commercial radio environments played into the hands of those lobbying against commercial competition.

This began to be dispelled when the world became smaller through international communications and jet travel for business and tourism. The vested interests militating against commercial radio licensing sustained their hegemony from 1955 to 1973 even when ITV and Independent Television News successfully developed an international reputation and challenged BBC TV news in terms of style and audiences. The BBC was fortunate in that the Labour Party during the 1960s and 1970s had a political policy opposed to commercial radio. The BBC was also fortunate that the explosion of pirate radio during the 1960s, stimulated by the huge blossoming of youth culture and popular music had been manipulated by newspapers and political parties into a 'moral panic'. New legislation introduced to the House of Commons in 1967 by Labour Post Master-General Anthony Wedgwood Benn effectively outlawed pirate broadcasting and the BBC was given the task of responding to the needs of youth culture by transforming its broadcasting networks to meet popular demand. Radio One was the result. Most of the new station's disc jockeys had been recruited from the legally harassed and economically disabled pirate services. Unlike Labour, the Conservative Party was committed to the idea of a competitive market in radio and towards the end of the 1960s former athlete, Christopher Chattaway MP, was at the centre of a successful campaign to introduce new legislation licensing independent radio.

There was a deliberate plan to begin with an all news radio service modelled on the New York radio station WINS. The Conservative government under Prime Minister Edward Heath between 1970 and 1974 provided the window of political opportunity. The London Broadcasting Company started its service at 6 am on October 8th 1973 with audio birthday cards from leading politicians including Labour leader Harold Wilson who reaffirmed his party's opposition, but welcomed the radio equivalent of ITN. UK radio had reached the point of no return and BBC radio journalism had to face up to a force of competition which would profoundly change its news gathering and broadcasting culture over the next twenty years.

LBC and UK independent radio's national and international news service, IRN, have pioneered developments in both the technology as well as the style of radio journalism. Many of these developments have been borrowed from well established
traditions in America and Australia. The organisations were sited in the middle of London's Fleet Street newspaper community. Their broadcast journalists were a stone’s throw from pubs, restaurants and meeting places frequented by the country’s leading national newspaper journalists. This enabled LBC and IRN to have a much more independent journalistic culture and news priority agenda. The sequential nature of commercial broadcasting meant that the station’s schedule was much more flexible in accommodating news gathering and broadcasting responses to dramatic and changing events.

The introduction of talkback phone-in radio brought the journalists in direct communication with listeners who were allowed to articulate opinions, views and provide direct information. In the beginning IRN only had one member of staff, Fred Hunter, who had been recruited from the government’s information service, the COL. IRN’s development depended on the further licensing of local commercial stations who had to pay a subscription fee based on audience size, turnover and profits. The first major story was the Yom Kippur war between Israel and its neighbouring Arab countries. IRN’s first news bulletin was presented by Australian radio journalist Ken Guy. The first words of the bulletin were in a popular direct style: ‘The Middle East War.’ The writing was short, simple and concrete. The first report was an ad-libbed actuality based ‘voicer’ from UPI radio correspondent, Richard C Groce, in Northern Israel. You could hear the rumble of tanks driving towards the Golan Heights as he talked into his microphone:

‘Here comes another one I think. And this one has its gun facing forwards. Two men staring out the top turret. This main street actually in more normal times is like a main street anywhere. Traffic here is tanks, armoured half tracks, command vehicles and jeeps, the stuff of any army on the move. That’s because this town is hard by the frontier with the occupied Golan Heights. Here comes another tank...tank commander gave a wave. The troops and vehicles have been moving through this town on the way to the front since Israel first started mobilizing its troops on the first day of the war. If I turn around I can see pops of white smoke on the hills on this side of the heights that face Israel proper. And from there are dulled explosions that one can hear from time to time. The soldiers here have been mobilized hastily and some of them are still wearing dungarees, civilian shirts, or teeshirts and they’re either going to change into uniform away to the front or else go fight in their dungarees. Traffic here is heavy, the heaviest it has been since the last war in 1967. One soldier told me ‘This time it is going to be the last one’. This is Richard C Groce at a small town in Northern Israel near the occupied Golan Heights of Syria’.

LBC and IRN relearned the basics of radio journalism by changing the outmoded and bureaucratic practices of reporters who had been recruited from the BBC and importing the skills of mainly Australian and New Zealand itinerant radio journalists who were on their ‘world trips’. An influential figure was John Herbert who had been in the thick of ABC’s battles with Gough Whitlam’s Australian Labour government in 1972, had worked at editorial level at the BBC World Service and later wrote the first book on radio journalism which averred to practice outside the BBC. There is an apocryphal story that LBC were at one point so desperate for experienced freelances that an editor was despatched to the Alhambra which was a traditional gathering point for international travellers from ‘down under’. Here travellers sold their camper vans on to compatriots wishing to take on the world tour via Katmandu. The story goes that the editor had to move from camper van to camper van saying ‘Anyone here a radio journalist from Australia or New Zealand?’

In the next twenty to thirty years IRN/LBC became a substantial training ground for broadcast journalists who now figure prominently as international bi-media correspondents and programming executives. Generations of reporters learned their trade in reporting London news events and many journalists in their early twenties found themselves flying around the world with a battered Marantz cassette recorder, ‘Comrex’ telephone transmission enhancement unit and a personal credit card which would eventually be reimbursed by the station’s expenses accountant Tony Darkins. Years later he would be recruited by News Direct 97.3fm as a producer for rolling news format programmes. The lively, ambitious and enthusiastic community of journalists walking in and out of the basement headquarters in Gough Square changed the face of UK radio journalism. The most influential editors and managing directors included former ITN reporter George Fiftech, former Daily Sketch and Daily Telegraph journalist Peter Thornton, Keith Belcher, Ron Onions, Linda Gage, Dave Wilsworth, and John Perkins. There were many others in the chain of editorial command who determined the style and content of the news coverage including bulletin editors, intake editors and network editors such as John Greenwood, Jim Keltz, Derek Grant, Rick Thomas, Nigel Charters, Colin Parkes, Robin Malcolm, Charles Morrissey, Vince McGarry, Chris Shaw, Charlie Rose, Vivienne Fowles, Kevin Murphy, Stephen Gardiner, John Sutton, and Marie Adams. I can only apologise for omitting the names of many other journalists who made a significant contribution during this period.

Up until 1987, IRN’s resources had expanded with the subscription fees provided by the burgeoning ILR network of stations and this had been combined with a subsidy from the sister company LBC. The operation was labour intensive, but despite fluctuations in funding and the threat of redundancies in four to five year cycles, LBC was a remarkable success. The station was protected by a limited radio market. For many years there were only two commercial stations in London and the competition was music format in the form of Capital Radio. UK spending on radio advertising remained stubbornly restricted to two per cent. The introduction of ‘Newslink’ with a spectacular presentation on the Orient Express radically changed IRN’s funding base. Newslink was the UK’s first national radio network advertising opportunity. The IRN morning bulletins would include commercials and the revenue earned from this selling point meant that IRN carriers would no longer have to pay subscription fees. Soon IRN’s commercial prowess would result in carrier stations receiving a Newslink dividend. Previous IRN subscribers became significant shareholders and IRN was no longer a financial subsidiary of LBC.
A former IRN/LBC industrial correspondent and negotiator for the National Union of Journalists, John Perkins, successfully steered IRN to commercial success and domination of the news provider market through the late eighties and nineties. Many attempts were made to challenge the IRN hegemony. They included expensive loss-leader news services from Network News, ITN and Reuters, but these were unsuccessful. IRN contracted out the service provision to ITN in 1991 after a major decline in LBC's fortunes. In 1989 LBC's new owners Crown Communications made a series of poor management decisions which included leaving Gough Square, changing the identity of the station by launching two new services on the AM and FM frequencies and failing to match expenditure with income. By the time the Radio Authority withdrew the licence in 1993, IRN had found a new home in the highly resourced multimedia ITN building in Grays Inn Road. LBC returned to the London radio scene with another change of ownership in 1996 and the sensible decision to return to the original branding. It is ironic that the LBC of the present day is again operating on the same floor as IRN and its sister FM station News Direct 97.3fm.

Although it is an analysis born of nostalgia, it is quite clear that maintaining the pre-1987 economies of scale at Gough Square and a continuity of radio journalism culture would have preserved LBC's unique position of qualitative news and current affairs based broadcasting which had been the envy of the BBC. From 1987 successive managements failed to appreciate the value of audience loyalty and brand identity of a 20 year track record in broadcasting, overestimated the threat of an expanding radio market and underestimated the expansion in advertising expenditure. Another catastrophic mistake included relocating to an inaccessible suburb of London in an expensive leasehold office block which became a white elephant when property prices in the City collapsed shortly after the move. LBC/IRN could have remained in Gough Square with a peppercorn rent and would have been adjacent to powerful decision making centres of finance, politics and law. The history serves to show how a vibrant and creative centre of journalism culture can be undermined by a series of organisational failures in a liberal democracy and capitalist economy that allows business takeovers and the buying and selling of media assets. The 'regulation' by the old IBA and succeeding Radio Authority is open to question. Should the IBA have permitted the Australian media entrepreneur David Haynes to buy LBC/IRN from the Canadian conglomerate Selkirk Communications in 1987? Should the unelected Radio Authority have been allowed to withdraw LBC's licence in 1993 when the station had successfully recovered from its earlier losses and had re-established its share in a more competitive London radio market? Politics may have been influential in a highly unpopular decision. The station's owners Chelverton Investments were inextricably linked to former Westminster Council leader Dame Shirley Porter who was being accused by the District Auditor of selling council homes to buy Conservative votes. The Radio Authority awarded the franchise to the group led by LBC's former Managing Director, Peter Thornton. But Peter Thornton's group did not have the necessary financial base to launch the new services and had to sell out to Reuters which had been a rival franchise bidder. These events undermined the credibility of regulation and leave uncomfortable question marks over whether the politics of broadcasting were more important than the merit of broadcasting operations. Many of these questions are difficult to answer because the Radio Authority conducted its decision making in secret and was not obliged to provide any reasons for its decisions. IRN/LBC reporters demonstrated a faster response to news events from 1973 onwards. Sometimes reporters as a result of receiving tip-offs from freelances monitoring emergency service frequencies, or telephone calls from listeners, would be on the scene of major crimes before the police. There was one celebrated occasion when an LBC reporter conducted an interview with the victims of an armed robbery. They had been locked inside their warehouse. As questions were asked and answered through the letterbox police sirens could be heard getting closer and closer. Another reporter conducted a bizarre interview with an anti-immigration National Front supporter while he was fighting with an Anti-Nazi League protester. Interviews with Captain Mark Phillips and Princess Anne prior to their wedding in 1973 betray sexist cultural values of the period. Princess Anne is asked if she would make a good housewife, and would she cook her husband's breakfast before he goes off to work? She was also asked if she could sew on a button. She replied with considerable equanimity that she had been quite well educated.

The IRA's mainland terrorist campaign from 1973 onwards produced dynamic and disturbing actuality reports from reporters Ed Boyle and Jon Snow. News packages are produced with ad-libbed links mixed with the actuality sound of interviews and location recordings. Ed Boyle arrived on the scene of the pub bombing in Guildford shortly after the fatal explosion. His language is imagistic and direct: "The quaint shopping streets littered with broken glass, footprints in blood outside a clothing store, people crying, policemen everywhere, Guildford has never seen and never wants to see again anything like it".

Ed Boyle became IRN/LBC's political editor by 1975 and on Monday June 9th of that year commentated on the first broadcast from the House of Commons. In that year Jon Snow became the first radio reporter to use a radio car phone to broadcast the end of a dramatic siege of an IRA active service unit that had been cornered in a flat in London's Balcombe Street. The four men who gave themselves up adamantly...
indicated that they had been responsible for the pub bombings at Woolwich and Guildford, but the British judicial system continued to detain eleven people who became known as the Guildford Four and Maguire Seven for crimes they had plainly not been responsible for. LBC interrupted its regular schedule to take this live report from Jon Snow who was well known for travelling to the scene of London news stories on a racing bicycle:

'The four gunmen have come out. The siege here has just ended one minute ago. There is still a great deal of activity here, but a blue flashing lighted van has just swept off into the distance with its siren wailing. Briefly a figure came out onto the balcony, looked over, went back in again. Another came out, looked over, went back in again, and then suddenly we saw the four being led across the street into the police van and away they've been swept. There is still a very heavily armed presence all round. I am just getting further information. Just one moment'. ANOTHER JOURNALIST SAYS 'THAT'S A GUNMAN WITH A WHITE HANKERCHIEF'. 'A gunman with a white hankie has literally just come out. Really it is so dark up that end now. We are obviously going to have to wait for the firm confirmation of the police but the evidence so far is that we are right at the very end of this siege'. IRN's parliamentary unit covered the major political events of these two decades and in particular the rise to power and triumphant general elections of Mrs Margaret Thatcher. Ed Boyle was succeeded as political editor by Peter Allen who successfully drew out of this politician views and opinions about sound domestic housekeeping which were to become the cornerstones of 'economic Thatcherism'. Peter Allen left IRN to pursue a successful career as a television political specialist and is now co-presenting the successful breakfast programme on BBC Radio Five Live which is drawing listeners away from the Radio Four flagship 'Today'. He was succeeded as IRN's political editor by Peter Murphy who is admired for his wit and ability to focus on the real news value of political developments.

In 1975, LBC reporter Julian Manyon travelled to Saigon to witness the fall of the South Vietnamese regime to the Vietcong and North Vietnamese army. He stayed behind after the frantic evacuation of the American embassy by Chinook helicopters. He produced a remarkable five minute long ad-libbed telephone account of Vietnam's fusion into one country. It combined dramatic, concrete description with assured analysis of the significance of what he had seen. Here is an example: 'Whatever one's political views about the rights and wrongs of the war what is undisputed is that the North Vietnamese and Vietcong soldiers were far better disciplined, far better controlled and just basically obeyed orders'.

In 1980 IRN/LBC journalists were broadcasting live on the dramatic end to the Iranian embassy siege. It was a sunny Sunday afternoon when the British Home Secretary gave his permission for the SAS to attack the building. By this time Iranian separatists had begun to shoot hostages and dump their bodies on the steps outside. The first to die was the Iranian press attaché. BBC personnel had been inside the building when the siege began. Producer Chris Cramer had been allowed to leave after being taken seriously ill. A duty BBC television reporter, Kate Adie, was also present with the IRN reporting team of Malcolm Brabant and Peter Deeley. The journalists there were clearly shaken and shocked by the blasts of percussion grenades, the outbreak of firing and an enveloping fire. Kate Adie has been criticised for screaming when the firing began, but she has rather pointedly observed that her friends and colleagues were inside the building as hostages and she feared that they were being murdered. Her accomplished live reporting of the event for BBC television brought her to the notice of editors and in the following years she became the BBC's Chief News Correspondent and Britain's most popular broadcast journalist. It is a salutary tribute to radio journalism that she learned her trade as a radio reporter for seven years in local BBC stations. The young Malcolm Brabant was challenged by the struggle of having to provide accurate and live eye witness description to LBC listeners while being completely unaware that SAS soldiers were entering the building in a ruthless military operation which would result in the deaths of all but one of the gunmen. His ability to keep his head under fire stayed with him through the rest of his career which has included award-winning reporting of the war in former Yugoslavia.

Like America in the 1960s, Britain in the 1980s was to witness severe outbreaks of public disorder caused by decades of economic deprivation, racial prejudice and aggressive police tactics in Asian and Afro-Caribbean communities. Youths attacked police officers with petrol bombs, and business premises were looted. IRN/LBC, like every other area of the media, was poorly represented by non white journalists. IRN reporter Paul Davies witnessed the first petrol bombs being thrown at poorly protected police officers at Toxteth in his native Merseyside:

SHOUTING AND BEATING OF BATONS ON SHIELDS. 'And the noise that you can hear now is the police beating on their riot shields as they move into a barrier in the centre of the road. They are coming under fire now. Missiles. There's a large crowd of youngsters at the other end of the street. They seem to have got hold of a civilian car. They've turned the person out of it and they're pushing it towards the direction of the police barricade. The police are moving up the street and they're coming under heavy fire. They're now forming what looks rather like the old Roman system of using their riot shields to protect not only their sides, but also their heads. And bottles are coming in. One just landed very near to me and a stone just there. The police are having to duck for cover beneath their riot shields. The stones really are flying in. Some of the youths, their faces hidden by scarves and masks. That car that was just taken has been crashed into some railings and the police are now moving in again, beating their riot shields and trying to break up a crowd of youths who are now sprinting back up the street, still throwing bottles, and bricks at the police...SHOUTING, CRIES AND SMASHING GLASS. And there goes the first petrol bomb that I have seen. It came flying over the ranks of the policemen. Burst into fire. Nobody seems hurt at this moment. Policemen putting it out with a fire extinguisher. But there comes another one. A bottle straight into the ranks of the
The Ministry of Defence excluded all foreign journalists from accompanying the naval Task Force sailing to the Falklands. The four broadcast specialists, Robert Fox for BBC radio, Brian Hanrahan for BBC television, Kim Sabido for IRN, and Michael Nicholson for ITN worked on a pool basis. During the events all the reporting was radio. Television pictures were not allowed out until after the islands had been reaptured. The only woman broadcast journalist covering the war was IRN’s Antonia Higgs who reported the Argentine side in Buenos Aires. This tough, resourceful general reporter was also the first British broadcast journalist to land on the Caribbean island of Grenada after the US invasion by marines.

Kim Sabido’s journalism during the Falklands War was in the best tradition of war reporting - honest, vivid, sensitive, and informative. He decided to join the troops ‘yomping’ through the marshy peat bogs to do battle in the mountains behind Port Stanley: GUNFIRE. ‘You can hear now the bullets whizzing around us. Ricocheting off the rocks. A heavy salvo of small arms fire, machine gun fire coming both down the hill and then up the hill in reply from the British troops ahead of me. GUNFIRE AND EXPLOSIONS. More incoming gunfire. From Argentine batteries around Stanley. Keeping everybody’s heads down. CRIES AND SHOUTING. Somebody’s been hit up front. LOUD EXPLOSION AND CRACK OF SHRAPNEL AGAINST ROCK. Good Heavens! Everything now landing far too close for comfort. I just heard somebody up front about twenty or thirty feet has received a bullet in the leg or something.’

In one of the despatches he sent, Kim Sabido made the poignant observation: ‘I can honestly say that my thirst for action, if that is what it was, has been fully satisfied. I pray earnestly I shall never have to face another night like that again. And I can assure you that there are many more young men here who share that sentiment’. IRN’s Andrew Simmonds was recovering from a back operation during the Falklands War. Although frustrated by missing the opportunity of reporting such an important news event, he was to have no shortage of drama as IRN’s reporter in Beirut during the Israeli invasion of Lebanon. After checking in at his hotel, he went out with colleagues and returned later to find it had been reduced to a pile of rubble. The Israeli bombardment created human suffering on a vast scale. At one point he simply decided to describe events into the microphone as a mother wailed with uncontrollable grief:

‘You can hear the screaming of a mother who believes her child is underneath the huge piece of concrete. I can’t really describe in any acceptable tone what I can see now. THE SOUND OF DIGGING WITH SPADES AND THE ENGINE OF EARTH MOVING MACHINERY. There is the body of a man underneath the massive slab of concrete - only a leg showing. There can be no hope for rescuing this man. But the mother insists she heard the screams of her child underneath all of this and so the bulldozer moves forward and relief workers crowd around what really can’t be anything else but a massive hideous concrete graveyard. SCREAMING VOICE OF BEREAVED MOTHER. SIREN OF AMBULANCE BLOCKED BY THE BULLDOZER DRIVING BACKWARDS AND FORWARDS.

As world news events broke throughout the 80s and 90s, IRN reporters were present to provide a fresh, popular approach to radio journalism. Dave Loyan’s reporting of Indira Ghandi’s assassination won him the Sony Reporter of the Year in 1985. Lindsay Taylor’s reporting of the Kings Cross fire also earned him the same accolade in 1988. In one year the Sony judges refused to make an award because there had been no IRN/LBC entries and they were not satisfied with the standard offered by...
BBC radio reporters. However, this golden period of independent radio reporting seems to have passed. The journalistic infrastructure that served both IRN and LBC was broken up through aggressive management policies in the early 1990s. Key journalists took voluntary redundancy or found alternative employment in other broadcast services. The transfer of IRN personnel to ITN's managed service saw further reductions in staffing levels and experience.

Network stations no longer demanded 30- to 40-second voice reports and wraps which used the medium skilfully. The demand in the late 90s has been characterised by short cuts of actuality, and two minute bulletins written in a predominantly tabloid newspaper style. The editing of the service by its first woman editor Derval Fitzsimons required a more complex balance of resources to provide different outlets to a larger and more demanding market. Access to ITN's reporters and international news bureau created a bi-media service which meant that expensive international connections could be achieved by interviewing and asking for reports from television reporters, many of whom used to be IRN reporters. Derval has shown that she is more than up to the task. IRN recently won the contract to provide news to British Forces Broadcasting from the BBC.

There is every sign that IRN continues to be in the front line of award-winning coverage. In 1996 Andrew Bomford's documentary on the trial of serial killer Rosemary West won a gold medal at the International Radio Festival of New York and twenty one years after his report on the fall of Saigon, Julian Manyon's radio reporting of the Chechen war with Russia was also recognised at the 1996 Festival. In recent years independent radio has vied with the BBC in the battle to command the majority share of radio listening in the UK. IRN continues to be a powerful competitor, but the BBC has responded with substantial investment in news and current affairs since 1987. BBC radio reporters have more outlets and greater capacity for varied coverage of news events. The all news and sport network, Radio Five Live, staffed by many former LBC/IRN journalists, continues to enjoy substantial increases in listening figures.

The depth of IRN radio news coverage may be limited by the fact that News Direct 97.3 fm is only a London service and Classic FM's Six o'clock 'Classic Report' is the only opportunity for a national platform for independent radio reporting. The death of Diana, Princess of Wales, on August 31st 1997 and the subsequent funeral demonstrated that LBC, News Direct, and IRN were more than up to the task of responding appropriately. LBC, in particular, surpassed all BBC national networks by abandoning normal programming into a responsible and sensitive news reaction and analysis service between 1 am and 6.15 am. As overnight presenter, I used the World Wide Web, Press Association, IRN and News Direct sources to guide the growing audiences of London listeners through a traumatic morning. Internet news groups and other radio analysts have now acknowledged that LBC was the first UK radio station to transmit ‘reports of her death’ and became the first UK broadcaster to confirm her death. The entire broadcast for five and a half hours was unscripted and is currently being examined and analysed by a team of sociologists who wish to explore the subject of broadcast news communication and public mourning. LBC received a deluge of letters from listeners who wanted to appreciate that LBC had found the the right tone and the right approach.

The success of the LBC and News Direct operation owes much to the professionalism of programme editors Charles Golding and Chris Mann who arrived at the ITN building within half an hour of the first report of the serious road traffic accident in Paris to direct editorial management of the story. News Direct's rolling format news coverage throughout that day and the subsequent week drew plaudits from all sides of the industry and a special letter of recognition from Janet Lee, the Deputy Head of Radio Programming at the UK Radio Authority. IRN's coverage was equally impressive. The independent broadcasters seemed to be more in tune with the mood of public opinion and showed greater flexibility than their BBC counterparts who found themselves hidebound by programming rules and bureaucracy.

NOTES:
LESSON: 6
RADIO BROADCASTING IN INDIA
HISTORY AND DEVELOPMENT

Objectives:
Broadcasting was introduced in India by amateur radio clubs in Calcutta, Bombay, Madras, and Lahore. The first of such clubs was the Madras Presidency Radio Club which was formed on May 16, 1924. It began broadcasting on 31 July. Financial difficulties forced the club to close down and to bequeath its transmitter to the Corporation of Madras in October, 1927. A regular broadcasting service, however, went on the air from 1927, when the Indian Broadcasting Company Ltd., a private concern, came into being.

It was under the private operators and afterwards placed under the direct control of the central government and renamed as the Indian Broadcasting Services. In 1935, the Hyderabad station under government of the Nizam of Hyderabad started operation. In 1936, the Indian radio was designated as All India Radio was designated as All India Radio (AIR). In 1938 June 16, a programme journal named Vani a Station Publication from Madras with the declaration of was on 3 September, 1939 it was inevitable that the Broadcasting news from AIR station acquired added importance from October 1, 1939 coinciding with about 40% increase in the transmission hours of all stations, AIR started giving news bulletins, in five Indian languages Tamil, Telugu, Gujarathi, Marathi and Punjabi in addition to the usual bulletins in English, Hindusthani and Bengali. In 1948 Vijayawada station started broadcasting.

Lionel Fielden, India’s first Controller of Broadcasting, tells the story of the early years of Indian Broadcasting in his autobiography.

‘A group of Indian business men, fired by the financial success of European broadcasting, had floated a company in 1927 with a too-meagre capital, built two weak little stations at Calcutta and Bombay. In the following three years they had gathered some 7,000 listeners and lost a great deal of money. They decided to go into liquidation. The government of India, which then and later with considerable wisdom-thought broadcasting a curse was thereupon bullied by the vested interests of radio dealers to buy up the transmitters. Having done so, it proceeded, quite naturally, to economise. File-writers in Delhi could hardly be expected to sanction public expenditure on music, drama and similar irrelevancies. It seemed obvious that all such frivolous waste should be avoided. The programmes accordingly deteriorated even from their former low standard and Indian Broadcasting would have spiralled down to complete eclipse had not the BBC, at the critical moment, started an Empire programme on the short wave. Europeans in India rushed to buy sets and the Government had, by way if strangling broadcasting although, put an import duty of fifty percent on sets, even the 8000 extra sets purchased brought quite a deal of money under the broadcasting head. The dealers cried that broadcasting's profits must be used for broadcasting: The Government replied with the offer of a new station at Delhi and a man-me-from the BBC. But, however much English residents of India listened to the BBC and to the radio dealers it did not matter, then, who listened to what as long as sets were sold-Indian broadcasting remained what it had always been...

All India Radio
India presents huge challenges to any broadcasting institution that aspires to serve the whole nation. All India Radio (AIR), the state-run monopoly, was expected to take these challenges on and help build a modern nation state with an egalitarian social democracy. More than a billion people, nearly half of them living below the poverty line, are spread over a land mass of 1.27 million square miles. Although urbanization and industrialization are the hallmarks of postcolonial India, nearly 75 percent of the population still lives in 55,000 villages, eking out a living from farming. About 10 percent are employed in industries in urban areas. India’s religious, cultural, and regional diversity is striking, with 83 percent of the population claiming Hinduism as their religion and Muslims, Christians, Sikhs, Buddhists, and Jains accounting for the rest. Fourteen officially recognized languages and hundreds of dialects coexist with English. Hindi, the official language of modern India, is slowly gaining a foothold with the masses. Uneven development characterizes India; cities such as Bangalore claim a place in the global computer industry as the “Silicon Valley of India,” whereas villages have extremely bad roads and lack clean drinking water, medical facilities, and schools. Significant advances have been made in literacy rates since independence in 1947, but a mere 52 percent are functionally literate. Social inequity such as caste, class, and gender inequality can be found in urban and rural parts of the country. Untouchability is still practiced against nearly 170 million people who are cast aside in near-apartheid conditions.
Origins
Enthusiasts in India's big cities pioneered radio by organizing amateur radio clubs in the early 1920s. Their efforts, and the successful growth of radio in Europe and the United States, gave impetus to a group of Indian entrepreneurs who established the Indian Broadcasting Company on 23 July 1927. Nevertheless, by 1930 their pioneering effort to launch privately owned radio ran into trouble because of lack of revenues. Broadcasting from their two stations, located in Bombay and Calcutta, they catered to the small European community and Westernized Indians while ignoring the masses. The colonial government was faced with the rising tide of anti-imperialist sentiment in the country; being interested in the propaganda potential of broadcasting, it bought the assets of the Indian Broadcasting Company and renamed it the Indian State Broadcasting Service (ISBS).

In 1935 the colonial government took another decisive step by inviting the BBC to help develop radio; one of the BBC's senior producers, Lionel Fielden, was sent. Fielden is credited with having the name of the organization changed to All India Radio and for laying the foundations for public service broadcasting with the goal of providing information and education.

He returned to England in 1940. By 1947, the year of India's independence, the AIR network had grown to 11 stations with 248,000 radio licenses.

AIR Today
AIR's growth and reach have been phenomenal in the last 50 years. There are 333 transmitters today, including 146 medium wave, 54 shortwave, and 133 FM. Some 210 radio stations cover 90 percent of India and reach 98 percent of the population.

AIR claims a listenership of approximately 284 million who tune in on 111 million radio sets. Although controlled by the central government, AIR introduced advertising in 1967 and earns 808 million rupees a year (US$1 = 48 rupees). The government makes up any deficit in its operating expenses. AIR broadcasts in 24 languages and 146 dialects for domestic audiences and in 24 languages for international audiences. Approximately 303 news bulletins are aired daily, of which 93 are intended for national listeners, whereas regional stations originate 135 news bulletins daily. In addition, there are special bulletins on sports, youth, and other major events, such as the annual Haj to Mecca by Muslims or the Kumbh Mela in Allahabad. More than 80 stations in the AIR network broadcast radio dramas in various languages. Forty percent of the broadcast time, however, is set aside for classical, light, folk, and film music. The External Service, set up to act as a cultural ambassador, airs 65 news bulletins in 16 foreign and eight Indian languages.

In addition, magazine programs on sports and literature; talk shows on sociopolitical-economic issues; and classical, folk, and modern Indian music from different regions of the country are broadcast. AIR employs well over 16,000 persons. Approximately 13,000 are regular government servants; the rest are contract employees. They are transferable every three years, and so these employees seldom come to know the community in which they work. Such a huge organization cannot escape a hierarchical structure and the formal nature of appointments, promotions, retirements, and codes of conduct. Instead of demanding commitment to listeners, the organization requires its employees to adhere to the rules and procedures of a large government department. Because the employees have very little functional freedom, creativity and innovation are sacrificed. Lethargy, apathy, and favoritism unfortunately permeate the organization.

Regulation and Autonomy
Broadcasting is a regulated monopoly of the central government. The Indian Telegraph Act of 1885 was later amended to vest the exclusive right to “establish, maintain and work” wireless apparatus in the Government of India. Consequently, AIR has functioned as an arm of the central government ever since its inception. The Ministry of Information and Broadcasting is the policy-making body for the entire broadcasting system. Generalist officers drawn from the civil service manage the ministry. The director general heads the AIR and executes policy. The government has held that any member of the elite Indian Administrative Services can function as head of AIR with equal disinterest. Hence the director general is a bureaucrat who may or may not be interested or qualified in radio. National television grew under the umbrella of AIR and in 1976 was given a separate structure called Doordarshan, literally meaning viewing from a distance. As one would view a deity in a temple, TV audiences regularly gain a glimpse of the political establishment via Doordarshan's newscasts. With a mandate similar to radio's, television has also seen remarkable expansion and reach in the country in the last three decades. With the rise of privately controlled satellite delivery services, India now has a mixed system of public and private enterprises in television, whereas radio has clearly remained a government monopoly.

The credibility of AIR news has always been in question, however, not only because it is a government department but also because of well-reported instances of interference by the prime minister's office, irrespective of who is in power. There has been considerable pressure from private and public institutions as well as from intellectuals in the country to create an arms-length relationship between the government and the broadcast institutions ever since the National Emergency in 1975. Suspending certain articles of the constitution, the prime minister unleashed a reign of terror, which lasted almost 19 months. To silence dissent, the government engaged in mass arrests of prominent political leaders, trade unionists, human rights activists, communists, and students. There were widespread reports of torture and sterilization, especially of the poor. While the judiciary was not abolished, the ruling party in the Parliament passed certain amendments to the constitution to put the prime minister and her party loyalists above the nation's laws. The privately controlled press and cinema were subjected to intense censorship, and journalists at AIR were instructed to abandon even the pretense of journalistic fairness and balance in their coverage of events. Prominent journalists went underground to avoid arrest. The government restructured the news agencies in the country to “clean out” anyone who was not favorable to the prime minister and
denied advertising in newspapers that would not change the tone of coverage of the regime. A dark moment in the history of the nation, the national emergency exemplified the extent to which the executive branch of the government could misuse its power over the media.

The debate on autonomy for broadcasting has finally resulted in Parliament passing the Prasar Bharati Act of 1990, which seeks to free radio and television from the direct control of the government and place it in the hands of an autonomous corporation that would be managed by a board. That board would be required under the law to be accountable to a broadcasting council and in turn to a statutory parliamentary committee with various powers reserved to the government. The act has not been implemented, however.

**Promises Versus Reality**

AIR’s heavily bureaucratic ways have been the major impediment to innovation and creativity. In a highly pluralistic society with incredible linguistic, caste, and class differences, AIR has attempted not to offend any group. Controversial social and community welfare issues take a back seat while popular film music dominates. Regional language radio stations beam programs to the whole state in a formal dialect, which renders it stiff and official. As a consequence, most people find AIR boring. Radio, as a mass medium, is particularly suited to communicate in the local dialect and idiom, thereby establishing a personal connection between the broadcaster and the listener. That has not, however, been achieved in India because of the bureaucratic stranglehold on radio.

The model of a centralized national radio service with many regional and local stations intended to achieve the vision of unifying the nation was well intentioned but expensive and difficult to deliver. For development purposes, more localized micro radio operations based in community and educational institutions would have been more cost efficient and credible with audiences. The distance between the program creators and listeners would have been reduced, which in turn would have enhanced radio’s credibility with the rural masses. Perhaps radio might then have met local needs better. Until recently, the government has guarded the frequencies as though they were its property and has only reluctantly allowed private program producers some space on the government controlled stations. This may lead to licensing of private FM stations that will, in all likelihood, be urban-centered. All India Radio’s local outlets around the country often are criticized for their low levels of involvement on the part of local groups. Partly in response, the Indian government began to license private radio stations in 2000, and the first of them came on air in July 2001. As of 2002 a few community radio stations had begun to appear. AIR’s long-held policy of broadcasting classical music meant that it should have developed an extensive collection of recordings by some of India’s greatest performers. Lacking resources and vision, many station directors simply did not save such precious recordings. For a few rupees more, the artists would have let AIR keep the recordings and later release them in the burgeoning cassette market. Recently, AIR seems to have realized its folly, and cassette tapes of speeches by leaders such as Gandhi and Nehru are being released to the public.

Competition to radio has grown steadily from film and television. Doordarshan, with its national reach and through its regional stations, and the privately controlled satellite TV channels have stolen radio audiences. They offer similar programs of music, talk, and other shows with the power of visuals.

The enormously popular film music from India’s own gigantic film industry became widely available on cassettes by the mid 1970s and even penetrated rural areas in the following decade. Satellite audio services and on-line radio, operated by private companies, will be the next frontier on which AIR will have to compete.

AIR needs bold new directions in this age of the internet and FM broadcasting. What seems to be in store is an added layer of bureaucracy in the name of autonomy and higher pressure on AIR to earn more revenues and become self-sufficient. Those signs do not offer much hope for an institution with the national purpose of employing the power of the medium for social change.

**Further Reading**


Luthra, H.R., Indian Broadcasting, New Delhi: Ministry of Information and Broadcasting, 1986

Manuel, Peter Lamarche, Cassette Culture: Popular Music and Technology in North India, Chicago: University of Chicago Press, 1993

Masani, Mehra, Broadcasting and the People, New Delhi: National Book Trust, India, 1976


Broadcasting started in India in 1927 with two privately-owned transmitters at Mumbai and Calcutta which were taken over by the Government in 1930. These were operating under the name “Indian Broadcasting Service” until 1936 when it was given the present name “All India Radio (AIR)”. It also came to be known as “Akashwani” from 1957. The Five Year Plans have given new impetus to the growth of broadcasting resulting in a Phenomenal expansion from 6 stations at the dawn of Independence to around 200 stations at the close of the millenium. Today, AIR’s network provides radio coverage to 97.3% of the population and reaches 90% of the total area.

Social responsibility and Public Service broadcasting continue to be hallmark of AIR. The services provided by AIR on its primary channel including local radio stations is a vital part of life in the country. It educates, entertains and provides information for enrichment of lives of the people and it seeks to cater to the interests of the few as well as of the many. It provides:-

- Information through news and current affairs programmes.
- Entertainment through Music – devotional, classical (Indian & Western), Folk/Pop/Light, Film songs etc.
- Education through extension programmes for specific audience including farmers, women, children, youth, troops, Formal and non formal education, Adult education, IGNOU, UGC etc.

The AIR network comprises the National Channel, Regional Stations, Local Radio Stations, Vividh Bharati Centres, FM Stereo Service, External Services and North-Eastern Services.

With the advancement of technology and innovation of new trends in interactive broadcasting, it is now possible for the listeners to receive popular programmes and music/songs stored in a computer system. AIR has developed a system for providing ‘Music on Demand’, wherein listeners will be able to get the music of their choice on request. All India Radio has started an interactive broadcasting service for providing News on phone. Through this service, listeners can access a capsule of the latest news highlights. AIR has started Live Service on the Internet on a regular 24 Hrs. basis. With the starting of this service, it has been possible to extend the coverage of AIR programmes to all parts of the world including USA & Canada, where signals of AIR External Service are not received adequately.

All India Radio has launched its first digital satellite radio service on 15th August, 2000 on ‘Afri Star’ satellite of M/s World Space Corporation, USA. The service is launched on the east beam of the satellite and covers West Asia and North & East Africa. The programme of this service can be received on digital radio receivers, which are commercially available in the market.

**Facts at a Glance**

**Broadcast Facilities**

**1. Broadcasting Centres (208)**

- (A) Full fledged Stations
  - i) Local radio Stations
  - ii) Regional Stations.
- (B) Relay Centres
- (C) Exclusive VB Centres
- (D) Community Radio Stations
- (E) Recording Studios.
- (F) Transmitting Centres for External Services.
- (G) VB centres excluding exclusive centre.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>76</td>
<td>113</td>
</tr>
<tr>
<td>189</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>3 C</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>208</td>
<td></td>
</tr>
</tbody>
</table>

**Number of Transmitters (328)**

- (A) Medium Wave
- (B) Short Wave
- (C) FM

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>149</td>
<td>55124</td>
</tr>
<tr>
<td>328</td>
<td></td>
</tr>
</tbody>
</table>

**Broadcast Coverage**

- (A) By Area
  - 89.51%
- (B) By Population
  - 98.82%

**Legend**

C. Chandigarh, Kanpur and Vadodra
D. Bhubaneswar and Shantiniketan
E. Dorakhpur, Tuticorin and Panaji

For more information about AIR visit AIR’s home page at www.allindiaradio.org

**Suggested Readings**

2. Baruah U.L. This is All India Radio: A handbook of radio broadcasting in India. New Delhi, Publications Division, 1983.
4. ‘The History and Development of Independent Radio Journalism in Britain’ International Radio Journalism, published by Routledge - by Tim Crook
Objectives:
All India Radio Services- Vividh Bharati

World War II necessitated the growth of a national and an external service, and the installation of high power transmitters to expand coverage. Nazi propaganda was coming through loud and clear, and it needed to be countered. Thus was established the practice of all news bulletins being broadcast from one central newsroom. During the War years 27 bulletins were broadcast each day. The External Service as also a Monitoring Service were set up as part of the Military Intelligence Wing, but were delinked when the war ended.

All India Radio Services
The National Service

Only the broadcasts to the nation on special occasions by the president, the Vice-President and the Prime Minister have to be compulsory relayed by regional stations, also the news bulletins in the languages of the region and English and Hindi news bulletins. The origin of this centrally planned National Service goes back to World War II when news bulletins were broadcast from Delhi.

The News Services Division plans and presents the news, newsreels, spotlights, current affairs. The National Programme of music, plays features and talks are planned by the Director General but produced at regional centres.

The Regional Services

The Regional Services cater to major linguistic and cultural groups. Each State and Union territory serves the groups living in the areas covered by it. Except for news and national programmes of talks and music which are relayed from Delhi, the order programmes of each regional station director at different groups such as farmers, workers, children, women, youth are produced at the regional stations centres. The National Services Programmes are broadcast over short-wave transmitters which makes it possible for regional centres to relay them.

The Vividh Bharati Service

The Vividh Bharati was started on 2 October, 1957 as a service of ‘light entertainment’ to compete with Radio Ceylon, which had begun directing a commercial service to India on powerful short-wave transmitters. Earlier, AIR had banned film music on its programmes, for it was felt that film music was too cheap and vulgar to be broadcast on AIR and its regional services. Sponsored programmes were introduced in May 1970.

Initially, a daily five hour programme was put out and 60% of the time was devoted to film music. The rest of the time was given to devotional music, and short plays, short stories and poetry recitals.

Today, the service is on the air for 12 hours and 45 minutes every day, with an extra hour and a quarter on Sundays and holidays. Most of the programmes are produced in Bombay, except for a few local request programmes, which are produced at regional stations. The proportion of film music on Vividh Bharati remains 60%, while classical and light classical music, constitute around 20% of transmission time. The channel also carries two news bulletins and some time. The channel also carries two news bulletins and some “spoken-word” programmes.

Unfortunately, the service can only be heard on medium wave in an around cities, where the transmitters are located and can be picked up in remote areas of the countryside on short wave.

The programmes are broadcast on two short-wave transmitters in Mumbai and Chennai and on 20 low power medium wave transmitters. AIR does not have a network of transmitters for Vividh Bharathi, and therefore the 30-odd centres have to be regularly supplied with tape recordings made many days in advance at Vividh Bharathi headquarters.

The popularity of this channel has drawn away listeners from AIR and its many regional centres. However, it has not yet succeeded in drawing away many listeners from Radio Ceylon.

Masani observes that Vividh Bharathi should have been planned as an independent service producing its own news, music, sport review and commentaries and other ‘spoken-word’ programmes to provide a real alternative to the listeners who did not care for the National or Regional Service. The Verghese committee found that the programme content of Vividh Bharati was interesting but pointed out that it has ceased to be a ‘Variety Programme’ and ‘has become an essentially repetitive film disc programme.’ Accordingly, it recommended a review of Vividh Bharathi, ‘so as to develop a genuine radio originated light entertainment programme inclusive of film music which could become a vehicle for much experimentation and innovation.’

External Service

Broadcasting today is regarded as part of the normal apparatus of diplomacy. Shortwave and long wave broadcasting have made it possible to beam programmes across frontiers to different parts of the world. We in India, for example, are bombarded almost throughout the day with programmes from Radio Moscow, Radio Peking, the BBC, the VOA, Radio Deutsche Welle, Kuwait Ceylon, the Netherlands, the Vatican, South Africa and Australia, and on powerful sets programmes from many other countries besides.

From 1939, when we inaugurated our external services with a broadcast in Pushtu, we too have joined in the game of diplomacy on the air.
The primary objective of the broadcasts is to project the Indian point of view on world affairs and acquaint overseas listeners with developments in India, along with information on various facets of Indian life, thought and culture.

A UNESCO report on international broadcasting takes a similar stand, stating that ideally the purposes of international broadcasts are (a) to present the best culture and ideas of the broadcasting country, (b) to present world news objectively, (c) to explain the broadcasting country's view point on important world problems and to promote international understanding. The shortwave boom began in 1975 in Japan and a few years later in Europe and the United States.

With more than 80 countries around the worlds clamouring for the overseas listeners attention in 148 languages on 4550 short wave frequencies, the voice of India has slight chances of being heard. The only feed back AIR receives is by way of listeners letters which number about 31/2 lakhs each year. Half that number is from listeners in non-target areas. The main target areas are Pakistan, Bangladesh, Afghanistan, the Arab States and Western Europe.

**School Broadcasts**

Programmes for schools are broadcast from Delhi, Calcutta, Chennai and Mumbai and other centres, twice or thrice a week of not more than 30 minutes duration. However, only around 20,000 out of more than 7,00,000 schools own radio sets, and not more than 40% of these schools listen more or less regularly. Few schools provide for the broadcasts on their time tables.

The BBC radio policy is: “Radio is first and foremost an extension and enrichment of experience through the sense of hearing.” AIR school broadcasts are like Doordarshana’s telecasts for schools, curriculum and classroom oriented.

Further, the quality of the programme is uneven, as few excellent teachers make excellent broadcasts. The responsibility of the broadcasts rests with AIR, not with educationists. AIR draws up programmes on the advice of Consultative Panels for School Broadcasts, comprising six members at each station.

The consultative Panels also have representatives of the State Education Department, Principals of Schools, and AIR, Teachers are not on the panels are set up by AIR and members at each station.

The consultative Panels also have representatives of the State Education Department, Principals of Schools, and AIR, Teachers are not on the panels are set up by AIR and members at each station.

**Univerisity Broadcast**

AIR helps out with the correspondence courses of Delhi, Punjab(Chandigarh) and Punjab(Patiala) Universities. Responsibility for the courses lies with the respective universities, but AIR needs UGC funds if it is to meet expenses, and even think of introducing a separate educational channel like NHK of Japan. The range of most AIR stations is 80km, and so can be of little help to educate students in remote rural areas.

**Popular Radio Genres**

Radio programmes may be classified into two broad groups: 1. Spoken word programmes, which include news bulletins, talks discussions, interviews, educational programmes for schools and colleges, specific audience programmes directed at English and the various regional English and the various regional languages. The major bulletins are of 15 minutes duration, while others are of only 5 minutes duration. They present summaries of news stories in order of importance and interest-value. National and international happenings get pride of place, while regional and local news is read out if time permits. Human interest stories and sports news generally round of the major bulletins.

AIR's news bulletins are much too formal in language, structure and presentation, suitable more for a lecture than a talk across the table which news reading really is.

**Drama**

Radio drama is a story told through sound alone. The sound is of course that of dialogue and voices of people, background or mood effects, musical effects, atmospheric effects and the like. Radio drama, like stage drama is based on conflict, uses characters and has a beginning, a middle and an end. Movement and progress, generally to a crisis or climax, must be suggested in radio drama through sounds. The voices of characters must be sufficiently distinguishable, one from the other, lest the listener gets confused. They must sound natural, speak true to character and above all, be interesting.

Radio listeners would be confused by the presence of more than three to four characters. In fact, the shorter the drama (the average duration is 30 to 60 minutes) the fewer should be major characters. In the early years of Indian broadcasting, the radio plays were broadcast then for three hours at a time. In Mumbai, Parsi, Gujarati and Urdu plays were frequently put on the air, in Madra, mythological plays roved very popular. Fielden introduced the present norms of the 30 minute radio play on AIR.

**Talks**

Radio talks are not public speeches, they are chats with a friend who does not see you, but is nevertheless close and attentive to you. Radio talks should give the impression to a listener that the speaker is addressing him alone in an informal manner.

The words of a radio talk need to be kept simple and familiar, yet descriptive and powerful, and the sentences short and without dependent clauses and awkward inversions. Care should be taken to keep close to the rhythm of ordinary speech when writing the talk, and also when recording it.

**Music Programme**

Music programmes enjoy much greater popularity than talk show, as is evident from the popularity of Vividh Bharati programmes which are musical through and through. We enjoy music for its rhythms, melodies and harmonies and above all for the relaxation it provides.

Like any like show, a music programme must have unity and form. Disc Jockey programmes of ‘pop’ or ‘disc’ therefore, should not be mixed up with classical music. Variety is the keynote to any music programme, the different items should linkd together with interest comments, announcements and narration.

**Movie trailors**

Vividh Bharati's movie trailors are sponsored programmes usually of 15-30 minutes duration. They are fastpaced, and packed with extracts of dialogue and songs from the film being advertised. The narrator links the elements with dramatic
appeals and announcements. The names of stars of the producers, director, announcements. The names of stars of the producers, director, playback singers and musicians figure prominently in the trailers.

**Quizzes**
Easily the most popular quiz programme is Bournvita’s broadcast every Sunday afternoon. Beginning with the Bournvita jingle, the programme gets off the ground quickly and moves at a hectic pace, taking listeners along with it. It’s the sense of participation and involvement in the quiz questions that makes the programme very enjoyable family fare.

**Suggested Readings**

**NOTES:**
Objectives:

Popular Radio Genres
Radio programmes may be classified into two broad groups:
(1) Spoken word programmes, which include news bulletins, talks, discussions, interviews, educational programmes for schools and colleges, specific audience programmes directed at women, children, rural and urban listeners, drama, radio features and documentaries.
(2) Music Programmes which include disc jockey programmes, musical performances of all types and variety programmes.

It is obvious that a good number of programmes like drama, features and documentaries need both the spoken word and music. This is true in particular of programme broadcast on Vividh Bharathi.

News Bulletins: News bulletins are put out by AIR almost every hour of the day in English and the various regional languages. The major bulletins are of 15 minutes’ duration, while others are of only 5 minutes duration. They present summaries of news stories in order of importance and interest-value. National and international happenings get pride of place, while regional and local news is read out if time permits. Human interest stories and sports news generally round off the major bulletins.

AIR’s news bulletins are much too formal in language, structure and presentation, suitable more for a lecture than a talk across the table which news reading really is.

Newsreel: Newsreel, generally of 15 minutes’ duration present ‘spot’ reports, comments, interviews, and extracts from speeches. A much more complex and expensive format than the news bulletin, it calls for skilled tape editing and well-written link narrations.

Documentaries/Radio features: Documentaries or radio features are usually factual, informational in character and sometimes educational in intent. They bring together the techniques of talks and drama to tell the story of events, past or present or those likely to happen in the future. They may sketch the biography of a great leader, or merely offer an interpretation of the world around us, or teach us about peoples and cultures unfamiliar to us, or even inquire into social, political, economic or cultural problems. Indeed, any subject of interest is grist to the mill of a feature writer.

The use of a narrator interspersed with voices of real people, background or mood effects, musical effects, atmospheric effects and the like. Radio drama, like stage drama is based on conflict, uses characters and has a beginning, a middle and an end. Movement and progress, generally to a crisis or climax, must be suggested in radio drama through sounds. The voices of characters must be sufficiently distinguishable, one from the other, lest the listener gets confused. They must sound natural, speak true to character and above all, be interesting.

Radio listeners would be confused by the presence of more than three to four characters. In fact, the shorter the drama (the average duration is 30 to 60 minutes) the fewer should be the major characters. In the early years of Indian broadcasting, the radio play took on the characteristics of the theatre as it existed on the stage in a particular region. Radio plays were broadcast then for three hours at a time. In Mumbai, Parsi, Gujarati and Urdu plays were frequently put on the air: in Chennai, mythological plays proved very popular. Fielden introduced the present norm of the 30-minute radio play on AIR.

Talks: Radio talks are not public speeches; they are chats with a friend who does not see you, but is nevertheless close and attentive to you. Radio talks should give the impression to a listener that the speaker is addressing him alone in an informal manner.

The words of a radio talk need to be kept simple and familiar, yet descriptive and powerful, and the sentences short and without dependent clauses and awkward inversions. Care should be taken to keep close to the rhythm of ordinary speech when writing the talk, and also when recording it.

Radio talks have no definite structure. All that the listener expects from them is that they should be interesting and informative.

Music Programmes: Music programmes enjoy much greater popularity that talk shows, as is evident from the popularity of Vividh Bharathi programmes which are musical through and through. We enjoy music for its rhythms, melodies and harmonies and above all for the relaxation it provides.

Like any talk show, a music programme must have unity and form. Disc jockey programmes of ‘pop’ or ‘disco’, therefore,
should not be mixed up with classical or light classical music. Variety is the keynote to any music programme; the different items should be linked together with interesting comments, announcements and narration.

Movie Trailers: Vividh Bharati's movie trailers are sponsored programmes usually of 15-30 minutes duration. They are fast-paced, and packed with extracts of dialogue, and songs from the film being advertised. The narrator links the elements with dramatic appeals and announcements. The names of stars, of the producers, director, playback singers and musicians figure prominently in the trailers.

Quizzes: Easily the most popular quiz programme is Bournvita's broadcast every Sunday afternoon. Beginning with the Bournvita jingle, the programme gets off the ground quickly and moves at a hectic pace, taking listeners along with it. It's the sense of participation and involvement in the quiz questions that makes the programmes very enjoyable family fare.

Suggested readings:
2. Ah U.L. This is All India Radio: A handbook of radio broadcasting in India. New Delhi, Publications Division, 1983.

NOTES:
**Objectives:**
While broadcasting services in India are owned and controlled by the Central government, it is organised as a regional service serving distinct geo-culture areas. AIR broadcasts mainly in regional languages and dialects. At the apex is the Ministry of Information and Broadcasting presided over by the Minister who is accountable to Parliament in all matters concerning the electronic media.

**PRODUCERS**
Programmes, as in other broadcasting organisations, are planned and executed by Producers who are known by a number of designations in AIR. There are the Programme Executives, who form bulk of them and deal with diverse areas of programming from music and spokenword to drama and documentaries, industrial and youth programmes, whereas the Farm Radio Officers are responsible for rural and farm broadcasting only, and the Extension Officers for broadcasts relating to family welfare and health educations generally. These three categories of staff are civil servants, while the ‘Producers’ who also deal with different areas of programming are on contract; so are the Science Officers who head the Science Cells, and the Sports Producers, who are expected to head the newly created Sports cells. All these six categories of staff, who draw similar salary, are likely to be integrated into one common category called Producers. For the purpose of this narrative they would be referred to as Producers, even though a category called Senior Producers, have been recently created. More about the integration of staff is dealt with in the chapter on Staff Matters.

**ORGANISATION**
Programme activities at AIR stations are organised as Units or sections dealing with specific areas of programming. They are headed by one or more Producers depending upon the monthly hours of output. Each unit prepares its own programme schedules usually on a quarterly basic. The quarterly schedules dealing with spoken word particularly in the field of education and extension, are usually prepared in consultation with experts, academicians and other professional people outside the organisation followed by internal discussion presided over by the Station Director or his deputy. The scheduled of Rural & Farm programmes and Educational Broadcasts are also discussed in the quarterly meetings of the Advisory Committees and Consultative Panels. The schedules not only contain the titles and scope of talks, plays, series or serials but also names of speakers or writers, except in case of items of a topical nature, which are planned at short notice. Thus after a programme schedule or proposal is approved with as many details as possible, the Producer is free to go ahead with it; he does not have to seek approval at each step unless there is a substantial change in the scope or cost of the programme. In most cases the approval taken by a Producer is of a formal nature since the fees of the artist are known and the time slots in which a musician will perform have already been fixed. A competent Producer who knows his job and is conscious of his (social) responsibility, can enjoy a considerable autonomy in is day to day work. Autonomy in an organisation has however to be matched with a system of internal control, which is exercised at an AIR station, at the level of Station Directors (SDs) and Assistant Station Directors (ASDs).

**CREATIVE FREEDOM**
A regional station of Akashvani is usually caded by a Station Director, who is finally responsible for what goes on the air. He or she (there were ten women in the grade of SDs in a total of 97) is assisted by one or more ASDs, who co-ordinate the work of Programme units for smooth running of the broadcast transmission and control the output including facilities of programme production, in addition to helping and guiding the junior staff. According to norms laid down by the Ministry of Finance, a radio station is entitled to an ASD if there are five or more Producers. There could be two if the by number exceeds fourteen. At one time there was a view that the AIR stations would function more efficiently and creatively if this additional ‘clog in the wheel’ were to be removed. But experience has shown that with wider variety and sophistication in programming there has been greater need for consultation and discussion at different levels. Since what goes on the air cannot be retrieved, a level of check above that of the Producer is considered important. Considering the influence the broadcast media exercises over society, a system of regulation and control becomes inevitable. The question of creative freedom of the Producer would therefore remain a difficult one. A comparative study of the role of television Producers in France, Canada, Britain and West Germany made for the Annan Committee by Anthony Smith, a former BBC producer, says: ‘It is fundamentally the Producer who exercises the freedom which the broadcasting organisation has (or has not) secured for itself, and it is only the individual producer working on an actual programme who can judge whether the regulating systems, within which he is operating are helping or hindering; frequently they do both simultaneously. The students of broadcasting systems quickly discover that there is no concept more intractable than creative freedom.’ It is however the declarable policy of the Ministry of Information and Broadcasting which controls AIR on behalf of the Government of India, that only the creative freedom of the talented Producer is to be protected and nurtured, but also that functional freedom should be given to all category of staff.

**FUNCTIONAL AUTONOMY**
All India Radio has three distinct kinds of activities viz. Programme, engineering, and general administration which
includes houses-keeping and book-keeping. Detailed instructions have been issued clearly bifurcating functions so as to ensure functional autonomy of the programme and the engineering wings. While programme and engineering activities are clearly distinct, and it is not necessary for engineering staff to work under a Programme Officer or vice-versa, house-keeping and book-keeping functions impinge on both. It has, therefore, been decided by the Director General of Air in consultation of Ministry of I&B, that engineering heads of stations viz., Station Engineers and Engineers-in-charge may also be made Heads of AIR stations at certain places and thus look after general administrative duties. While station at other places, engineering officers are expected to be heads. This has been done in order to ensure that the engineering officers become familiar with the general administrative problems of a station, and thus do not feel left out.

ENGINEERING

The engineering wing of an AIR station, is headed by a Station Engineer or Engineer-in-charge (being redesignated Superintending Engineer) depending upon the power of the transmitter. Stations with transmitter power of 50 kilowatt or more are headed by an Engineer-in-charge who is a senior engineer. He is assisted by one or more Assistant Station Engineers (ASEs) dealing with transmitter and studio operations. Another engineering officer is the Assistant Engineer who usually takes shift at high-power transmitters. The other engineering staff consists of Senior Engineering Assistants, Engineering Assistants and Technicians. They operate and maintain transmitter and studio equipment in shifts. Some stations also generate some amount of power to run transmitters and other stand-by equipment at the time of failure of power supply from the grid. In some places like Mogra (near Calcutta), Rajkot, Aligarh and Khampur (near Delhi) AIR has independent transmitter complexes headed by Deputy Chief Engineers. Recently a Service of AIR and Doordarshan engineers have been constituted in order to bring it on line with other engineering services of the Government of India.

DECENTRALIZATION

AIR Stations have to operate within the budget voted by Parliament. Their accounts are submitted to the Director General AIR, every month. They are subject to audit by the controller of Accounts of the Ministry of I&B. The stations have to work within the financial and administrative powers delegated by the Director General, and conform to all the general financial rules and producers of the government. Certain scales of fees have been laid down by the DG for artists and free-lance broadcasters. Payments to artists beyond a certain limit require his sanctions. Subject to these and the general and specific directives issued by the DG from time to time, AIR stations are fully autonomous to decide as to who should broadcast and what. All subject of talks, discussions, plays or documentaries, names of speakers or writers are decided at the level of the stations and generally reflected in the quarterly programme schedules. These are finally approved by Station Directors and sent to Director General for information. It is not often that the Director of Programmes (DPs) at the headquarters comment on the shortcomings of the schedules or can monitor programmes of regional stations. It has long been felt that the AIR network has become too large to be controlled effectively from Delhi. Therefore a scheme to divide the country into five zones has been launched. Each zone is to be headed by a Deputy Director General with all the powers of the DG. Such officers with a small staff have been posted in the West at Bombay, in the East or Calcutta and the North East or Gauhati. There are plans to have two more DDGs in the South and in the North and provide adequate staff in all the zonal offices for effective decentralised control, engineering operations of AIR are already being controlled by regional offices headed by Regional Engineering. They deal with the technical maintenance and development of the AIR network. These engineering establishments at Calcutta, Delhi, Mumbai and Chennai which have been in existence for over two decades have been mainly responsible for the execution of the AIR and Doordarshan’s plan schemes.

AIR HEADQUATERS

The AIR headquarters in Akashvani Bhavan in New Delhi is presided over by the Director General. The engineering operations are controlled by the Engineering-in-chief, who is assisted by three Chief Engineers dealing with maintenance and training, projects and development and the civil constructions wing. On the programme and the administrative side the DG is assisted by an Additional Director General and four Deputy Director Generals at the headquarters, one of which deals with administrative and financial matters and acts as the Financial Advisor. Another deals with the security of AIR installations, which are ‘protected’ places under the Official Secrets Act etc. The other two deal with the policy director and control of different areas of programming, development, public relations including foreign relations. The Director of the News Service Division has also the status of a DDG. The DDGs at headquarters are assisted by staff officers, who are called Directors of Programmes. It is the DPs who keep in touch with stations about their day to day problems and needs. There are seven DPs dealing with policy and coordination, music, spokenword, commercial and external services, development, planning of ‘software’ and public relations. There are two Joint Directors and one Director who deal with farm, rural, family welfare and health-education broadcasts. There is a separate DP dealing with the Asian Games project. Recently a post of Director of Sports has been created to improve sports coverage by AIR.

PLANNING & DEVELOPMENT

Among the important activities of the AIR headquarters is planning and development of the AIR network. The Planning and Development Unit consists of two Deputy Chief Engineers, dealing with transmitters and studios, four Planning Officers and a number of APOs and DAPOs. They draw up AIR’s development plans and monitor its execution through the regional engineering offices and Civil Construction Wing. Formulation and monitoring of special ‘soft ware’ schemes for
the improvement of programmes are the responsibility of the Programme Planning and Development Cell, which is headed by a Director. He along with PO and APOs, keeps liaison with the engineering wing for overall planning and co-ordination of AIR's development plans. Another important engineering official at the headquarters is the Director of Frequency Assignment who co-ordinates the use of frequencies allotted to AIR, with Wireless Advisor in the Ministry of Communications and the International Telecommunication Union in Geneva.

TRAINING
An important activity of the Directorate General of All India Radio is training the different categories of staff. It is divided into two wings- Programme and Technical. Both are headed by Directors and assisted by Deputy Directors and Instructors borne on the staff. A plan for expansion and strengthening of the Staff Training Institute (Technical) has been sanctioned to be financed out of AIR's own resources the Non-lapsable fund. Thus far the STI (I) was running around 10 courses including induction courses for new recruits, covering about 250 trainees per year. The expansion scheme envisages a Director an additional Director, 5 Deputy Directors and 5 Assistant Directors. When the scheme is fully implemented, the STI(T) would be able to run 14 to 15 courses per year and train about 350 engineers a year. The STI(P) is able to run four Basic Courses a year each lasting for a duration of about 4 weeks. Emphasis is laid on induction courses for new recruits. In addition reorientation courses, seminars and workshops are also conducted covering specialised area like Farm and Rural Broadcasting, Educational Broadcasting, Science Broadcasts, Drama and Audience research. Every year about 500 people attend such courses at Delhi and at the Regional training Centres at Hyderabad and Shillong. While the STI (T) shares the building of the Research Department of AIR, the STI (P) is accommodated at the fourth floor of Akashvani Bhawan. A new building to accommodate the Staff Training Institute including lecture rooms, studies, and a hostel for trainees are under construction in the Kingsway Campus of AIR Transmitters. When ready by the end of 1983, it is expected to fulfill a long felt need for a home for the Staff Training Institute both for technical and programme personnel. In case of technical training stress is being laid on both operation and maintenance, while programme personnel need something more than were learning of production techniques and skills. An orientation to the broad spectrum of India's cultural heritage is given in every course along with creation of awareness of the social problems of the country.

ADMINISTRATION
The Director Administration and Finance, who has the status of a Deputy Secretary to the Government of India, is another important official at the AIR headquarters, who along with the DDG(Administration)deals with most of the administrative and financial matters. The staff and administration sections of DG's office are headed by Directors of Administration, who are officers of the status of Under Secretary to the Government of India, and are drawn from the Central Secretariat Service. There are six staff sections, one of which deals with the staff artists on long-term contract with AIR. This section is looked after by an officer of the Programme cadre called DP. There is a small Works Study Unit which advises the DG on the application of staff norms and the deployment of staff.

MINISTRY OF I & B
The Director General AIR, has been delegated all the powers of the Ministry of Information & Broadcasting. He is, however, subject to all the general restrictions imposed by the Government about filling in of posts or the creation of new ones. He has therefore to refer all such matters to the Ministry, which has to consult the Finance Wing or refer to the Ministry of Finance. There are matters like posting and transfer of Station Directors, appointment of members of AIR committees, foreign travel, which require the approval of the Minister. The Minister for Information and Broadcasting is responsible to Parliament in all matters concerning broadcasting. Except for matters, which have to go to the Cabinet as a whole as per rules of business of the government, the Minister has the final responsibility in all matters of policy and performances of the broadcast media. In fact he is responsible for all the acts of commission and omission of the AIR staff. He receives a large number of requests and complaints directly from the members of the public artists, and others interested in broadcasting. Parliament too has felt free to ask detailed questions about the activities of the electronic media. Location of radio and TV stations, treatment of ruling and opposition parties in news broadcasts, programmes in minority languages, and staff matters are among the many that form the subject matter of questions in Parliament. The Consultative Committee of Members of Parliament attached to the Ministry of I &B is another forum where members raise questions and elicit information. Like all other activities of government, the affairs of AIR are subject to full Parliamentary control through the Minister of I &B.

AUTONOMY
While the Ministry is headed by the Secretary, who is the highest civil servant in government, the director General has the status of Additional Secretary to the government. The day to day liaison with the media is maintained by the Joint Secretary concerned with broadcasting. The present organisational set-up of AIR provides for considerable autonomy to the stations. The day to day instructions issued by the DG mostly relate to coverage of events, support to developmental activities and campaigns. AIR stations are free to draw up their own programme pattern, which is contained in their fixed-point charts. These require the approval to be made in linguistic proportions, pattern of relays of news bulletins, permanent extensions or reduction in transmission hours.

ACCOUNTABILITY
While every effort is made by the Director General to see that not only the Station Directors, but all categories of staff particularly Producers enjoy creative freedom, they are accountable not only to the government of the day and Parliament, but also to the public at large. Accountability to
Parliament is ensured through the Annual Report, discussions on demands for grants of the Ministry the Question Hour, and the Consultative Committee of Members of Parliament. The electronic media, which in most countries of Asia, Africa and Europe are publicly owned, have a wider responsibility to the public at large. The broadcast programmes are essentially a service to the listeners and viewers who pay for it through licence fees and excise customs duties on receiving equipment. The broadcasting authority thus has an obligation to provide and adequate service, so as not to lose listeners and viewers, whom it seeks to influence in the interest of the society at large. While listeners mail, comments in the Press are treated seriously, the broadcasting organisations have developed the institution of Programme Advisory Committees. Programme Advisory Committees are attached to stations as soon as they come into being or when developed fully.

**ADVISORY COMMITTEES**

During the last few years there had been delays in the constitution of Programme Advisory Committees at AIR stations which has since been remedied. On 1st January 1982, Programme Advisory Committees were functioning at 58 stations out of 61, which are expected to have such committees on the basis of daily 5 1/2 hours programme origination. The PACs are expected to meet twice a year. Non-official Members of these Committees, which number around 15, represent various interests like music, drama, literature, science and technology in addition to minorities. The committees are expected to keep AIR station in touch with public opinion and advise on the composition of programmes.

**Suggested Readings**

2. Baruah U.L. This is all India Radio: A handbook of radio broadcasting in India. New Delhi, Publications Division, 1983.

**NOTES:**
Lessons 10
Audience Research Units

Objectives:
A survey of listening to broadcasts relating to small-family norms of the Hyderabad station of AIR was done in the twin cities of Hyderabad and Secunderabad and 20 villages in the Ibrahimpatan Taluka in November 1979. It revealed “quite a large percentage in the city consider a son and daughter in the family as the ideal size. In the rural areas, a majority consider that three children constitute a happy and healthy family.” The Audience Research Unit of AIR Hyderabad had interviewed 469 respondents in the reproductive age groups in the urban areas and 200 in rural areas for this survey with the help of a structured and partly coded questionnaire. A major finding was: “Both in the urban and rural areas 95 per cent consider that a son and a daughter are essential in the family.” Another interesting finding was that a majority of rural people favour programmes with a direct message while a higher proportion in the urban areas prefer with a hidden message. Among the action points suggested to the programme planners are:

- There is need to popularise the small-family norm of two children and a motivational campaign could be mounted on a sustained scale.
- Programmes stressing the equality of rights, equality of opportunities etc. for men and women and equal cost of bringing up both sons and daughters should be mounted.

Bibliography of Surveys
In fact Audience Research Units operating in different stations carried out during the seventies 28 studies about the effectiveness of AIR’s motivational and informational broadcasts relating to family Planning. A bibliography of Audience Research studies compiled by the AIR Unit of the DG, AIR up 31-3-81 reveal the following break-up.

Functions
The Functions of the Audience Research Units-20 in AIR stations and 10 in Doordarshan Kendras, have been summarised as follows:
- To provide quantitative or qualitative feedback for policy formulations and improvements in programmes.
- To find out audience size, reach, coverage etc. of individual programmes as well as general transmission of a station.
- To provide a research base to development broadcasting.
- To maintain different types of data for ready reference by the information makers.

Organisation
The Director of Audience Research (DAR) is head of the combined organisation for radio and television. He is assisted by a Deputy Directors one each in Mumbai, Calcutta, Delhi, and Chennai, are in charge of what are known as Mobile Units. There is another Deputy Director dealing with commercial broadcasting in the Central Sales, Unit in Mumbai. Twenty AR Units headed by an Audience Research Officer are located at the following stations of AIR.

- Andhra Pradesh - Hyderabad
- Assam - Gauhati
- Bihar
- Gujarat
- Haryana
- Himachal Pradesh
- Jammu & Kashmir
- Karnataka
- Kerala
- Maharashtra
- Manipur
- Nagaland
- Orissa
- Punjab
- Rajasthan
- Tamil Nadu
- Tripura
- Union Territories
- Uttar Pradesh
- West Bengal

Apart from the Mobile Unit, which forms part of the office of the Station Director, there are two other Units in Delhi one working for the Delhi Station and another for the External Services Division. The Mobile Units, which came into being in 1976, are located in the four zones-north, west, south and east. They are expected to take on urgent surveys particularly in areas not covered by the existing units. A typical AR unit consists of one Audience Research Officer (ARO), assisted by two Investigators, one Statistical Computer, Tabulator Clerk and Sorter each. A Mobile Unit, which is headed by a Deputy Director, has one senior Investigator, Statistical Computer, Stenographer, Tabulator clerk, Daftary and peon each. While the AR Units form part of the AIR stations the ARO reports to the DAR on professional matters. The Director General finally approves of the schedule of surveys usually drawn up on a yearly basis by the DAR on the basis of proposals received from the Units.

Operation
The research needs of AIR are initially determined at the level of station, the Directorate General and the Ministry of Information and Broadcasting. These are compiled and discussed at the level of Senior Officers of the Directorate General AIR. Resources, not being unlimited, priorities have to be determined keeping in view the needs and requirements at combination of these methods to supplement the information gathered with the help of one or the other of the methods. In addition the audience researches also resort to telephone surveys.
(mostly of TV), mail surveys and panel surveys. Functionally these studies fall in the category of:
General listening surveys to workout popularity ratings, audience indices, ascertain peak listening time, leisure-time activities etc.
Studies relating to specific programmes to find out listeners’ views on qualitative aspects.
Feed forward studies undertaken at stations where new stations are to be set-up, and
Solicited and unsolicited feedback through mail or panel surveys, or through the analysis of listeners/letters.
Surveys are conducted on the basis on a random sample of Broadcast Receiver licence holders. Such respondents, who are contacted by part-time interviewers by visiting each household, which usually number three to five hundred for each location depending upon the nature of the survey. For all India surveys like that of Cricket Commentaries or party election broadcast as many as ten locations have been chosen keeping in view the costs involved. Various studies have shown that random samples usually bring forth a good cross-section of listeners or viewers which can be taken as representative. Results would not substantially vary even if a larger sample is taken.

CHECKS
The AIR Units attached to various AIR stations and TV centres have to undertake quick surveys if they are related specific programmes. In order to avoid the chances of what is called recall lapse i.e., forgetting what had been heard or viewed the opinion of the respondents have to be sought as early as possible. Every AR Unit has to rely on part time (casual) interviewers who are usually students and paid a daily wage or fixed amount per interview schedule or questionnaire. Temporary hands have thus to be trained and strict supervision kept over their fieldwork. Some times interviewers not found up to the mark has to be eliminated in the course of a survey. Several methods of quality control are employed by audience researchers. Sometimes dummy addresses are supplied to the interviewers and often the supervisor checks the investigators in the field. Certain questions are deliberately included in the interview schedules for internal consistency checks. Finally ten per cent of filled in schedules are selected at random and back check undertaken by a different set of investigators. The members of the staff of the AR Units have scrutinised each and every schedule and certify that it is correctly filled in before payment in made to the part time investigators.

SPECIAL STUDIES
From time to time AR organization has been called upon to undertake special surveys in which various methods of surveys and library research have to be combined. Four such studies may be mentioned here:
To determine the norms and criterion of revising the tariff of the commerical broadcasting service.
A consumer oriented survey about the sale of TV sets in Calcutta and the adjoining areas.
Impact of party election broadcasts on voting behaviour etc.
The most suitable frame for AR studies after the abolition of licence fee on one and two band sets.
In the CBS study the rise in the cost of living and the operational cost of the service, comparative rates, reach and coverage of the other media and finally the comparative cost effectiveness of the other media and finally the comparative cost effectiveness of the other media were taken into consideration along with criteria for determining the commercial importance of the CBS centre. This survey covering more than 40 townships and 1200 villages, contacted around 65,000 respondents from radio and TV householders. The Calcutta study revealed that a smaller size TV set was not acceptable to the people irrespective of the size of the rooms. The poll broadcast study was simultaneously carried out in 10 selected centres five in rural and five in urban areas. In the methodological study for an alternative sampling frame consequent on abolition of licence fee on one two band sets, the effectiveness of the alternatives frames viz., electoral rolls, census blocks, urban sampling frame(USF) of the National Sampling Organization were judged against the hundred per cent enumeration carried out in selected areas.

ACTION
Every audience research study is expected to contain action points or recommendations for the programme markers of a station. A copy of each report is simultaneously sent to the concerned Station Director and the DAR. The SD is expected to react immediately to the findings and the suggestions made or action points is not acceptable to him. The implementation report with reference to the action points, is subsequently reviewed at the level of the Directorate General and finally all papers are submitted to the Secretary, Ministry of I&B. The entire procedure has been so devised as to ensure implementation of each report. While it is easy for a Producer or Supervisory Officer to react to the specific suggestions made in the report, as to the practicability or desirability of implementing them, there is often a problem of understanding the report as a whole. Sometimes the listening figures given in a report is subject to different interpretation. The listening percentage given in AR reports are usually that of perceived listening. Daily listening usually means 5 to 7 times in a week and frequently 3 to 4 times. AR organisations have devised common standards to ensure compatibility. The Asian Broadcasting Union, which reviewed the subject of AR in one of its sessions in Bali in 1979, expressed the view that there was considerable scope for improving the format and presentation of the reports to make them understandable to a busy producer and the executive, who is the ultimate user of the report. While the managements throughout the world welcome AR reports the programme producers often look at them as fault finding. It is in this context suggestions are made that the audience research should be outside the broadcasting organisations to make it really independent. In AIR, while the work of the DAR is evaluated directly by the DG, in day to day functioning, he reports to a DDG. For reasons of independence and impartiality suggestions are often made for greater use of outside agencies for audience research. While this has been done
to a limited extent, there is no alternative to expansion of the AR organisation and giving it a place of pride in both the electronic media.

**COMMUNICATION RESEARCH**

Elihu Katz the well-known communication researcher and teacher told a BBC audience: “The researchers are convinced rightly I would say, there is no use just studying audience; one must have access to producers and contents as well.” According to him, “the broadcasters are interested in their audience is not as self-evident as it sounds”. It is said professionalisation of broadcasting have meant increasing importance of peer judgements rather than approval of clients. Having asked the audience what is wanted the professionals have discovered that it always wanted the wrong thing. According to him communication research is stimulated by:

- Competitiveness of broadcasting:
- Professional concern with service and with responsibility;
- Need for a reliable source of evaluation of performance and allegations of departure from rule as a preferred method of accountability.

Desire to cope with challenges to receive professional practice. Interest in identifying and improving organisational conditions, which are conducive to creativity.

Communication researches today want to study not only audiences and content, but also the Producer his working environment, the values, the tacit assumptions and paradigms that guide broadcasters in their decisions, along with a systematic monitoring of content for balance and possible bias. Simultaneously there is need to refine methods of sociological research to measure the actual quantum of listening and viewing and their impact on society.

**Suggested Readings**

2. Baruah U.L. This is all India Radio: A handbook of radio broadcasting in India. New Delhi, Publications Division, 1983.

**NOTES:**
The BBC (British Broadcasting Corporation) and the VOA (Voice of America) are the world's most well-known broadcasting stations whose news bulletins are listened to with fanatical devotion and admiration by millions in all parts of the globe. Both the stations have acquired a reputation for accuracy and credibility and it has become a habit with most people in whichever part of the world they may be to refer to the BBC if they want to know about anything happening in the world. So great is the reliance on the truthfulness of the BBC that many would seek confirmation from it of an event happening in their own country rather than accept the veracity of the report of the radio of their own country. The BBC broadcasts a round-the-clock news service which embraces every part of the world. Its broadcasts are in many languages and they cater to the needs of all kinds of people and climes. It has correspondents and stringers all over the world who are almost always first with the news which are flashed over the air with speed and accuracy. The Voice of America is equally worldwide in its organisation and appeal and has built up a reputation for speedy transmission of news and analysis. It is an organisation which confines itself to broadcasts to the outside world and it has a team of experienced and veteran correspondents who cover news from all parts of the VOA is a government-owned broadcasting station in the United States and works under a charter approved by the US congress its news broadcasts have been acclaimed as impartial and objective. The BBC, on the other hand, is an independent organisation created under a royal charter. It enjoys autonomy and freedom of action untrammelled by any government authority. There have been many instances when the BBC has carried news and views unfavourable to the ruling party and government in Britain but this has not come in the way of its functioning or relations with the government. Over the long years since its birth the BBC has grown into a mighty, steadfast champion of freedom of news and its dissemination without fear or favour. The BBC was founded on December 31, 1926. It was the direct successor of the British Broadcasting Company (1922) and inherited the company's broadcasting monopoly, its plant, staff and Managing Director, Sir John Reith. The British Broadcasting Company was a consortium of manufacturers of domestic wireless receiving sets. Their purpose in financing and organising radio broadcasts was to provide regular transmissions of programmes, which people who bought domestic receivers from them could listen to. The BBC became a public corporation in 1927. Sir John Reith, who took control of the BBC. Was guided by certain key principles in his approach to broadcasting. These were that it was not to be governed by the profit motive and that it should produce material of a high standard in line with the view of what the public needed rather than what it wanted. Sir John's conception of the role of broadcasting implied, in the words of a writer, 'not simply a monopoly in a business sense but a cultural dictatorship with the BBC as an arbiter of tastes and definer of standards. News like broadcasting was seen as part of a service to the nation and its form and content were substantially influenced by this.

The BBC news division was set up in 1942 and steps were taken to organise a team of foreign correspondents. In the words of a commentator. They quietly became something of a elite, achieving the highest standards in handling and interpreting news as well as setting it in perspective. The BBC faced problems from its inception. The printing media saw it as a directly competitive medium. It saw to it that restrictions were imposed on broadcasting news which was limited to between 7 p.m. and 1 a.m., a restriction known as the 'seven o'clock rule.' The BBC's first news bulleting was not produced by its own staff but sent over the wires but a consortium of news agencies and formally attributed to them. Until the arrival of radio broadcasting in the early 1920s the press was the sole medium of mass communication in public affairs chief protagonist and defender of the public right to know in an expanding urbanised world. The press and radio- which did the people believe more?

The newspaper or broadcasting? World War II heightened the long-standing rivalry between the press and radio. A widely held view in the BBC in 1941 was that while radio was concerned with reporting events as they occurred, the press was regarded as a medium of news for entertainment. A Home Service talk in March 1941 said that newspaper stories might even come 'from a report from a Mexican correspondent or a Portuguese journal quoted in an Italian paper. The public had little idea of the tricks employed by the press in presenting facts. By the end of World War II people had come to trust broadcast news more- at least in comparison with other sources of information. From 1939 the BBC's news section grew rapidly gathering material from an increasingly wide range of sources including foreign broadcast stations. It also ultimately developed the 'topical news' the 'on the spot' or 'outside broadcast'. By the late 1940 teams of broadcasters were regularly accompanying British troops both in France and the Far East. Commentators developed a way of reporting conditions on the fighting front which related the soldier's experience more intimately to their families at home.

News broadcasting was slow to develop in Britain. It took 15 years and a World War to put out day-round bulletins by the BBC. The BBC's credo was expressed in 1939 by R.T.Clarkm Home Service News Editor thus: 'The only way to strengthen the morale of the people, whose morale is worth...
strengthening, is to tell them the truth and nothing but the truth even if the truth is horrible. After all, what is horrible is a matter of taste or conviction and depression is caused as often as not, not by the news itself but by the peculiar conditions, physical or otherwise, in which the recipient hears it. During the war security regulations were extended to the premises of the BBC, which was treated in many ways like a government department although it retained a great measure of its independence throughout. During the war news came to be seen as of central importance in combating German propaganda, both nationally and internationally, especially in occupied Europe. The war accelerated the pace of innovation fostering new forms and techniques many of which were subsequently incorporated into the news programme of the post-war period. The changes included collecting information through war reporters, increasing the range of outside contacts, introducing recorded inserts into new programmes, associating comment with fact and above all gaining an advanced sense of professionalism. The well known voices of news readers and announcers became symbols of reality in a topsy-turvy world. From June 1940 newsreaders who had hitherto been anonymous began to be named. The aim, it was then said, was not to publicise the announcers but to ensure that listeners get acquainted with their voices so that there may be no confusion in times of emergency. The 1950s where to see a news explosion which continued into the 1960s. This involved the invention of a series of technical and creative methods among which new styles of interviewing, investigative journalism, introduction of the 16mm film and new cameras, new attitudes to film editing and processing, developments in electronic news gathering and use of satellites. Most of this news explosion occurred not in the field of news but in that of current affairs.

Sir John Reith, the first Director-General of the BBC who functioned form 1927 to 1938, set standards which have influenced British broadcasting and radio stations in other countries to a great extent in their insistence on objectivity and accuracy as far as humanly possible. He believed that, ‘it is bad to miss a deadline but worse not to have checked the story properly. The BBC staff have been trained from the beginning to set aside their personal beliefs and to try to achieve political and social neutrality. Sir John said: ‘Human feelings are acceptable in their reports only where joy or sorrow is an integral part of the event. He reached the top post at the age of 36. He turned a commercial company formed by radio manufacturers to promote their products into a national institution constitutionally recognised as such four years later when it became a corporation under a royal charter and a government-authorised monopoly. As one commentator remarked: ‘it was as a member of an oligarchy of good taste that Reith fashioned the BBC. He turned it into an ideal expansion of the best of the public school virtues: a national headmaster. His thesis was that he knew themselves. Radio provided the means to cover the entire social spectrum and cater for every layer of the British social pyramid in a way the British press was not yet ready to do even in the twenties. The masses had to wait even longer for a broadcasting service that would speak to them in their idiom than they did for a newspaper that would. The oligarchical functioning of the BBC fitted Reith’s temperament. The BBC embodied the outlook of the educationists and men of public spirit who even when they did not trust the people wished to do them good and bring them along in the right way.

The BBC began broadcasting news bulletins from November 1922 when Sir John Reith was at its helm. The news bulletins then were entirely provided by the news agencies. There was no radio newsroom. For Reith speed was important but accuracy was even more vital. He did not mind a story being delayed while facts were checked. Radio slowly became popular and by 1930 fifty per cent of British slowly became popular and by 1930 fifty per cent of British homes had a wireless set and most people listened to the news.

In 1936 Richard Dimbleby, a veteran BBC broadcaster, wrote to the BBC News Editor making suggestions for better news bulletins. He said that the BBC should depute its correspondents to the scene of news just like a newspaper and, in addition, to writing news reports to get eye witness accounts. In this way I believe that news by the infusion of the human element. He realised that newspaper and broadcast journalism were two entirely separate professions. They required different skills and approaches. Radio is not some kind of speaking newspaper, he said, it requires a training all its own. A goof newspaper journalist may not be good in radio journalism.

Dimbleby's stature in the organisation was such that when he broadcast on April Fools Day a film on Panorama in 2957 claiming that spaghetti grew on trees, thousands of viewers believed him. At the height of the Cuban missile crisis five years later one woman was reported to have telephoned the BBC to say that she would not send her children to school the next day unless Mr.Dimbleby can promise me there will be no war.

Today the BBC transmits over 400 news bulletins a week on its domestic services: Perhaps the figure is much more since this was written. To form those bulletins a million words pour into Broadcasting House every day. The BBC external services put out 250 programmes a day- round-clock news bulletins, news summaries, news reels analysis, indepth reports from correspondents overseas and question and answer programmes on news stories. These broadcasts, as already noted, are also made in a variety of languages and directed to countries of Africa, South and South-east Asia and South America. News bulletins are usually of 10 minute duration. About 1,500 words are needed to fill a 10 minute bulletin(this would fill about two columns in an average newspaper). Individual stories are considered long if they go much beyond 100 words lasting about 40 seconds. A minute is considered too long for anything but a comparatively big story on radio.

A popular programme in the early day and which continues to be popular is the Radio Newsreel which was started in 1930. It dealt with the news of the day and carried interviews and the voice and sound of important events and personalities round the world. The personnel element began to dominate in its content and presentation and was copied in other countries. Radio Newsreel was the forerunner of many later developments in radio news broadcasting. It was described as 'deliberately designed to suggest immediacy, seeking radiogenic stories and
sequences and relying on slick continuity. By the end of World War II the Radio Newsreel was well established and had an international reputation for probity.

Another popular programme of the BBC was Panorama, which was started in 1955. This programme quite rapidly moved into areas of controversy with its coverage of political and social stories and of international affairs. The programme, built up by Richard Dimbleby, who was its anchorman, allowed its reporters considerable leeway in putting a personal stamp on their stories.

Before 1939 style had often seemed more important than comprehensibility. During the war ease of understanding became paramount. There was a new anxiety about syntax and vocabulary and scripts were scrutinised for difficult words and constrictions. The BBC also became more sensitive to the voices of its newscasters. The tone of voice also became a more sensitive matter than before. The tone of an announcement could establish the public attitude towards the news. One newscaster wrote of the problem posed, for example, by announcing the suicide of the commander of the Graf Spee, the German pocket battle ship, after the ship was lost. If the announcer seemed pleased the item would sound gloating while if sounded sympathetic it would sound fifth column. The BBC's solution to this problem was that announcers should sound 'official, neutral and as unaffected as possible. The BBC announcer, it was decided, should sound like a civil servant.

In the BBC newsroom control is exercised on a day-to-day basis through the daily editorial conferences which are known as the morning meetings. As there are two news departments (radio and TV) the meetings are an important means of control at the divisional level since they are linked by radio circuit over which discussions of mutual problems take place and news judgements are exchanged. The meetings are chaired by departmental editors or their deputies. The editors are the executive and managerial heads of the news department and have access to policy decisions made at the highest level in the BBC. They are joined at the meetings by senior editorial staff from the newsroom, planners of news coverage and such special correspondents as are available. A deputy editor said of the meetings: 'We take a brief look back and also forward and ask what should we lead with. We try to plan the coverage for the day. Sometimes we look back and decide we led with the wrong story and have a brief discussion. At these meetings there is much concern with the deployment of reporting resources. News organisations have a limited manpower and can only cover those stories they think are the most newsworthy. These arrangements are especially complex in TV news where there is permanent concern with 'logistics' with the mechanics of the thing', getting the stuff in. Because TV has a more complex technology than radio the morning meetings bring in people with technical expertise (such as film editors, graphic assistants and studio directors) as well as journalists. Comparing the problem of TV coverage with that of radio a senior executive said: 'TV at its optimum working method uses much more obtrusive. The newspaper reporter is indistinguishable from the general public apart from his notebook and pencil. The radio reporter is also a single man with his own equipment but the TV reporter will need a crew (cameraman, sound recordist, lighting man). To do the job effectively you need a certain amount of physical movement over varying distances in order to get the picture on the air. Compare this with the radio, you can get a totally effective report through provided you can get to a telephone anywhere in the world.'

The news diaries contain data of deployments which have already been made. The central problem is that of ensuring that reporters are available to meet transmission times. There are two mechanisms for controlling production at the newsroom level. The first is the morning meeting which works out unwritten guidelines for treatment of news on a pragmatic day-to-day basis and the second is the editorial structure inside the newsroom. The BBC editorial system vests maximum responsibility in editorial producers at the level of production. At the centre of newsroom operations with the overall responsibility for production of bulletins on any given day is the editor of the day. In radio news where there is a 24 hour cycle an editor of the is responsible for each shift (9 a.m. to 10 p.m. to 9 a.m. the next day). Editorial autonomy is stressed in the BBC's corporate ideology. However, newsroom decisions are within constraints set by the diaries which list the bulk of each day's likely output. The guiding principle behind the system is that during each shift one (radio) or two (TV) senior and trustworthy personnel are given as complete an overview of newsroom and news-gathering activities as possible with the intention of securing an output which is reliable in the BBC's line of thinking. For reporters out in the field and editorial staff inside the building the editor of the day is a legitimate authority figure with a final say on the duration and content of the news bulletins. Within the news department he is seen as 'god of the day'. The gods rotate according to the mundane dictates of the shift system.

The BBC is forbidden to editorialize, that is, to voice opinions about controversial issues, take sides, to favour one interpretation of politically significant events rather than others. This means that editorial control which does not exist in broadcasting is exercised almost entirely negatively. It consists of instructions about what must not be broadcast. It means also that in attempting to be neutral news broadcast. It means also that be persuaded that their function is passive, that they are mere receptors of news items generated by the outside world, selecting those items to be broadcast in terms of 'outside world, selecting those items to be broadcast in terms of 'outside criteria'. The people responsible for broadcasting have inevitable to adopt an uncompromising, unshakable 'mirror of society' view in purveying news.

The voice of America began as an anti-German war propaganda service during World War II. Its first broadcast on February 4, 1942 was in German. The Germans were active with Nazi propaganda on their radio, especially aimed at the Americans. President Delano Roosevelt was anxious to counter Nazi lies and let the world know that America stood for and what Americans believed in. The very first broadcast was made by William Harlem Hale. He told the Germans: 'We bring you
the voice of America.' It was only later that the radio was given the official title of Voice of America.

In the beginning the VOA was not used as an information agency. It was seen as another weapon in the war. Its task was to counter the wartime propaganda of the enemy and its programmes were slanted to achieve that goal. The objective of the VOA was mentioned in its first broadcast: 'Daily at this time we shall speak to you about America and the war. The news may Congress passed a law making the VOA a permanent peacetime overseas information programme agency. The Act prohibits the VOA from broadcasting in the US so that it would not compete with the commercial radio stations. The VOA moved on to Washington in 1954 and a VOA charter was passed into law in 1976. The principles governing VOA broadcasts were laid down as follows: 'VOA shall serve as a consistently reliable and objective and comprehensive. VOA will represent America, not any single segment of American society and will therefore present a balanced and comprehensive projection of significant American thought and institutions. VOA will present the policies of the US clearly and effectively and will also present responsible discussions and opinion on those policies.' Today the VOA has developed into a mighty worldwide organisation with correspondents in all parts of the world and with a round the clock news programme. Like the BBC it also broadcasts in many languages.

Again, like the BBC, the VOA is particular about verifying its stories before they are broadcast. Even if it is a scoop it waits until it gets another reliable radio station to confirm the news before it even mentions it on the air. News items have to be reported by at least two sources before the VOA will broadcast them in its news bulletins. This may mean that the VOA is not the first with the news but it also means that the news put out by it is true and accurate.

Voa broadcasts tell the outside world of the life of Americans in the cities and countryside and about their art, science and literature and music. To make them realistic and collect stories and features, the VOA uses what is called the Voyager Van which has a fully equipped broadcast studio in it. It has a microphone, tapes and everything else a regular studio has. Programmes can be produced in the Voyager and sent to Washington to be used immediately or taped for future use. The VOA staff in Washington will decide where the Voyager will go next week. Several weeks before the Voyager visits a state the VOA staff make contact with local tourism bureaus, chambers of commerce, and the state capital to find the places the van should visit. Sometimes it ends up in a town the VOA staff has never even heard before. Stories broadcast by the VOA give listeners glimpses into the lives of ordinary Americans. It is difficult to do stories like these if one spends every day in Washington( DC). So the Voyager van goes from coast to coast to put the American people on the air so that the rest of the world can hear what they are like. The Voyager has been travelling across the US recording programmes about America since January 18, 1985. It has been said that VOA is the next best thing to visiting America. Listeners can imagine what the country is like through the voices of VOA broadcasters.

American society was a commercial society and it was into this society that American broadcasting was integrated. Its commercialism was not of deliberate design. The advertising base that was to become one of the major features of American broadcasting as compared with the public service licence fee base of the BBC, was at first opposed both by the them Commerce Secretary, Herbert Hoover, and the leaders of the new radio manufacturing industry. At the very first American Radio Conference in 1922 Mr. Hoover declared it was 'inconceivable that we should allow so great a possibility for service to be drowned in the advertising chatter.' David Sarnoff, the Commercial manager of the Radio Corporation of America, wanted broadcasting to be organized by a public service broadcasting company. But the American social pattern was too strong for them. The American ethic demand competition. Broadcasting became part of the entertainment industry subject to the same competitive pressures as the entertainers, the same freedoms but also to the same restrictions, indeed because of the size of the audience, to greater ones.

By the beginning of May 1922 there were 219 registered radio stations in the US and by the end of 1924 the number went up to 530. It went on rising till it reached 4,000. The early stations broadcast news, weather reports, market bulletins, concerts, sports commentaries, commentaries on local and national affairs anything that would fill time and hold attention. Like early newspaper many stations were short-lived. Although licences had been issued to more than 1,100 by the end of August 1924, fewer than half found impossible to stay on the course. As had happened in journalism chains began to move in. The first network, WEAF, was formed soon to be followed by Columbia Broadcasting Service (CBS). Networks and local stations alike went after a mass public. By Sir John Reith's standards at the BBC a good deal of the American radio output was superficial and meretricious. It was the product of an open society but of one increasingly driven towards conformity by commercial pressures. But although as time went on American broadcasting leaned increasingly on advertising for its moral and social values as well as for money, in its early days it had a vitality which British broadcasting lacked and was a good deal more venturesome in exploring the potentials of radio as a reporter of current events.

In the history of early American broadcasting the name of Paul E. White has high place. He was regarded as the unsung and now almost forgotten hero of broadcast news - the progenitor of that brilliant band of reporters who, microphone in hand, were to bring the world to the world. He was in the CBS and had a consuming passion for news and a remarkable talent for picking news. He also had a great advantage, once he managed to be put in charge of CBS news, of being left to get on with the job since it did not spell the sort of money that interested radio executives.

With the help of Edward R. Murrow, who lived on his nerves and too many cigarettes, White built up a thrusting service of on the spot radio news and interpretation that do everyone's surprise soon began to edge out many more costly entertainment programmes of top ranking. With success and a bigger budget White extended the CBS news service until he had at his disposal more full-time foreign correspondents that any American newspaper except the New York Times, as well as having on call domestic news reporters from all the CBS
network stations. His foreign correspondents had deadlines for regular news bulletins into which voices from half a dozen centres or more could be fed to produce a composite picture. They were also instructed to get to 'microphone without a moment' delay if big news broke. So important and so audience-riveting had White shown news to be that he was given authority to cut into any CBS network programme if he thought a news break warranted it. Almost all men he picked proved superb practitioners of swift and reliable news reports ideally suited to the new medium. Their lives and style were keyed to a competitive rhythm. Their lives and style were keyed to a competitive rhythm of which the BBC knew nothing, but they were also encouraged to interpret and comment and to introduce into their news bulletins after the hard news the sort of spoken political essay- a man thinking aloud on the meaning and significance of the events that were his daily life that the BBC from its established monopoly was in no position to try or in a mood to risk.

American radio often went to the opposite extreme of seeking to accentuate differences of opinion so as to give serious discussions something of the entertainment quality of a prize fight in a way that seemed excessive to those used to the polite exchange of the BBC. But it moved much more rapidly than the BBC did in the world of current events, picking up what it needed to know from journalism as it went along. The basic weakness of American Radio and TV was the compulsive search for a mass audience even if it could only be attracted by ignoring a good deal that mattered.

NOTES:
Objectives

Writing for radio
In most cases, however, our choices mean that we must create new material. Any farm radio broadcaster knows that there are not many sources for ready-to-broadcast material about sustainable agriculture, basic nutrition and health, or other topics of interest to small-scale farmers. When we write for radio, we follow “The Seven Cs of Effective Communication.”[1] These are:

• Command attention.
Everyone loves a story, and we all like to listen in on the lives of other people. A radio drama can be very effective in commanding attention. However, we recognize that they can be time-consuming and expensive to produce, so we provide scripts in a variety of formats including interviews, group discussions and narrative storytelling, in addition to radio dramas. We ask our partners to add local details, names, places, etc. that will command the attention of their listeners.

• Cater to the heart and head.
We are writing to convey social development messages and to change people’s behaviour. The messages in our scripts appeal to people’s intelligence. But to have lasting impact, they must also strike an emotional chord. We try to avoid technical language and a “teacher’s tone.” Instead, we try to write in a way that lets the listener place herself in the story or example.

• Call to action.
We write for radio so that people will listen. But we also write so that people can take action. We try to present practical examples (of farming, of community organizing, of marketing, etc.) that have been beneficial to a farmer, a rural family, or an entire community, so that others can learn from their experience and replicate their success.

• Clarify the message.
It is often said that a message must be repeated three times if it is to be well understood and remembered. In our radio scripts, we often repeat the main message several times. We also reinforce the message and clarify techniques through serial radio scripts. Our scripts are packaged in series, and we encourage our partners to use them that way, for two main reasons. (1) The series may continue over many weeks, even months. Key messages can be introduced gradually and repeated as necessary. The audience then has a better chance of understanding the message, even if they must hear it several times before its relevance to their own lives becomes obvious. (2) The message can be introduced in different ways. The variety of the scripts in a series increases the likelihood that people with different perspectives and positions will have the chance to understand how the recommended practice or behaviour is relevant to their own lives. The complexity of the message is a factor in determining the number of scripts required.

• Communicate a benefit.
When we write a script for social change, we know that the behaviour we are recommending will benefit the listener. But simply telling someone that something is good for him or her is not a very effective way to achieve change. One of the cardinal rules of good communication is “Show, don’t tell.” We try to demonstrate benefits by “taking” listeners to farmers elsewhere who have increased yield, increased income, reduced labour, or otherwise benefited from a changed behaviour. We write dramas that show how women empower themselves by forming cooperatives to market their produce. We encourage our partners to use the scripts as a basis for field interviews, visits to agriculture research stations, etc.

• Create trust.
A health worker, a farmer-leader or a local agriculture extensionist or researcher who is known to the audience is much more likely to attract the trust of the listeners than is an official who is known only in a formal setting. We write our radio scripts so that our partners can easily adapt them to involve members of the local community. Even when such local figures are unavailable, scripts can be written in such a way as to create a familiar character that listeners will come to know and trust. For example, in a recent series of scripts we developed a character, Dr. Compost, whom listeners would recognize from week to week. Listeners are more likely to trust the message in the script by seeing their favourite characters or familiar local figures recommend and adopt the new behaviours.

• Convey a consistent message.
This doesn’t mean that scripts must be repetitious. In fact, we must constantly write new material that communicates and reinforces key messages. For example, we write for the small-scale farmer who is producing for her own family’s consumption or for local market, and we consistently recommend behaviours that will benefit her. We ensure that the practices we recommend are not harmful to human health and the natural environment. There are thousands of scripts we can write that convey key messages that support sustainable, small-scale agriculture. We would confuse our audience if we one day wrote a script that extolled the benefits of large-scale, chemical-intensive monocropping! Each of our partners must decide what their main messages will be. These decisions generally are based on the radio station’s mandate, particularly in the case of community or public radio. Then they can decide whether the scripts we share with them are appropriate for their radio programs.

Selecting script topics
Now that we have gained some insight into the specific issues, relevant to our chosen theme, that are important to the people we want to listen to our programs, we are ready to select script topics.
There are several considerations in our selection process. Our mandate is to develop scripts that will have practical application in the field. That means that we must select topics that can be covered on radio in such a way that a listener can take the lesson and actually go and do something with what they've learned. Our mission is to improve food security - and for us, that means more than understanding the issues, it means helping people take action for change. Sometimes, despite a topic's importance, we decide that it is not appropriate for us.

When we have a short list of appropriate topics that we want to address in our script package, we scan our environment. Is someone else doing this work? For example, perhaps UNICEF has already produced radio programs about child nutrition. There are scarce enough resources for development programs - we don't want to re-do what's been done by someone else. Instead, we will collaborate with that organization to adapt their product for our Network.

Perhaps a radio partner in the field has already written a program about growing and preparing leafy dark green vegetables to increase Vitamin A in the diet. If that is the case, our role is to share our partner's work with others in our Network.

We encourage our partners to share their ideas and their work with us, so that it can reach an audience far beyond their broadcast range. And, happily, many of our partners also share their work directly with each other. For example, the National Community Radio Forum of South Africa shares scripts amongst its members. Some of those scripts are shared more widely with our partners elsewhere in Africa, and on other continents. In Russia, Developing Countries Farm Radio Network works with the Foundation for Agrarian Development Research to manage a national network that shares scripts and audio files on the internet. For broadcasters who do not yet use the internet regularly, we continue the script exchange using regular post, and audio files are shared on CD-ROM.

**Suggested Readings**

Shrivastava, K.M. Radio and T.V. Journalism, New Delhi, Sterling 1989

**NOTES:**
LESSON: 13
RADIO INTERVIEW, PANEL DISCUSSIONS AND FEATURES

Objectives

RADIO INTERVIEWS
Your aim is to record and produce a short radio piece consisting mainly of an interview with one contributor. You will be working in pairs for the recording of the interview; one will act as producer the other as presenter/interviewee. You will have to research the piece (mainly by telephoning your contributor); plan and record the interview; then edit your interview down. If you want to, or find you need to in order to tell the story, you may write a BRIEF script to introduce and close your interview. You may also, if you really feel it would genuinely help, suggest music and/or sound effects.

Why Radio Interviews?
If you are a public speaker, or if you are a professional who has a strong viewpoint on a particular topic, then you no doubt have considered interviewing with your local newspaper, radio or TV outlet so that you can get your viewpoint out, and so you can generate some sales and/or sales leads for your business. And while all the different media would certainly be welcome, you may not have the time or the energy required to do them all; thus we’d like you to focus on just radio interviews. Here are the reasons you should consider pursuing radio only:

INSTANT FEEDBACK:
Only the broadcast media can give you instant phone calls (either to the studio, or to your own number) or instant traffic to your site. This makes tracking much easier since you can tell immediately what show/station is pulling best for you. With print, you may end up with several pieces circulating at once, so finding out which one is working (and which one is wasting your time) can be difficult.

CAN BE DONE ON THE RUN:
Since you probably are a person heavily involved in other areas besides media, stopping everything you are doing so that you can go through a one or two hour TV or print interview can be difficult to say the least. Radio is the only medium that allows you instant feedback WHILE you are on the run (although, a cell is not the best for interviews... land lines are best); no stopping by a TV station, and no meeting with a print reporter.

THE MOST OUTLETS:
In any city or town, there are more radio stations than TV stations and newspapers combined. This becomes very important once you have gotten good at doing your interviews, and you then want to make the best use of the approach you have developed. Also, once one of the media (say, radio) sees that you are doing a good job interviewing with them, others in that same medium will want to follow suit; thus you’ll want to stick with the medium that has the most outlets. Here are the rough numbers of radio stations in the U.S. and Canada...

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>2,400</td>
</tr>
<tr>
<td>Oldies</td>
<td>2,070</td>
</tr>
<tr>
<td>Religious (including Christian, Gospel, and Ministry)</td>
<td>1,910</td>
</tr>
<tr>
<td>News/Talk/Sports</td>
<td>2,000</td>
</tr>
<tr>
<td>Adult Contemporary (all styles)</td>
<td>1,709</td>
</tr>
<tr>
<td>Rock/Alternative</td>
<td>830</td>
</tr>
<tr>
<td>Variety</td>
<td>456</td>
</tr>
<tr>
<td>Top 40</td>
<td>300</td>
</tr>
<tr>
<td>Urban (all styles)</td>
<td>730</td>
</tr>
<tr>
<td>Non-English</td>
<td>228</td>
</tr>
<tr>
<td>Classical/Jazz</td>
<td>50</td>
</tr>
<tr>
<td>Kids</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13,348</strong></td>
</tr>
</tbody>
</table>

These numbers include all possible broadcast stations, whether the stations are commercial or non-commercial, large or small, or AM or FM. They do not include any non-broadcast (i.e., cable or internet) stations, because of the low listenerships of these types of stations.

SEVERAL CAN BE DONE IN A ROW:
Since there are so many radio stations, you can make good use of your time by scheduling as many phone interviews in one day as possible. Since you are live-on-the-air, stations have a vested interest in not wasting your time or theirs; you’ll be off talking to the next station before you know it.

NO MAKEUP IN THE STUDIO:
This applies to men also. Unless your topic or area of interest requires visuals (like maybe hairloss or juggling,) then you are going to love being able to do live-in-studio radio interviews without putting on makeup for the camera.

GOOD PRACTICE FOR YOUR OWN SHOW:
This is one of the best reasons to stick with radio for your interview medium. Many folks do their interviews with the long-term goal of starting their own radio program. This is very feasible in radio; your own TV show, however, is going to be quite a stretch, and your own magazine or newspaper probably isn’t going to happen anytime soon. A weekly half-hour radio show; or even a 2-minute special, is easily done even by beginners, and learning to syndicate it is a logical next step.
Preparing For TV & Radio Interviews

• Your media relations campaign has paid off and you’ve been asked to appear as a guest on a TV or radio program. Congratulations! The following information should help you prepare for a TV or radio guest appearance.

• Gather Background Information
  • First and foremost, learn all you can about the reporter or interviewer. What’s her style? Is he or she experienced or knowledgeable about your field of expertise?
  • Secondly, learn all you can about the media program. What is the program’s reputation? Is the show known for its cutting-edge reports? What are the demographics of the show’s audience? What’s the format (talk show, news, variety show, etc.) of the program? Is the program a call-in show? Is there a studio audience? Knowing what to expect will go a long way toward helping you prepare for the interview—and will help calm your stage fright!
  • Ask the producer, reporter or interviewer—whoever is setting up the interview—the following questions prior to your appearance:
    • What’s the topic of the interview? Why was it chosen? - Most producers choose timely topics or topics of general interest to their audience. (A timely topic is something that’s in the news now or in sync with the season. A topic of general interest may be interesting at any time, such as cooking tips for those who are interested in gourmet cooking.) Make relevant suggestions to the producer, reporter or interviewer to highlight your latest accomplishment, proposal or plan. For example, if the topic is entrepreneurs and home-based businesses, let your contact know about a recent contract you won that you’ll be working on from home.
    • Will the interviewer pull relevant information from other sources during the interview? - Prep yourself on what the interviewer will know. Try to “get into his or her shoes” and determine what types of questions will be asked. Understand from whom and from where they’ll obtain information. Make yourself a source of information. Provide the interviewer with your biography and company information (press kit, brochures, etc.) well in advance. If possible, include any public relations information your company has already produced, such as video tapes or publicity photographs for TV, and audio tapes for radio. If you’ll be part of a panel, find out who the other panelists will be and the points they will be making. Keep an eye on the current events.
    • How long will the interview last? - Knowing the length of the interview will help you better prepare your answers to anticipated questions. Will you be interviewed for three or 20 minutes? The shorter the interview the more critical it is that you condense your main messages into sound bites of 10 to 20 seconds.
    • Is the interview live? - Live interviews may require more practice and preparation on your part—there won’t be any “retakes” if you stutter, misspeak or fail to make your point. If the interview isn’t live, will the recorded interview be edited? If it is recorded but not edited, prepare as you would for a live interview.
    • Where will the interview be conducted? - If the interviewer or reporter is coming to your location, create a visually enhancing environment to help project a positive image and emphasize your message. Use props or stage a working environment or situation to illustrate your professionalism and expertise. For example, if you own and operate a flower shop, you might choose to be interviewed in front of your employees arranging flowers or a beautiful display of your work.

• Prepare Your Message
  • While you may know your business, your industry—and certainly yourself—inside out, your best chance for a successful interview lies in preparation.
  • Prepare and outline the specific points or objectives you wish to make. Draft concise, to-the-point statements, or sound bites, that highlight these points.
  • Prepare concise and effective opening and closing statements—they’re often the most remembered statements you’ll make.
  • Remember to illustrate and explain your points with examples. Use analogies, related stories and personal experiences to help the interviewer and audience understand your point of view.

• Practice delivering your sound bites and examples in a mock interview with a colleague or friend or even in front of a mirror. Your goal is to answer anticipated questions quickly, clearly and naturally.
  • Practice delivering each of your answers in under 20 seconds. Time your answers.
  • Outline your points and examples on note or index cards and have them close by during the interview.
  • Bring extra copies of your biography, company information (press kit if you have one) and audio or video tapes with you to the studio. (Remember, you’ve already sent information to the reporter in preparation for the interview.)
  • Arrive at least 30 minutes early for interviews held at a studio.
  • Arrange to meet the interviewer or reporter before the program and ask how you will address each other during the program. (Speaking to each other on a first name basis is best.)

Do’s and Don’ts For Delivering Your Message
Follow Up After the Interview

• Be yourself. Be natural.
• Maintain eye contact at all times.
• See yourself comfortably.
• Check your appearance on the TV monitor beforehand, if possible.
• Adjust and test any equipment before the program begins.
• If you are speaking into a microphone, maintain a distance of at least six inches.
• Assume that you will be on air for each and every second of the program. (Don’t make a gesture or say something you don’t want broadcast.)
• Assume that anything you say to the reporter could be transcribed for the interview, even if it is a casual remark made during a post-hoc chat.
• Enjoy the role, at some stations in mind. Treat your audience to that.
• Speak only as a representative for your organization and not as a personal viewpoint.
• Try to last your answers to about three sentences.
• Finish answering each question completely in the order in which they were asked.
• Don’t look at the monitor during the interview.
• Don’t say any high-brow language or industry jargon. Speak in lay terms.
• Never say "no comment." (It sounds as if you have something to hide.)
• Avoid saying anything you may regret. Don’t accept a personal question or stronghold controversial material. Instead provide the interviewer with an explanation. "That information is confidential and I’m not at liberty to discuss it at this time."
• Don’t get into an argument. Never become defensive or angry.
• Don’t speak for someone else’s viewpoint.
• Don’t dash misleading statements trap you. Make your argument or position known clearly.
• Don’t assume that any statistics or comments are going to be correct. If you are uncertain, express it clearly. "That may or may not be true. I’d like to see a copy of that report."
• Never offer any information "off the record" or "just between you and me." Don’t say anything you don’t want on the evening news.
• Choose smart, tailored, business-like attire like suits, dresses and pantsuits. Be a professional!
• Avoid red, white, ivory and light pased colors in dresses, jackets and suits. These colors, however, are fine for blouses (under a jacket), ties and scarves. Hint: If you have a few days’ notice, watch what female TV news anchors wear.
• Avoid small, busy patterns, such as small plaid, tiny checks, mini-stripes and paisley patterns.
• Don’t wear any shiny fabrics.
• Don’t wear overpowering scarves or ties.
• Avoid wearing large amounts or large dangling pieces of shiny jewelry, including necklaces, earrings and pins. (Unless, of course, you’re the jewelry designer!) Choose dull finished jewelry or pearls instead.
• Hair and Make Up Tips
  • If offered the services of a make-up professional at a studio, take them up on it. Professionals understand how to make any skin type look good through a camera’s eye.
  • Wear your makeup as you normally would for every day. Avoid overdoing it!
  • Brush on some loose powder to help eliminate shine.
  • Choose a long-wearing matte lipstick.
  • Even if you normally don’t wear make up, powder and lipstick will help you avoid looking “washed out” by the bright lights.
  • Consider a hairstyle that emphasizes your face and doesn’t hide it.

Factual Accuracy in Jazz Interviews

In a recent issue of the British magazine Rubberneck (about improvised music and contemporary literature) I read the following editorial statement: "If you find mistakes in this magazine, please remember that they are there for a purpose. We try to publish something for everyone, and some people are always looking for mistakes.”

As a jazz trivia fanatic I plead guilty on the last count, and my wishes were promptly satisfied by the latest issue of Hennessy Jazz Notes (Winter 1996). In the “Gimme Five...” section, editor Michael Bourne asks Benny Golson which five records he would take along to the proverbial desert island. For Golson, one album would do: Blue 'n' Boogie and Walkin’ by Miles Davis, with Thelonious Monk playing piano. It was a 10-inch LP, one track each side. “That was epochal for me. I told my wife to play that at my funeral.”

In that case, the mourners will wait in vain for a Monk solo. On the Prestige LP182 - Walkin' and Blue 'n' Boogie by Miles Davis, with Thelonious Monk playing piano. It was a 10-inch LP, one track each side. “That was epochal for me. I told my wife to play that at my funeral.”

In that case, the mourners will wait in vain for a Monk solo. On the Prestige LP182 - Walkin’ and Blue ‘n’ Boogie by Miles Davis, with Thelonious Monk playing piano. It was a 10-inch LP, one track each side. “That was epochal for me. I told my wife to play that at my funeral.”

As a Dutch jazz journalist who has done, over the years, interviews with such historical figures as...
Ben Webster, Dexter Gordon, Stan Getz, Gil Evans, Bill Evans, Charles Mingus and Sun Ra, I still adhere to the puritanical school: never knowingly publish factual inaccuracies. Otherwise, you run the risk that they will go on to lead a life of their own. The jazz literature of the past century contains too much misinformation already.

**Interview Methods**

Unstructured Interviews Here the interview is a conversation with no prepared questions or predetermined line of investigation. However, the interviewer should explain:

- The purpose of the study is and
- The particular focus of this interview

The roles and the purposes give structure. The interviewer generally uses a questioning strategy to explore the work the job holder performs. Listening and taking notes are very important. These enable follow up questions to be posed. The questions and responses - with summaries enable the interview to be controlled. The conversation takes on a structure with areas being considered, explored, related to each other and revisited to secure the depth of information required in job analysis. An unstructured interview involves question and response and may be free flowing but it becomes structured in the sense that the interviewer has a purpose and needs skill to

- Establish a relationship
- Ask well-structured questions to generate a conversational flow in which the interviewee offers information - factual, opinion, subjective and objective about aspects of the job

To ensure information received is heard and understood - listening, clarifying and reflective summarising

Effective listening requires concentration and this can be disturbed by interruptions, the interviewer's own thought processes and difficulty in remaining neutral about what is being said. Notes need to be taken without loss of good eye contact. Cues need to be picked up so that further questions can be asked to probe issues and areas of interest.

Structured Interviews A structured interview may assume a definite format involving:

- charting a job-holder's sequence of activities in performance
- an inventory or questionnaire may be used

Care is needed to set up such interactions. A specialist analyst is not involved and participants need to know what they are doing, why and what is expected as a result. They may be intrained as interviewers and not structure the interview as recommended. Notes and records may be needed for subsequent analysis.

A structured interview may be akin to a staff appraisal or job evaluation interview carried out by a manager with a subordinate. The manager is the analyst.

**Interview Outcomes**

Interviewing is a flexible method for all levels and types of job. An interview may focus on what a hypothetical job might involve.

Interviews generate descriptive data and enable job-holders to interpret their activities. A good interviewer can probe sensitive areas in more depth. Structured questionnaires cannot easily do this. Jobholders can give overviews of their work and offer their perceptions and feelings about their job and the environment. Rigid questionnaires tend to be less effective where the more affective aspects of work are concerned. However information from different interviews can be

- Hard to bring together
- There is potential for interviewer bias
- Certain areas of the work may fail to be picked up
- An interview may stress one area and neglect others.
- There are problems in interpretation and analysis with the possibility of distorted impressions
- The subjectivity of the data captured needs to be considered

Interviewing as the sole method of job analysis in any particular project has disadvantages. Interviews are time consuming and training is needed. Co-counselling may remove the analyst and enable jobholders to discuss work between themselves.

Through inexperience however they may miss items and there is the natural problem of people not establishing and maintaining rapport with each other during an interview.

**Research Assignment:**

**Conducting an Interview**

For Research Assignment, you will conduct an interview with an individual whose skills, knowledge, or experiences seem pertinent to the argument of your second essay. Because interviews impinge not only on your own time as a student but also on the time of an innocent stranger, it is vital that you prepare yourself adequately in advance. The interviewee will have his or her own responsibilities, and taking time out of that busy schedule to help a student is an act of generosity. To repay that kindly deed, you should prepare your questions in advance and be punctual and organized. If an individual refuses to talk with you, do not badger her, but seek a different respondent for this assignment.

The interview should have a clear purpose, rather than simply being a “fishing expedition” to see what facts you turn up. The purpose might gaining the perspective of an expert or insider within the field, explaining a tricky or technical issue, or providing the reader with information normally unavailable in books. You will need to find the interview subject early in the writing process and set up the time in advance. It is sometimes more convenient to arrange for the interview to take place over the phone or via e-mail if that is preferable to both parties. You might wish to read Carter McNamara’s General Guidelines for Conducting Interviews before you begin as a supplement to the guidelines below:

**REMEMBER:**

Prepare your questions in advance before meeting with the interviewee.

This interview is for academic purposes, not the Jerry Springer Show or Hard Ball. Mainstream media of lowbrow taste often engages in confrontational or aggressive questioning in order to spark disputes, embarrassment, or scandal. That sort of tomfoolery is both inadvisable and unnecessary for genuine research. Often mass-media interviews serve primarily as a source of “sound bites,” snippets of quotation that sound neat, but end up water-down or simplifying the debate rather than engaging in a sincere, nuanced analysis. Collecting sound
bites is not your purpose here. You are not inflating your paper with neat-but-empty catch phrases; you are seeking to understand something better as a part of your argument. You are seeking to become an expert on the subject at hand.

**BEFORE YOU BEGIN:**

Think about what sort of person would be a useful candidate for an interview. A professional who works within the field? An academic who studies that issue in particular? A published author who has already written books on that topic? A person in the local community who has dealt with this issue in his or her personal life? Identify that person and make arrangements to contact her. Authors can often be contacted through the publisher of their books or the editor of their journals (though this may take a week or two). Scholars can often be contacted through their respective departments, or through campus directories. Professionals often have listings in the yellow pages of the phone book. Other individuals may be harder to track down. Allow yourself sufficient time to locate them and set aside a little cash for a high phone bill if you are contacting someone far away.

**WHEN YOU FIRST CONTACT THE INTERVIEWEE TO SET UP THE INTERVIEW:**

1. Explain who you are, why you want to talk to them, and what you wish to find out. The purpose of that interview should be made clear to the interviewees before you meet them.
2. The interviewees should know in general what sort of questions they will be asked, and approximately how long the interview will last. (Note that when conducting interviews on the radio or on television, some reporters will often not let the interviewee know specifically what questions will be asked. The purpose in this subterfuge is to catch the interviewees off guard, and perhaps make them slip and reveal more than intended. It makes for good ratings and a dramatic presentation during a live-interview, but that sort of trick is not appropriate for a scholarly interview; our purpose isn't to impress the audience with chicanery.)
3. Arrange a time to meet, a time to call them on the phone, or a date for an e-mail exchange. If you meet face-to-face, pick a fairly public location, but one with few distractions. Let them know how long you expect the interview to take. Many interviewees will feel most comfortable if you interview them at their offices, i.e., on their “home-turf” where they are psychologically at ease.
4. Ask to obtain permission in writing to quote the respondents, to cut-and-paste e-mail responses they write, or to use a tape-recorder during the session if you will be doing any of these activities. You can type up and mail a form to them to sign, or bring it with you to the interview for their signature. I include an example below:

**Example Form:**

I [respondent’s name] hereby give my permission for [student’s name] to interview me and quote my responses in a scholarly research paper. I understand that this research paper will be submitted to a professor at the University of XXXX. I understand that I waive any claim to copyright to this material should the student ever publish it in a scholarly journal or in electronic format online. I understand that the author [will / will not] maintain my anonymity as a part of this interview. I hereby give my permission in the form of my signature below:

Signature ______________________
Date ___________________________

5. Ask if the interviewee has any questions to ask before you begin.

**NOTES:**
LESSON: 14
PLANNING AND CONDUCTING VARIOUS TYPES OF INTERVIEWS: FACTUAL, OPINIONS, AND IDEAS

Objectives:

WHEN PREPARING THE INTERVIEW
1. Plan to wear appropriate apparel for the interview. Dress a bit more formally than normal so the interviewee will treat you seriously and respectfully, rather than dismiss you as some punk college student who is barging into her life demanding an interview.
2. Prepare a list of questions in advance. Decide if you want an informal, chatty interview (which often puts interviewees at ease), or a more formal, structured interview (which often is more time-efficient and covers material more completely).
3. Since relying on one's memory is haphazard, be prepared to record responses in some way. Take a notebook for jotting down answers, or bring along a partner to take notes. Even better, bring along a tape recorder and ask permission for the interview to be recorded.

WHEN YOU FIRST MEET THE INTERVIEWEES:
1. Explain any issues of confidentiality. Explain who will get access to their answers and how their answers will be analyzed. Do note that it is often difficult to promise absolute confidentiality. Court orders may supersede their request for anonymity if you are interviewing someone who has engaged in illegal activities (something one should only do with caution—if at all. Professional reporters are paid good money interview dangerous individuals, and they have the staff of their publication to help ensure their safety. College students aren’t and don’t.
2. If these comments are to be used as quotes, get written permission to do so.
3. Explain the format of the interview. Explain the type of interview you are conducting, its purpose, and its nature.
4. Explain how to get in touch with you later if necessary.

WHEN ASKING QUESTIONS:
1. Ask only one question at a time. Don’t jumble the response by trying to combine multiple questions at once.
2. Attempt to remain as neutral as possible. Often researchers suggest that the interviewer should not show any strong emotional reactions to their responses to avoid altering the responses. One researcher, Patton, suggests acting as if “you’ve heard it all before.”
3. Encourage and illicit responses with non-committal body language, such as nodding, or murmuring “uh huh,” and so on. Don’t suddenly jump up to take notes, or it may seem that you are unusually surprised about an answer, which may influence the subject's response to the next few questions.
4. Don’t let the respondent stray to another topic, but steer them back to the topic at hand with your questions.
5. Phrase your questions in such a way as to ensure an open-ended response. Don’t put words in the interviewee’s mouths, but let them choose their own vocabulary and phrasing when responding.
6. Keep questions neutral in tone. Avoid judgmental wording or evocative language. Asking someone, “what do you think the effects will be of higher levels of acidity in the Mackenzie” is less likely to direct a response than, “What do you think the effects will be of callously leaking industrial waste into a freshwater river?”
7. Word the questions clearly. Make them concise.
8. Pick pertinent inquiries. Part of this is also becoming familiar with the vocabulary of that field or topic, so you can ask intelligent questions.
9. Use caution when asking “why” questions. This type of question suggests a cause-effect relationship that may not actually exist. These questions may also invoke a defensive response, e.g., the interviewees may feel they have to justify their answer, e.g., the interviewees may feel they have to justify their response, which may inhibit their responses to future questions.

OTHER TIPS:
1. Begin the interview with simple, factual questions that the interviewee can easily answer. This will help put the interviewee at ease, and make her more talkative for later, more complicated questions.
2. A good way to start is to ask about the interviewee’s qualifications or knowledge. For example, “How long have you studied or worked on X?” “What first made you interested in X?” These questions, called ice-breakers, help establish a rapport with the subject.
3. After easing into the interview with simple questions, you can seek information about personal opinions or about more controversial issues.
4. Ask questions about the present before moving into questions about past events or future events. People have an easier time talking about what is taking place currently than they do recalling the past or speculating about the future.
5. The last question should be an invitation for the interviewee to add any final points or comments of his own.
6. If you are using a tape-recorder, check to to see that it is working over the course of the interview.

AFTER YOU ARE DONE:
1. Go over your notes and make sure you can read your writing while it is still fresh in your memory.
2. It is polite to send a thank-you card or letter expressing your gratitude to the individuals interviewed, and offer them a copy of the final paper, if they wish to have one. If your paper is later published, it is also polite to acknowledge the interviewee's
assistance in a section thanking those who helped in the creation of the paper.

3. Be sure to include an entry for the interview in your Works Cited or Bibliography page of your final essay.

Congratulations. You have engaged in first-hand research, and found information that may never have been recorded before in any publication. You are one step closer to becoming an authoritative writer on this topic. Other writers may end up quoting you and your publications on this matter.

Research Assignment:

Turn in to your teacher by Week Eight the following information:

1. Name of the person interviewed
2. Date scheduled for interview
3. A brief explanation of why the interviewee seems like a pertinent source (i.e., what qualifications, knowledge, or experience does he or she have regarding your topic).
4. A list of a dozen questions for the interview.

Doing Radio Interviews

If you're part of an activist group, talk radio is one of the most effective ways to reach your audience. The opportunities afforded are unparalleled.

Equipment needed

A telephone is all the equipment you need. With a simple phone, you can be interviewed from anywhere — from home, your office, or even a hotel room. My favorite "studio" is in my office facing my computer. Additionally, I use a telephone headset, which I highly recommend. One benefit of a headset is free hands. With free hands you have the freedom to access reference materials, your computer, and jot down notes while you are talking. Before doing a show, I bring up a "radio" file on my computer. In this file I have all sorts of useful information for the interview (more on this later). I also use the computer to type notes to myself. For instance, during the breaks many ideas come to mind for the next segment. I quickly write down these ideas. Some hosts have a knack for throwing their guests off target, so you want to do everything you can to stay focused. The one other thing I always have on hand is a big glass of water.

Getting on talk shows

Talk radio hosts are always looking for interesting, informative, and provocative guests — not necessarily in that order. Actually, depending upon the size of the station, it's often the "producer" who finds and schedules guests. However, you don't need to know producers to get on a talk show. Unless your issues have national impact, you should limit your exposure to the community in which your group operates. One advantage to doing local radio shows is that you can be interviewed in the radio station's sound studio. Using a studio mike results in better audio quality than when you use a telephone. Another advantage is face to face visual cues often help during an interview. If your group's interest is national in scope, you might want to start with talk shows in your city, then appear on shows in other communities. Nationally syndicated shows will save you time by hitting many cities at once.

How to start

If your group has a publication, add the names of known talk show hosts to your mailing list. Also, send them newspaper clippings about your group, press releases, and brochures. If you or someone in your organization writes a book related to the purpose of your group, send book reviews or a sample copy to the radio station. (Your publisher may assist you in this.) Be sure to include contact information so producers will know whom to contact. Simply sending timely material will most likely get you on the air. If your organization is national in scope, there's another cost-effective way to get your spokesperson on shows all over the United States. Bradley Communications, of Lansdowne, Pennsylvania, publishes Radio-TV Interview Report — The Magazine to Read for Guests & Show Ideas. Published three times a month, this excellent magazine is sent to 4,000 hosts and producers. Each issue contains 64 pages of display ads from experts and opinion makers. When planning our next media strategy, I always consider advertising in Radio-TV Interview Report. Because of its frequency and reach, activists can organize a radio blitz lasting a few weeks, or even months. I continue to get calls months after my ads run. The staff at Radio-TV Interview Report will write your ad for you. All you have to do is supply the information you want talk show hosts to have about you and your group. This information might include your group's newsletter or magazine, a book, a photo (for TV), or a press release. You'll receive a fax of your ad copy for your approval before it runs. You can run your ad once, three times a month, or once a month for as long as you like; it's up to you. Radio-TV Interview Report has never failed to get me on more shows than I could handle, easily justifying the cost of the ads. You might also land some TV talk shows. To contact Radio-TV Interview Report, write to PO Box 1206, Lansdowne, PA 19050-8206, or call Jack Lewis at 610-259-8206, Ext. 408.

When a producer calls

When a producer calls, make sure you learn the name of the host, the radio station, and its location. You should also ask about the host's position on the issues you'll be discussing. Although it doesn't matter what your host's positions are, it's good to know in advance.

For some reason, Christian stations often try to hide that fact from me; then attempt to ambush me on the air. I still do those stations, but I like to know in advance if they have a Christian format. Recently, I've begun to look for a station's call letters in the National Religious Broadcasters' Directory of Religious Media.

Ask how long you'll be on; don't assume it'll be an hour, it might be less. Many of my appearances have been extended for an extra hour or so. It all depends on audience response — and whether another guest is scheduled to follow you. You want to be sure you have enough material on hand for a longer show. Most programs are live, and because of callers, are the most interesting. Occasionally, the host will tape your interview for a later airing.

Write down the producer's name and phone number. If you have to cancel, call as far in advance as you can. When setting the date and time, be sure you understand what time zone the
show is in. Don’t forget to write down all this information in your appointment book.

What to expect on the air

Here are some of the notes I have in my computer’s “radio” file. I have a collection of one-liners I’ve successfully used as retorts, facts and legal cases regarding my issue, talking points, and even a few interesting quotations. Before each interview I type in the station’s call letters, city, and the host’s and producer’s names. Then I add personal notes, such as relax, enjoy yourself, use and keep a sense of humor, remember you don’t have to answer every question, answer questions with questions when appropriate, promote issue X. While all this may sound trite, sometimes in the heat of a talk show these things are easily forgotten. I also prepare a brief opening statement, and a note to myself about what issues to focus on during the program. A friendly host will support and guide you during the show. Even the most hostile host is just doing it for effect, and, if you know your material, you’ll do fine. Most callers are polite — but often ill-informed. An experienced host will keep the unruly ones in line, sometimes by cutting them off. Don’t “read” any statements, including your opening remarks. Remember not to say anything that you would not want to go out over the air. You may think you’re off the air when you’re not. Keep your remarks short, develop good sound bites, and have plenty of facts on hand. Never attack the host or callers. Above all, be yourself. Keep cool and maintain a sense of humor. It’s extremely helpful to provide contact information — an 800 number, or a simple address — so listeners can reach you. It’s also a good idea to make a free offer, such as a copy of your newsletter. Remember, you’re on the air to promote the mission of your group, advance a cause, or deal with specific issues. Stay on target.

On Radio Interviews

I start doing radio interviews again and why I stopped doing them in the first place.

I’m at home, sitting at a table (my old kitchen table, as a matter of fact) in our upstairs “den.” (If we had a family, we might call it a “family room.” But we don’t, so we don’t. We sometimes call it a “TV room,” because that’s where the TV lives, but I like to think that we use the room for more than just being pacified by the universal pacifier.) During the day, this room’s two 4 x 8 windows have an incredible view of the Weaver and Bradshaw mountains, but it’s dark now and I can’t see much more than the lights in a few neighbors’ homes. It’s 7:30 PM on a Friday night.

I’m waiting for the phone to ring.

I know who’s going to call. It’ll be David Lawrence, host of “Online Tonight with David Lawrence,” a radio talk show. Or it’ll be someone who works for him, just making the connection while David does other stuff in preparation for interviewing me. That’s why he’s calling, of course, I’m tonight’s guest on his show.

Oddly enough, this isn’t the first time I’ve been interviewed today. At about noon, I had to put my day on hold while I was interviewed by Alan Ashendorf and his partner (whose name I can’t remember; sorry!). I called at precisely 12 noon, chatted for about 20 minutes as a sort of dry run for the interview, and then got asked some of the same questions all over again, along with a few others. The whole thing took 45 minutes. I think I did pretty well. I only forgot what I was going to say once and, hopefully, they’ll edit that out. That’s one of the benefits of doing a taped interview. If I sound like a moron, they can fix things up to make me sound better. Of course, if I sound like a genius, they can also fix things up to make me sound worse. Whatever.

The interview by David will be live. With listener call-ins. I hate listener call-ins. Half the time, they expect you to solve some kind of obscure problem they’re having with their computer. The kind of problem that they shouldn’t be having in the first place, so you really don’t know why they’re having it, let alone how to solve it. But I like David and he supposedly “loves” me (for reasons I don’t quite understand). And I think he’ll protect me from the listener from hell. At least I hope so.

As you might have surmised, I don’t seem too enthusiastic about being interviewed. And you might be wondering why.

Peachpit Press used to line up interviews for me. Some of them were online chats which, I can safely say, are pretty much a complete waste of time. You’d check into a “chat room” at a prearranged time, then spend 50 minutes answering questions by typing them in. There would be about eight people in the audience — people who probably didn’t have much else to do with their time. Of those people, at least two worked for the organization that was holding the chat and at least one other was a fake person planted in the chat room to ask questions when no one else had anything to do. Call me an idiot, but it wasn’t until I commented to someone about how one particular person turned up for all my chats that I was told that that person didn’t exist. And I thought I had a fan. Instead, I was wasting 50 minutes of my day typing words of wisdom for the benefit of five people.

Peachpit also lined up real interviews, though. There was one that I did in a radio station studio in the Los Angeles area years and years ago. I can’t remember why I was in LA — I certainly didn’t go just for the interview — but there I was, sitting at a table with a mike in front of me. We were live and listeners were calling in. And my headset didn’t work right so I couldn’t hear a word anyone was saying. Needless to say, I didn’t make much of an impression on that show.

There were others, too. Telephone interviews. I remember doing one while I was up at my property at Howard Mesa. Mind you, I’m on top of a mesa (a flat-topped mountain for you east coast folks), 5 miles down a dirt road from pavement
that was 15 miles away from the nearest town. I did the interview on my cell phone, plugged into the car's lighter jack with the windows rolled up. I don't even remember what I was interviewed about or who interviewed me. For all I know, it might have been Alan Ashendorf and his partner — they seemed to remember me from another interview today.

The cell phone interview at Howard Mesa was the last straw. The problem was, Peachpit would line up these interviews weeks or months in advance. I had to arrange my schedule around these interviews. And I didn't like that.

One of the best things about my lifestyle is its flexibility. With a day or two of planning, I can go places and do things that keep me far away from telephones and other ties to civilization. (In the old days, before dogs and horses and parrots and airports, we didn't even need those planning days.) But things are a bit more difficult if I have to be reachable by a talk show host at a certain day or time.

So I told Peachpit I didn't want to do any more interviews. Or chats. They tried once or twice to line something up for me, but I reminded them that I wasn't interested. So they stopped. That was about two years ago.

Last month, I did a project for FileMaker, Inc. It was a very good project that required me to write a 15-page, illustrated document about using FileMaker Pro with Excel. The pay was excellent — heck, I wish I could get work like that all the time. But the pay included making myself available for — you guessed it — radio talk show interviews.

Earlier this week, the man in charge of lining up the interviews told me that he had two for me — both today. And because FileMaker, Inc. paid me to do them, here I am, waiting for the phone to ring.

What FileMaker, Inc. probably wouldn't like is that this afternoon's interview centered around my recently released Word 2003 book. That's not what they wanted me to talk about. In fact, they sent a detailed e-mail message to both interviewers and me, outlining what they expected us to talk about. But the PR guy also made the fatal error of sending the interviewers my Word 2003 book. They didn't care about FileMaker. Microsoft's Office 2003 software release interested them a lot more. After all, there are millions of Word users throughout the world. What's FileMaker Pro? I did my best. I mentioned FileMaker Pro twice in the interview. But neither interviewer picked up on it. I think Peachpit should pay the PR guy's fee for this one.

But in reality, I know it was all a waste of time. My Word for Windows books never sold very well — they do just well enough to warrant revisions every two years when new versions come out — and I don't expect one radio interview to change that. There's too much competition in the Windows world and Peachpit is a very small player there.

Peachpit did send the books as requested. So the cat's out of the bag; they know I'm doing interviews again. I wonder if they'll try lining something up for me.

So here it is, now 8:00 PM. According to the PR guy, the show is at 8 PM mountain time. My time. And I'm wondering why the phone hasn't rung yet.

But deep down inside, I know why. The PR guy got it wrong. The show is at 9 PM Pacific time. That means 10 PM mountain time. Which means I'll be staying up late tonight.

I'm wrong! They called. I'm on.

— LATER —

The interview is over and it was a lot of fun. David does a great job interviewing people.

But guess what? We didn't talk about FileMaker Pro.

Dealing with radio interviews

Helen Moore, of media agency Marketiers, on how to make a radio interview work for you

Talking on radio can be a nerve-wracking experience. Even though you're safe in the knowledge that the public can't see you, the thought of thousands of people hanging on to your every word over their breakfast can be terrifying. Helen Moore, from media agency Marketiers, has helped countless clients go through the interview experience with flying colours. Here she explains how to make the best of your air-time.

What's the first thing you need to think about?

The first thing to do is to check whether the interview is live or pre-recorded. It's as much for your own benefit as anything. In my experience, if it is live then the adrenaline starts to go and you tend to get a better interview. But equally, if it's pre-recorded then the person being interviewed at least knows that if they make a mistake, it's fine and they can do it again.

But that does that mean that you can be blase and think: Oh well, if I make a mistake then it doesn't matter?

No! Even if it is pre-recorded it's best to treat it as live because again, you tend to get that adrenaline pumping and - instead of resting on your laurels - you put in that 100 per cent. In my experience, if it is live then the adrenaline starts to go and you tend to get a better interview. But equally, if it's pre-recorded then the person being interviewed at least knows that if they make a mistake, it's fine and they can do it again.

How do you know if you're talking clearly enough?

Most radio stations will test your voice level prior to going on air. Prepare to hear that old question: 'And what did you have for breakfast?' as they test whether your voice is going out loud...
and clear over the microphone. They’re also checking to see whether you’re sitting close enough to the microphone and whether they’ve got any feedback at their end.

When being interviewed is it best to keep your answers short and sweet?
Try to find out what sort of show or slot the piece will be used on. If it is going to be for a news-based show - that's going to be used every hour on the hour - only a snippet of your voice will be used. In that case you need to keep your answers brief and to-the-point.

If it’s going to be a features-based or lifestyle-oriented interview, it’s going to be a lot more chatty and you’ll have the opportunity to go into more detail.

Is the key to take your cue from the person doing the interview?
Definitely you have to be very much led by the presenter. However, in my experience, if the presenter is quite low key or doesn't sound that interested in what's being said, it's not that they're not interested in the subject. It's just that they do this, day in, day out. Even if the presenter is very monotone and seems a bit dull, it still pays to be as forthcoming as possible in your answers. At the end of the day, your voice is the one that's going to be heard. If the piece is pre-recorded there's always a chance that they will edit out a lot of the presenter's voice anyway.

What should you do if you mess up your answers live on air?
If you're on live and you do feel that you're heading down a cul-de-sac, just stop for a a couple of seconds while you gather your thoughts and try again. But you should always try to keep the flow going because it is live and they don't want dead air time. Any good presenter will try and guide you along, try and give you the best push and attempt to get you to continue to talk.

What if you stumble over something or forget what you want to say in a pre-recorded interview?
Be very forthright with the presenter because obviously, they're not going to know what you want to say. If it's pre-recorded and you feel as if you're not saying what you want to say, then just ask; 'Can I do it again?' Ten times out of ten, they are going to let you - after all they want the best possible interview.

Preparing for radio interviews
Helen Moore, from media agency Marketiers, shares her tips on dealing with radio interviews.

1. Practise
Always try and do a dry run. Get someone to ask you a few of the kind of questions the radio interviewer is likely to come up with. It’s a sure way to get your confidence levels up because you know you’ve practised answering key questions.

2. Use the moments beforehand to mentally prepare
I think it’s important to never rush straight into an interview - even if you’re running late! Take a few moments to gather your thoughts and think about what you want to say.

3. Don’t rely on too many notes
From experience, I’d say that too much information can swamp you and you’re never going to get through reams of paper anyway. It’s more important to have a few key bullet points to remind you of what you want to say and just spark of those. Also, any rustling of papers is sure to be picked up by the microphones.

4. Try not to fiddle
It’s good to remember that the microphone really will pick up any background noise. So try not to tap on a desk, play around with a pen or tap the base of the microphone for example. People often fiddle absent-mindedly when they are nervous.

5. Don’t go outside your brief!
If the interviewer asks you a question that you don’t want to answer, don’t answer it. You’re under no obligation to answer a question that you feel uncomfortable with. Be forthright. Say: “I'm not the best-placed person to talk about that at this time. Obviously what we're concentrating on today is...”

6. Ask for a glass of water
Keep water on hand because a dry mouth is always bad news.

7. Turn that mobile off
Having a theme tune or the latest chart-hit ringtone go off in the middle of a live radio interview doesn’t send the right message.

Getting what you want from the media
Steve Parker, Chair of the Bristol Heart Children’s Action Group gives his top tips on making sure you keep control of the situation.

1. Make sure you brief journalists properly
Help journalists out by providing them with a briefing pack covering the issue including a printed statement with all the details they need. This way you know they’ve got the basic facts and figures in their hands. You’ll find that they are then immediately more relaxed about their article because they know that even if they don’t get they quotes they need elsewhere, they’ve still got something and they can still write a story.

2. Make sure your group has a common message
Make sure that you’re not all saying slightly different things, which will then get reported in the press. This happened to us
once but in fact the people quoted were actually talking about the same issue but using slightly different words. Make sure that as a group you use very similar phrases.

We came up with endless soundbites. Journalists love it if you can come up with a phrase, a few sentences - something memorable that flows. They like it because it means they don’t have to edit the text or have to put it in their own words. Having these stock phrases on two or three things you want to get across means that as a group you put out a clear message.

3. Value your contribution
We didn’t realise immediately that we had the power to be firm with the media. For example, there are a lot of things regarding costs that we didn’t know about. The BBC has a tendency to say we want you to do an interview in BBC Scotland on such and such a date. And we’d say: ‘Yes, but we need to put out a news pack and we haven’t got the money for it. Can you donate some money towards it?’ They’d then explain that they have a standard fee for guests. So there are expenses but most people don’t know how to ask for it.

However, there is a sort of cultural barrier when it comes to money that campaign groups have to overcome. It’s a sort of feeling that you’re not actually allowed to ask for money.

4. Correct the facts
It’s amazing how the wrong facts end up in print even if you’ve provided them to journalists time and time again. Don’t give up getting your facts out - you have to keep pushing.

5. Don’t talk jargon
Treat every journalist like it’s their first time dealing with the subject. You can’t assume they know all the background detail.

6. Have a variety of people willing to be featured in the press
You have to give the media enough that they stay interested. They want a new story; they don’t want the story they’ve seen in their rival paper or TV station the day before. They don’t want to feature the same people time and time again.

NOTES..
LESSON: 15
EMOTIONAL RESPONSIBILITY, FACTUALITY AND CREDIBILITY

Objectives
A Columbia University professor of journalism and sociology argued Thursday that the media’s primary function is to offer an emotional connection—not information—to consumers.

Todd Gitlin lectured to an overflowing audience in the John Bragg Mass Communication Building on the topic of “Media and the Emotions of War.”

“I want to try to convince you that the media does not primarily offer us information,” Gitlin said. “What motivates us to surround ourselves in media is our desire for feeling.”

Gitlin focused his lecture on how emotions and a desire for feeling are commodities the media can profit from and use during times of war.

“It is emotions that are the glue that holds us to media,” Gitlin said, referring to how people overcome the distance between themselves and what is going on in the world.

“Emotion is the bridge that we cross in order to experience our commonality as human beings,” Gitlin said, pointing out that this a large reason why people turn to the media. People go to the media in order to feel a certain kind of experience of being human, which puts us in touch with people who are not ordinarily in our lives, he explained.

“If people are capable of identifying with others, then they are capable of thinking about the kinds of social arrangements that will improve life in general,” Gitlin said. “When we read newspapers or watch television news or listen to radio, we are looking for a way to remain ourselves but to establish connection and forms of membership.”

Gitlin said that the commodity for sale in the media industries is the attention of viewers, from media proprietors to advertisers.

“Our attention is valuable to advertisers. What media institutions do is build on the fact that we have this propensity to feel, and they process this capacity and desire into something that is useful to advertisers,” he said.

Gitlin also discussed how “infotainment” is necessary for the media to make a profit. He explained how giving stories, particularly those related to war, logos and music is another way to build the hype of the situation. An example, he said, is “operation shock and awe.”

Helping Kids Cope with Media Coverage of War and Traumatic Events

Prepared by the Media Awareness Network (MNet) and Dr. Arlette Lefebvre, Staff Psychiatrist, Hospital for Sick Children, Toronto

The intense media coverage that accompanies traumatic events, such as war, acts of terrorism and natural disasters, can be very disturbing for children and teens. Certain young people are particularly vulnerable and some can be seriously distressed simply by watching TV replays of such events.

Parents, educators, health practitioners and others who work with kids can help to lessen anxieties arising from the coverage of catastrophic events if they:

• monitor media exposure
• mediate media images and messages and
• mitigate the media’s impact.

Monitor

Don’t assume that children are unaware of news events.

It’s almost impossible to be unaware of current events in our information age. Even very young children hear and see more than we think, so it’s important to question them about what they have learned and how they’re feeling.

Look for signs of anxiety in children.

Some children are more susceptible to anxiety about events reported in the media. Various factors influence children’s reactions, including age, temperament, a tendency to worry or a vivid imagination. Children are more likely to dwell on certain news events if they themselves have been victims of violence, war or similar tragedies, if they have relatives or friends living in the affected area, or if they have family in the military or in emergency-response professions.

Be selective in your media consumption, particularly with young children.
Protect kids from intensely disturbing or frightening TV images. Don’t leave the TV or radio on as background noise, don’t watch coverage of traumatic events with young children in the room, and avoid media “replays” in the days following a catastrophe.

**Mediate**

**Help children to feel safe.**

When traumatic events occur, kids need to have the risks to themselves and their families put into a realistic context. While we should be concerned about conflicts in other parts of the world, children need to be reassured that these events do not pose a direct threat to them. Explain how governments and organizations such as the United Nations and UNICEF are working hard to make the world a safer place for all children.

**Make the time to listen to any concerns children may have.**

Be honest when answering questions. With young children, however, don’t elaborate with long, detailed explanations. Some children may ignore news coverage of catastrophes in order to avoid unpleasant feelings. If they don’t want to talk about the events, tell them that’s fine. It’s okay to just let them be kids.

**Tell them how you’re feeling.**

Be aware of the impact that traumatic events may have on your own emotions and behaviour. Share your feelings with kids. It helps older kids to know that such events are upsetting to adults as well. Remember, however, that young children may become more fearful if they sense anxiety and tension in the adults around them.

**Mitigate**

**Help older children to analyze media coverage.**

Use this opportunity to educate kids about how the media work. Watch news coverage with older kids and talk about it. Explain that news is a business and that the need to attract audiences can influence editorial decisions on how events are reported.

**Expand your sources of information.**

Seek out news coverage from a variety of sources including the Internet, newspapers, magazines and radio. Access alternative media as well as mainstream media outlets. If your children are reading about current events on the Internet, check out the sources of the information to ensure their credibility. Compare the coverage by Canadian, American and other international media. Talk about the differences in how various media approach the same event.

**Emphasize the importance of tolerance and respect.**

Explain that media coverage of world conflicts can trigger powerful feelings of fear and anger in people, which can turn into hate directed at certain groups of people. Explain how negative stereotypes can lead to simplistic and dangerous “good versus evil,” “bad guys versus good guys” perceptions. Point out that peaceful solutions to conflict are always preferable to retaliation and violence.

**Emphasize the positive things that may arise from traumatic events.**

Talk about how, after a tragedy, there is usually a shared outpouring of grief, concern for the victims’ families and admiration for the heroes. Traumatic events can make us pull together and talk about the importance of loved ones and the value of life.

**Take action to make a difference.**

Gandhi said: “Be the change you want to see in the world.” Helping people in your community or another part of the world can help minimize feelings of despair and helplessness. Let children choose their own course of action. They can volunteer at a local food bank, make a donation to a refugee support organization or write a letter expressing their concerns to the local newspaper.

**Journalism in a time of war**

Journalism After September 11 reflects the problems and perils of patriotic journalism, not just in the US but across the world. Reading Journalism After September 11 while watching journalism during the war on Iraq has been a surreal experience. The book, a collection of essays and papers analysing different aspects of media practice in the period after the terrorist attacks of 9/11, renews hopes for American journalism. Media coverage of what is variously known as the invasion of Iraq or the liberation of Iraq, depending on who is talking, revives fears for journalism everywhere in times of war and terror. The book, with its detailed and critical examination of media responses to the events of that historic day and their aftermath, holds up a mirror to journalists, reflecting in particular the problems and perils of patriotic journalism. It appears, however, that not many journalists are looking into that mirror, judging by the coverage of ‘Showdown: Iraq’, certainly on mainstream American television.
Indeed, patriotic journalism seems to have progressed or, rather, regressed into what is now being described — often in glowing terms — as ‘embedded journalism’. This new genre of what passes as journalism is the outcome of recent efforts by the United States of America’s Department of Defence, a.k.a. the Pentagon, to facilitate media coverage of the war by training journalists, assigning them to different sections of the armed forces, and enabling them to travel with the troops and report live from various battle-fronts.

The question of how credible such reports can be, when the journalists concerned are almost literally in bed with the soldiers, was the focus of some discussion on the US-based, hard-hitting alternative radio show, Democracy Now! on March 21, two days into the attacks on Iraq. As one commentator put it, with such correspondents increasingly being identified by television anchors in terms of the regiment in which they are ‘embedded’, it is sometimes difficult to determine whether the person facing the camera is a military spokesperson or a journalist.

For those in the media interested in learning important professional lessons from recent history, and for those outside the media keen to improve their understanding of how the media shape public opinion and policy, Journalism After September 11 is a must-read. As Victor Navasky, Publisher and media shape public opinion and policy, Journalism After the media keen to improve their understanding of how the professional lessons from recent history, and for those outside journalist, person facing the camera is a military spokesperson or a television anchors in terms of the regiment in which they are correspondent put it, with such correspondents increasingly being identified by television anchors in terms of the regiment in which they are ‘embedded’, it is sometimes difficult to determine whether the person facing the camera is a military spokesperson or a journalist.

The focus of the book is primarily on the coverage of 9/11 and subsequent events in the American and, to a lesser extent, British media, and it offers a predominantly Anglo-American view of this coverage. Most of the contributors, including the editors, are academics attached to schools of journalism and communication or departments of cultural or media studies in universities, mainly in the USA, although four are based in the United Kingdom, two in Australia, and one in Canada.

However, the thought-provoking questions raised in many of the essays can be readily applied to the media elsewhere, including India. As Navasky says, “Although many of the examples here are site-specific, the issues raised cross geographic, cultural and political boundaries.”

For instance, post-9/11 patriotic journalism in the US was and is different mainly in scale, style and intensity from the nationalist journalism witnessed in India after the mystifying attacks, allegedly by terrorists, on Parliament House in New Delhi in December 2001 and Akshardham Temple in Gandhinagar in September 2002, not to mention the infamous near-war with Pakistan over the peaks of Kargil a few years earlier. Similarly, issues concerning media ownership, convergence and consolidation, the resulting market-orientation of the media, and the effects of these realities on the practice of journalism are becoming increasingly relevant in India.

In fact, books like Journalism After September 11, and some of its illustrious predecessors (most of them also relating mainly to Western media), underscore the urgent need for more regular, systematic and rigorous analyses of the Indian media, especially during crises of various kinds, of which there is no dearth in the country.

Edited by Barbie Zelizer and Stuart Allen, the book covers a wide range of media issues through essays organised under four heads: The trauma of September 11, News and its contexts, The changing boundaries of journalism, and Reporting trauma tomorrow.

The issue of trauma — as experienced by citizens as well as journalists — which underlies the essays in the first and fourth sections, is a new contribution to analyses of journalism and the media. The rationale for adding this dimension to media studies is explained by the editors in their introduction: “In pondering journalism’s imperatives following the events that rattled the world, the book’s contributors consider the emergent capacity of those invested with helping to give the events voice. At the heart of the discussion is a notion not previously addressed in scholarship on journalism, namely that of trauma… it is our belief that journalists and news organisations covering the events of September 11 were wounded too… To consider (the) impact (of trauma) on the news media, as engendered by the events of September 11, is tantamount to glimpsing into journalism’s future. For it may be that we have entered a new period in which journalism in its recognisable form has changed, a period in which trauma and its aftermath will continue to constitute a key factor in shaping the news.”

While the varied and imaginative approaches through which a number of essays tackle this issue made them interesting enough, they did not engage me as much as those in the second and third sections did. One reason may be the apparently implicit assumption that this was the first time journalists had experienced trauma (defined as “a wide range of cognitive-emotional states caused by suffering and existential pain”) in the course of doing their jobs. For journalists in many parts of the world, including India, who have lived through and covered major natural and man-made disasters, or widespread and brutal communal (sectarian) and ethnic violence, not to mention different types of armed conflict, trauma is not a new phenomenon. Perhaps some acknowledgement of this reality and a more sensitive, inclusive understanding of diverse experiences of trauma as experienced by journalists across the globe would have made the discussion on trauma here appear less like self-absorbed navel-gazing.

On the other hand, it could be that I found the essays in Part 2 most absorbing because the issues they raised dovetailed with my own preoccupations vis-a-vis the media: the links between journalism and the social, cultural, economic and political contexts in which it functions.

In his essay, ‘American journalism on, before and after September 11’, James W Carey, CBS Professor of International Journalism at Columbia University, New York, offers a fascinating historical overview to explain journalism’s coverage of 9/11 and the developments thereafter, highlighting the fact that it had much to do with “the damage done to democratic political institutions during the 15-year vacation journalists took from politics, rationality, and the public sphere.” There are many lessons here for journalists everywhere concerned about the dumbing down of the media, the rise of celebrity and lifestyle
journalism at the cost of serious coverage of critical issues, and related matters.

Robert W McChesney, Professor of Communication at the University of Illinois, Urbana-Champaign, in his essay titled ‘September 11 and the structural limitations of US Journalism’, suggests that the American news media’s coverage of the political crisis following 9/11 was exceptionally problematic from a democratic perspective. According to him, the basic reason for the poor coverage was the code of so-called professional journalism, which tends to give “official sources” considerable influence over what was covered and how it was covered. Again, this is an issue that is relevant to journalism everywhere and needs to be more widely debated by media professionals across the world.

The third essay in this section, by Karim M Karim, Associate Professor at the School of Journalism and Communication, Carleton University, Ottawa, ought to be required reading for journalists in India and other parts of the world where ‘Muslim’ has virtually come to mean ‘terrorist’. Titled, ‘Making sense of the “Islamic Peril”: Journalism as cultural practice’, it argues that reporting on 9/11 and its aftermath fit into the cultural frames that have long been in place to cover violence, terrorism and Islam. According to Karim, “Recognising the fundamentally cultural nature of journalism enables journalists to uncover and utilise the cultural tools of understanding that make possible genuine insight into human nature. The rupture resulting from the events of September 11 presents a longer-term opportunity for turning towards more authentic coverage of the world.”

The essays in Part 3 are particularly interesting because they look at “some of the forms and practices existing at the margins rather than the centres of journalism.” In his essay, ‘Reweaving the Internet: Online news of September 11’, Stuart Allan identifies several issues concerning online reporting of the day’s tragic events. In ‘Taking it personally: Supermarket tabloids after September 11’, S Elisabeth Bird examines the newfound relevance of tabloids in the landscape of post-9/11 journalism. While she focuses on American tabloids, Michael Bromley and Stephen Cushion include both broadsheets and tabloids in their analysis of ‘Media fundamentalism: The immediate response of the UK national press to September 11’. Simon Cock’s ‘Television agora and agoraphobia post-September 11’, which examines the role of British current affairs programmes in facilitating and containing public debate and deliberation surrounding the events of 9/11 and their aftermath, is not only fascinating in itself but useful for a more informed viewing of current affairs programming on Indian television, especially popular shows on satellite news channels.

Conspicuous by its absence even in this section is any discussion of post-9/11 coverage of minority media in the US — for instance the African American press. From what I heard from African Americans I met in early-2002, their community had quite a different and more complex take on the terrorist attacks, the patriotic fervour it generated, as well as the hate crimes against other minority populations that it led to. It would have been interesting to find out whether these privately expressed views were reflected in the media reaching out to the community.

The essay, ‘Journalism, Risk and Patriotism’ by Silvio Waisbord in Part 4 has an illuminating account of media coverage of the anthrax scare that followed the September 11 attacks, providing convincing arguments about why the panic-mongering media coverage of the early days subsided once it began to appear that the terrorist, in this case, was home-grown. According to him, once official sources seemed to lean towards the hypothesis that domestic perpetrators were behind the attacks, “The media could no longer render an account that fitted, in Michel Foucault’s sense, the ‘regime of truth’ in place since September 11. At a time when patriotism was still pervasive, indications that fellow members of the nation apparently sent anthrax-laced letters flew in the face of the ‘united we stand’ patriotism that the media helped to perpetuate.” Could a similar phenomenon be in operation in the apparent lack of interest in probing the continuing mystery of the murderous arson in Godhra last year?

Journalism After September 11 certainly raises many important questions regarding what journalism can and should look like. As Phillip Knightley, author of The First Casualty, has put it on the back cover, “This is not a book just for journalists but for everyone concerned about democracy, freedom of speech and our future.”

Radio News Coverage of D-Day

The following is an excerpt from News on the Air by Paul White of CBS News.

In anticipation of “D-Day,” four-network conferences among the various network news directors . . . together with Army public relations officers . . . were weekly and semiweekly occurrences. Our Army-installed and operated circuit to London passed through all four network offices. In that way everyone knew the business of everyone else. It was customary for one of us in New York to take down and pass along important messages to our rivals; the same thing happened in London. In the height of the excitement “pool” broadcasts—those available to all networks—were the rule rather than the exception. The teamwork and sportsmanship were, in a word, magnificent.

All of us knew, of course, that the invasion of continental Europe from the west was coming. The only question was when. The preparations were of all types—covering personnel, technical installations, advice to everyone who might possibly be concerned. Late in February I sent out a memorandum which said in part:

Military experts have warned us that a frontal attack on Hitler’s fortress may cost a record number of casualties. But bad handling of the news may cost plenty of casualties, too, either because the workers at home may believe prematurely that the war has been won and take it easy, or because they worry unnecessarily and are not able to do their jobs. Accordingly, as far as Columbia is concerned, let’s stick to these few general instructions:

1. No matter what the general tenor of the news, keep an informative, unexcited demeanor at the microphone.
2. Give sources. Be sure to label every report that is not officially released. Recently there have been at least two instances where this practice has paid off. One was at the Anzio Beachhead, where German claims of victory proved to be unfounded. The
other was at Truk, where the Japanese tried to make the world believe that American forces had landed. As a rule of thumb, let us in every case “lead” with the latest Allied communiqué or report from one of our own correspondents and then, if there are contrary reports either from enemy or friendly sources, label them and subordinate them. It cannot be emphasized too strongly that accuracy should never be risked for the sake of a prospective “beat”.

Should the flash come between 2:00 AM and 5:00 AM on weekdays, call Master Control. Order up the network. A recorded program of music is set to run for 55 minutes; cut in and out of it as you wish . . .

Call all key personnel. Miss Gauss [my secretary] will check on arrangements for delivery of coffee to news staff.

Advise the AT&T and RCA to set up monitors for us on their London circuits . . . In addition to the London circuits, we will have an Army Signal Corps circuit from London (handled through the AT&T) and known as “FAX”. This circuit will not begin to function for us until the invasion has actually begun, but thereafter we will maintain a constant 24-hour monitor on it in Studio 9. Most of our coordination messages will be handled over FAX. But if the West-to-East FAX circuit is tied up when we want to get a service message to London, we can send such a message through the War Department Signal Center in Washington . . . 50 words . . . address “ARL 470 FOR RELAY TO MOI.”

In addition, keep a constant monitor on BBC through an extension from the short-wave listening post. The listening post is to be fully manned. Attached you will find a list of foreign expert-consultants in New York, to be called at any hour, day or night. Inside the cabinet was a microphone attached to a good deal of wire that would stretch to a view of any of the 13 automatic printer machines in the newsroom, or any of 5 other machines linking us with cable companies in the adjacent network traffic office. There was also a switch. At any time that switch was depressed a fraction of an inch, the entire network would be shunted aside and that microphone would become the main-line express. All intermediate controls would be abolished and whatever was said into that “flash mike” would have the complete right of way.

Representatives of advertising agencies were called in and told our plans, were asked to have special “D-Day” scripts available in case their programs weren’t cancelled out. On June 1, this communication went out to all affiliates: Confidential and unpublishable. Beginning tonight, June 2nd, and nightly until further notice, we will operate our full network until 3:05 AM EWT. The decision to start this overtime operation is not based upon any military information, but it will provide additional protection to you in case extraordinary news does develop.

Monday, June 5, was quiet, and no news of any possible invasion had leaked. Actually, I went to bed that night with a pretty fair idea I would have a good night’s sleep. The War Department had told me that Ed Murrow had been selected as the radio voice to read General Eisenhower’s proclamation, and that night at 6:45 PM EST (which was 12:45 AM on D-Day itself in London) I talked with Murrow on a two-way “cue channel”. These conversations are not usually heard by the general public, although at the time all conversations were listened to carefully by censors in New York and London.

Mindful of this censorship and still trying to get a hint from Murrow, I said:

“Well I suppose I may be talking with you later tonight.”

“No,” he said, “I’m pretty tired and planning to get to bed early.”

That was enough for me. I told the staff it was improbable we would get any action that night, and I went to my hotel room two blocks away from the studios prepared to do some sleeping while the sleeping was good.

But the sleep for a good many hours came ended violently at 12:37 AM. The AP machine carried a bulletin that began: New York, June 6—(AP)—The German transocean news service has announced that the Allied invasion has begun.

Jesse Zousmer, the editor on duty, dialed extension 694—my hotel room was on the inter-office communication system in order to by-pass switchboards and thus save precious seconds—and told me the news. I said I’d be over within 10 minutes. Then still tieless but otherwise dressed, I called him back.

“Any confirmation?” I asked.

“Nope” said Zousmer, “but INS is now carrying the German report, too.”

“Oke,” I said, “put it on the air.”

Ned Calmer, who had finished his own day’s work at the microphone, but had stayed on to write a script in French for the Office of War Information, sauntered into the newsroom just as Zousmer hung up. Calmer said later he had never seen anybody as frightened as Zousmer. There was no announcer on hand at the time, and Zousmer was about to make his debut on the air with one of the most important stories of all time. “What in the hell is the matter with you?” Calmer asked. “You look like you’re going to sneeze or die.”

Zousmer held out a trembling hand.

“Here,” he said, “put this on the air.” And these were Calmer’s first words into the microphone:

We are interrupting this program to bring you a special bulletin. A bulletin has just been received from the London office of the Associated Press which quotes the German Transocean News Agency as asserting that the invasion of Western Europe has begun.

This report—and we stress it is of enemy origin with absolutely no confirmation from Allied source—says that American landings were made this morning on the shores of northwestern France.

There is as yet no reason to believe that this report is anything more than a German propaganda move or a fishing expedition for information. You will recall that Prime Minister Churchill warned us not long ago that the actual invasion would be preceded by feints and diversions. Nevertheless, until confirmation or denial of this German report is forthcoming,
the CBS World News staff is standing by and will bring you developments as reported.

Thereafter both Calmer and a hastily summoned announcer, Ed Darlington, kept putting on news at intervals, carefully qualifying every German report. I arrived in the office, called Washington on the 24-hour-a-day private telephone that linked the New York and Washington offices, and tried to see if there were any sign of confirmation. No word except that “more lights than usual are on at the War Department” and that some public relations officers could not be reached at their homes. Presumably, they too had been routed out of bed.

Zousmer was still on the telephone, as were others of the overnight staff, calling in the personnel necessary for the night. Soon after 1:15, fearful that some of the stations might be planning to leave the air, I had Darlington tell the public (and the stations themselves) that we were planning to stay on the air all night, regardless of whether the news was confirmed. Then I tried all available circuits to London. I pressed button after button, hauled over the small microphone on my desk, and kept up a monotonous chant, “Hello London . . Hello London . . CBS New York calling London . . Hello London.” No answer.

Then the short-wave listening station picked up a clue. The BBC in London, speaking to Europe, was overheard to tell citizen who lived along the Atlantic coast within 18 miles of the beach to stay off roads and railways and bridges . . It was still more bewildering when, from somewhere, came a report that the invasion was in the vicinity of Cherbourg, and a few minutes after that the BBC started warning Dutch listeners in their native language. Some or all of this was certainly a smoke screen. We simply couldn’t be attacking all the way from Cherbourg to Holland.

At 3:07 the loud bell rang on the War Department special phone. This, I thought, was it. I picked up the phone only to hear an unidentified voice saying the War Department was making a routine check of the circuit.

“Come in, one at a time, all network,” said the voice.” Give the name of your company and your own name.” Four frantic persons in four frantic newsrooms answered the roll-call.

“Thanks,” said the voice. “When are you going to have anything definite?” I asked. “Get back to you later. Good-bye,” said the War Department.

The coffee and sandwiches had arrived. One of the first persons called that night was a caterer. Trout talked on and on. The minutes were lumbering tortoises hanging with all their weight to the red second hand of the clock. Then, at 3:27 the War Department bell clanged a single, long imperative. Once more, a roll call. Then said the voice:

“Stand by for an important message over the FAX Army Signal Corps Channel at 3:32:00. Repeating, stand by for an important message over the FAX Army Signal Corps Channel at 3:32:00. Come in and confirm please.”

We all confirmed. I wigwagged to Trout to give his microphone to Major Eliot, and let the later talk for a few minutes. Then I explained to Trout that he was to switch to London at 3:32:00, but not to say anything about the War Department’s call before switching. Enemy ears might be listening and if, in fact, there were no invasion, I didn’t want anyone tipped off ahead of the announcement.

There was time to tell Jimmy Sirmons of network operations what was going to happen, and he in turn told the control room. Someone popped his head in the door and said the phone company had reported all 143 stations still on the air and waiting. I nodded and watched that red second hand. I vaguely heard Trout, who had taken back the microphone from Major Eliot. Just ahead of 3:32 there came the words, “And now, for a special announcement, we take you to London.”

One second. Two. Three. Four. At five seconds after the minute the senior public relations officer of SHEAF, Col. R. Ernest Dupuy, began to speak. In 26 words he tells the story: “Under the Command of General Eisenhower, Allied Naval Forces, supported by strong Air Forces, began landing Allied Armies this morning on the northern coast of France.”
LESSON: 16
MUSIC, SPOKEN WORD TALKS, DISCUSSIONS, RADIO-PLAYS AND FEATURES.

Objectives
Programme Composition

News, music and spoken work programmes constitute the three major pillars of AIR's programme composition. Music includes classical, folk, light, devotional, film and western music programmes.

Talks, discussions, interviews are regularly arranged to provide a forum for all shades of opinion on outstanding national and international issues. While some of the programmes are arranged for being relayed by a number of stations, a much larger number are presented by individual stations in their respective languages.

Radio drama is also an important ingredient of AIR's programme and figures both in its general programmes as well as in the programmes for specific groups. Radio features and documentaries are other formats, which employ the entire range of audio formats in a single programme, e.g., narration, music, drama, interviews, poetry, sound effects, etc.

Programmes for rural listeners are broadcast from almost all AIR Stations in different languages and also in local dialects to provide educational and informational support to agriculture and rural development programmes.

Special programmes for women are broadcast from all stations of AIR. These programmes are directed to housewives and working women. Though these programmes provide items of information and of educational nature, as also entertainment. Programmes on health, family welfare, household chores, nutrition and problem of working women are broadcast.

The programmes for children are broadcast for tiny tots and also children up to the age of 14 years.

Educational programmes of AIR cover a wide spectrum, primary, secondary, tertiary and university levels. Enrichment programmes are also broadcast for teachers.

Programmes on sports are very popular with the listeners and these constitute an important feature of AIR's programmes. All the important sports events of international, national, regional and local levels are given due coverage through running commentaries, despatches and radio reports. Apart from two 5-minute daily news bulletins, AIR also broadcasts two half-hour sports magazine programmes.

Yuva Vani caters to the needs and tastes of the youth in the age group of 15-30 years. These programmes are in different formats such as talks, discussions, interviews, plays, features, music etc., and are produced and presented by the youth and for the youth. Delhi, Calcutta, Hyderabad, Jammu & Srinagar Stations have separate Yuva Vani Channels.

Programmes for the senior citizens (aged people) are being broadcast from 17 capital stations for a duration of 30 minutes every week.

Programmes for industrial workers are being broadcast from around 40 stations of AIR in regional languages for a duration ranging from 20 to 30 minutes, two to seven days a week.

Interactive broadcasts like the Phone-in-Programme, Radio Bridge and Voice Mail, apart from people's forum programmes, are recent innovations in broadcasting. In the Phone-in-Programme, people telephone to the broadcasting station on a given telephone number at the time of broadcast and ask questions and the experts at the broadcasting station reply to their queries immediately. The entire communication is simultaneous.

Voice Mail is another service facility, where people can telephone and record their requests, complaints, suggestions and appreciation, etc. These messages are later retrieved and played back in a special Voice Mail programme with suitable replies to their queries.

'Radio Bridge' is a programme on special occasions and is broadcast live by uplinking AIR stations through satellite. It presents a live interaction among the participants including listeners in different parts of the country. Presently 20 AIR stations have uplinking facility.

Using the satellite facility AIR has made provision for 20 radio channels for cable distribution. The system became operational on April 1, 1994 to enable the subscribers to receive the Sky Radio Channel on their domestic FM receivers.

'Radio Paging' - FM Radio broadcast technology has an advantageous feature. It has got some vacant space in its allotted frequency band, where it is possible to inject additional signal in the form of data on sub-carriers. This data can be conveniently utilised to disseminate value added service like public utility information and education information, etc., in addition to the main programme (stereophonic and monophonic). A major application of the additional data service injected in the FM broadcast channel known RDS is radio paging. As the radio paging service would provide alert

...
signals, emergency calls, valuable information etc., the service will be highly useful for medical professionals, business executives, commercial applications, and emergency services. For the operating services, All India Radio has appointed licences/operators at 17 centres, where AIR has FM transmitters.

Vasumathi Has Been Performing Both Music And Dance On Various Stages And Festivals Throughout India. Vasumathi Has Toured Widely In Asia Pacific And Europe And Has Given Several Performances And Lecture-Demonstrations In France, Austria, Italy, Switzerland, Singapore And Thailand.

Vasumathi Has Also Produced And Presented Several Culture-Based Features, Talk-Shows, Panel Discussions For The Radio And Television.


List Of Certain Major Performances

<table>
<thead>
<tr>
<th>Location A</th>
<th>Location B</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Centre For The Performing Arts, Mumbai</td>
<td>Serangoon Music Circle, Singapore</td>
</tr>
<tr>
<td>Universite Stendhal, Grenoble, France</td>
<td>Ganakala, Vashi, Mumbai</td>
</tr>
<tr>
<td>Indian Association Of Grenoble, France</td>
<td>Cls World Conference, Phuket, Thailand</td>
</tr>
<tr>
<td>Music Triangle, Mumbai</td>
<td>Ahobila Mutt Music Festival, Mumbai</td>
</tr>
<tr>
<td>Fine Arts Society, Chembur, Mumbai</td>
<td>India International Centre, New Delhi</td>
</tr>
<tr>
<td>Vienna Indian Cultural Association, Austria</td>
<td>East Delhi Music Circle, New Delhi</td>
</tr>
<tr>
<td>“Know Your Notes” - Music Appreciation Programme, All India Radio, Mumbai</td>
<td>Kartik Fine Arts, Madras</td>
</tr>
<tr>
<td>Nagpur Fine Arts, Nagpur</td>
<td>“Saga Of The Raga” - An Illustrated Feature On Raga In Indian Music, All India Radio</td>
</tr>
<tr>
<td>Bharatiya Music &amp; Fine Arts Society, Mumbai</td>
<td>Hamsadwani Annual Music Festival, Madras</td>
</tr>
<tr>
<td>Lions Club, Poona</td>
<td>Kapali Fine Arts, Madras</td>
</tr>
<tr>
<td>Bhakti Kala Kshetra, Mumbai - “Leela Gopalam”, A Special Thematic Dance Presentation On Lord Krishna</td>
<td>International Percussive Arts Centre, Bangalore</td>
</tr>
<tr>
<td></td>
<td>Swami Haridas Sammelan Festival, Mumbai</td>
</tr>
<tr>
<td></td>
<td>Saraswathi, Madras</td>
</tr>
<tr>
<td></td>
<td>The Famed Cinematheque De La Danse, Paris, Has Filmed Vasumathi &amp; Her Music As Part Of A Film</td>
</tr>
</tbody>
</table>

NOTES:
LESSON:17

SPECIFIC AUDIENCE PROGRAMMES;FOR CHILDREN, WOMEN.

Objectives

Programme for Specific Audiences

Unlike music, plays, news, features, talks and discussions which are aimed at listeners in general, there are several programmes which are directed to specific audiences, like villagers students, women, children, tribal people, industrial workers and members of the armed forces. In this and the next two chapters we shall deal briefly with these and also with subjects like Vividh Bharathi, religious broadcasts and anniversaries, sports commentaries, election broadcasts, science programmes and publicity for social welfare projects.

Programme for women and children

For reasons, which are not always clear, but can only be guessed at, these two programmes have always been talked about or organised at the stations, together. It could be that mothers have (or should have) an encouraging hand at home, getting little boys and girls to listen to the generally varied and interesting fare put over for them. In the Report on Broadcasting (1940), there is no mention about either of these programmes, which indicates that these must have been introduced in a regular way only after March 1939. However, Awasthy is probably right when he says in his book that the programme given by the Madras Corporation from its station from April 1, 1930, for primary class students in Tamil, could rightly be called the earliest children’s programmes. Most old AIR hands called the earliest children’s programmes were the first to be started, and were given on Sunday mornings, and that there were almost always several kids present in the studio itself as an audience.

These proved quite popular, and there was a sizable fan mail with many requests for being allowed to sit in the studios to watch and listen while the programme was on. These broadcasts were usually compered by stock characters like ‘bhaiyya’ (elder brother), or ‘didil’ (sister) who became identified with the little listeners as part of their families. At North Indian Stations like Delhi, Lahore, Lucknow and Peshawar these comperes were also called ‘Khala’ (auntie) and ‘mamoon jan’ (maternal uncle).

It was decided in the Station Directors’ conference held in 1950 that the children’s programme should henceforth be for two age groups, the other ones of about 8 to 14 years, and the younger ‘tiny tots’ of around 4 to 8 years, but these limits were never clearly indicated. P.C. Chatterji has commented in ‘Two Voice’ on the need to carry out studies to examine how the content and the style of the presentation of programmes for the two age groups should differ, and to determine the best duration for each item (to avoid tiring the children whose minds are prone to wander off unless the programme is very interesting) and what element of repetition there should be in each broadcasting so that clear impressions are left on the young mind.

In 1959 it was decided, wisely according to this writer, that such programme need not be presented by children. The most important thing is that the programmes should be ‘for children’, and nothing much is to be gained by making these also ‘by children.’ Experience and personal observation seem to suggest that children like a ‘father’ or ‘elder brother or sister’ figure to be conducting the programme and holding it together. Also, if there is advice or guidance to give, the young ones will take it more readily and naturally from one who is senior to them, and whose voice carries a measure of authority.

The quality and effectiveness of the programmes for children has always depended upon the personality, imagination and the interest taken by the Programme Assistant(Executive) or the Producer and how successfully he is able to enlist the co-operating of those writers and speakers who have a flair for communicating with children, and to encourage them to keep up a steady flow of fresh ideas and ways of presentation. It would seem appropriate to close this section with a quotation from the Verghese Group Report: “We would feel that the children’s Programme merits the greatest attention and the very best production talent. This is where cultural tastes can be influenced and interests awakened in the world around.”

Women’s Programmes

Although the need for special programmes for women was not felt as spontaneously as those for villages, school students and children when All India Radio first started operating, it became evident gradually that these could serve a useful purpose, especially in the Indian context. In most of our homes there is only a limited amount of time when, with men away to work and children away to school, women can be free for a while from cooking and other domestic chores. Apart from that, women do have certain areas of special interest which need catering to although it has been argued sometimes that forming, as they do, almost half of the population they should be able listen to and benefit from the general programmes of entertainment and education, as men do.

At the moment all stations broadcast one or more such programmes every week, the usual duration being around 30 minutes. Multilingual stations like Mumbai have separate programmes in Marathi and Gujarati. Delhi puts over five of these in a week from 12.30 to 1.05 p.m. of which two (Wednesday and Fridays) are directed to women in neighbourhood villages within the station’s reception range, and such homes in the city where the families have lately migrated from villages and small towns, and not yet become quite urbanised in their ways.

In the programmes, usually compered by one or two women on the station’s own staff, the emphasis has
implies that the first step in launching a programme is to ensure
have encouraging response. It is strange that AIR should put
inadequate listening arrangements the programmes did not
any listening. In its memorandom AIR says that because of
in the surveys conducted at some of the Centres to have hardly
stations either daily or on three or four days a week, were shown
using their own musical talent.
these broadcasts is the programme presented by various Units
planning their post retirement years. An interesting feature of
regulation, family benefits, careers for their children and help in
information sought by officers and men about rules and
of entertainment, these programmes are very useful in giving
very welcome to those in isolating posts without other means
2 hours a day. A part from providing light fare which would be
now from 14 stations, varying in duration from 30 minutes to
up with their children at school, so as not to be treated by the
latter as ignorance. In the field of adult education too, therefore,
women listening at home have a very vital part to play in the
society.

For the Forces

These were first started from the Delhi Station during World
War II when, for certain periods, entertainment use to be
broadcast for British soldiers serving in this country. For the
American soldiers based on our soil, the U.S.authorities had set
up their own broadcasting studios and transmitters.
The Troops Programme is in Hindi and is broadcast
now from 14 stations, varying in duration from 30 minutes to
2 hours a day. A part from providing light fare which would be
very welcome to those in isolating posts without other means
of entertainment, these programmes are very useful in giving
information sought by officers and men about rules and
regulation, family benefits, careers for their children and help in
planning their post retirement years. An interesting feature of
these broadcasts is the programme presented by various Units
using their own musical talent.

Programmes for Industrial Workers

The Chanda Committee said in its Report that the
Programmes for Industrial Workers broadcast then from 18
stations either daily or on three or four days a week, were shown
in its surveys conducted at some of the Centres to have hardly
any listening. In its memorandum AIR says that because of
inadequate listening arrangements the programmes did not
have encouraging response. It is strange that AIR should put
forward this explanation in extenuation. Proper planning
implies that the first step in launching a programme is to ensure
that the complementary steps for creating suitable facilities and
aids for listening have been taken.
The position is no better today after almost two
decades. The number of stations putting over these
programmes has gone up somewhat, the latest addition being
Jaipur with a 30-minute weekly programme inaugurated on
Gandhi’s birth anniversary on October 2, 1981. The Delhi
station gives only one 15-minute programme there is a
consultative panel to help Akashvani plan these programmes.

Yuva Vani

There could not be many other broadcasting
organisations, in the world which have a separate channel for
programmes for the young people as AIR has. This
programme ‘Yuva Vani’ (The Voice of Youth) started from Delhi
on July 21, 1969 which was also by coincidence the day on which
man first landed on the moon. It was for 6 hours a day, in two
transmissions, in both Hindi and English, on the Delhi D
channel.
Inaugurating it, the Prime Minister, Mrs. Gandhi
said: ‘Young people everywhere have a feeling of unrest. They
have a feeling that something is wanting. They do not know
what it is. But they are groping for it. I welcome this groping.
Sometimes it takes strange directions, strange forms which we
who are older do not understand. But that does not give us
the right to reject these forms because out of such groping in
earlier we have become, or the world has become, what it is
today…. Radio can influence the young people and give them
the feeling that they are not a ‘problem’ but participants in the
country’s decisions’.
The basic philosophy of this new venture was that
young people (over 60% of our population being below 20
years) needed on outlet for self expression. AIR’s annual
reports to the Ministry, in the form of ‘budget brief’ for the
year 1974-75 said: “Yuva Vani caters to the age group 15+ to 30
years. This is a spectrum of several sub-groups 15+ to 17, 18 to
20, 21 to 24 and 25 to 29 years. Yuva Vani caters to all these
groups through their involvement and participation in the
programmes.”
The claim about the sub-groups sounds a little too
elaborate and fanciful today, a decade later, but Yuva Vani has
tried to encourage young talent by giving them a somewhat
freer hand to producer programmes and also by making the
audition procedures simpler than in the general service. In the
early years especially quite a number of people showed an
adventurous spirit and initiative, and some of them late joined
AIR staff on the basis of experience thus gained. Programmes
like ‘Firing Line’ were indicative of a promise which
unfortunately was not fulfilled to the degree expected. The
success achieved by ‘Echoes of a Generation’ by Ramu
Damodran, which won the ABU prize in 1977 has yet to be
repeated.

Programmes for Tribals

AIR Broadcast spoken-word and music programmes
in about 165 dialects from 53 stations. Over 100 of these are
tribal dialects, the rest represent local variations of the main
regional language of the areas, such as Bhojpuri and Magahi

69
Rural radio programmes promote Special Programme activities in Burkina Faso

Farmers and their families are both the main actors in FAO's Special Programme for Food Security (SPFS) and the key audience for information about its goals and methods. In Burkina Faso, where the Special Programme has been in operation for three years, they have also become the principal actors and audience for an information campaign using the medium that has the greatest outreach into remote farming communities - rural radio.

A local radio station - Radio Bobo - has been working with village residents and SPFS staff to gather information about the lives, work, and aspirations of rural families and to raise public awareness of the Special Programme. Eleven half-hour programmes have been made - including game shows focusing on SPFS activities, as well as open discussion of problems faced by farmers. The programmes are being broadcast weekly.

Banzon, west Burkina Faso: a local language radio producer interviews a member of the farmers’ cooperative

FAO communication expert Jean-Pierre Ilboudo, who participated in the programmes, said, “There was tremendous enthusiasm. At every site, the whole village - youth, women, men, elders - gathered to participate in the programme. Everyone wanted to express themselves, to be listened to. It was a major event for the village - like a feast day.”

Burkina Faso - a landlocked country partly taken up by the Sahara in the north - is a low-income food-deficit country (LIFDC). Despite arid conditions and erratic rainfall, agriculture is the population's main source of employment, food and income. The major objective of SPFS activities in Burkina Faso - at the seven pilot sites - is boosting rice production.

Technological production packages for three distinct types of rice cultivation - irrigated rice, rainfed rice and lowland rice - have been developed by SPFS staff in collaboration with farmers’ groups. These packages include seeds for improved varieties, advice on techniques of cultivation, tools and equipment, video demonstrations and, where appropriate, fertilizers. Maize is also being introduced as a new crop under the diversification component.

Each pilot site has been equipped with a treadle pump so that farmers can grow irrigated vegetables in the dry season, which lasts from November to July. Cabbages, tomatoes, onions and chilli peppers are the main crops and are grown both for family consumption and marketing.

Programme staff are working with farmers’ cooperatives at the seven sites, providing training and using participatory techniques to analyse - and where possible resolve - constraints faced by farmers in their fight to provide their families with an adequate diet, increase productivity and boost incomes. The radio programmes, which were funded by FAO, serve several purposes - promoting discussion among farmers, gathering information necessary for effective programme planning and raising awareness about the Special Programme among radio listeners across the country.

One major problem that limited rice production was lack of threshing machines, which made it difficult for farmers to process and sell their rice. To solve this, the farmers’ cooperatives have organized group savings and approached private sector suppliers for loans.

Suggested Readings
2. Baruah U.L. This is All India Radio: A handbook of radio broadcasting in India. New Delhi, Publications Division, 1983.
LESSON: 18
EXTERNAL BROADCASTS, RADIO COMMENTARY ON EVENTS A CASE STUDY OF VIETNAM

Objectives

VIETNAM: A NEW BROADCASTING ERA

Much of the technical background for this story was gleaned from a three week trip to Asia in June 2000. The nine-day Vietnam sector commenced in Ho Chi Minh City, and concluded in Hanoi, and I travelled by mini-bus, ferry, car, taxi, cyclo, boat, aircraft, and on foot. The trip was an escorted tour undertaken with a small group of Australians, during the hottest period of the year, with daytime maximum temperatures around 40 degrees C, and evening temperatures falling only occasionally below 30 degrees. Humidity was extreme, running between 90 and 95% for most of the journey. Monitoring was carried out with the small Sangean ATS808A portable receiver, using 3 metres of antenna, from Ho Chi Minh City, Hoi An (near Da Nang), Hue, Ha Long Bay, and Hanoi. Additional monitoring was from Eastern Malaysia (Kota Kinabalu and Sandakan), and in Peninsular Malaysia (Langkawi Island, Kuala Lumpur).

HISTORICAL PERSPECTIVE.
The date of April 30, 1975, will long be remembered by many. It was on that day that Saigon fell, and some of us will recall the graphic TV images of Russian talks forcing down the gates of the Presidential Palace, and of the last helicopters leaving from the roof of the US Embassy. That day marked the demise of South Vietnam and its government. General Duoung Van Minh, South Vietnam’s President for just 24 hours, surrendered to the Northern forces minutes later. In the quarter century since, Ho Chi Minh City has emerged from the ruins, and flourishes as the contemporary commercial capital of Vietnam. The Presidential Palace has been preserved and maintained, known as the “Reunification Hall”, and is now used mainly for ceremonial functions. I visited this building, and the basement contains Nguyen Van Thieu’s (president from 1967-1975) War Operations Rooms. The rooms have the original floor to ceiling maps and charts, showing in enormous detail the location of military assets and population distribution. Adjacent are other preserved offices, in which there is an astonishing collection of 1975 communications equipment on view: this includes rack-mounted HF transmitters, receivers, teleprinter facilities, telecommunications and telephone gear, switchboards, antenna couplers, and power supplies, just as it was during the regime.

The Socialist Republic of Vietnam is an S-shaped country, with Ho Chi Minh City at the south, and the capital, Hanoi to the north. Ho Chi Minh City is bordered by the Saigon River to the east and a flat plain stretching as far as Phnom Penh in Cambodia, 245 km to the west. About 100 km to the southwest is the Mekong Delta, one of the richest rice-growing areas of the world, where it widens as it enters the South China Sea. Vietnam’s population is about 75 million, with some 3 million resident in Hanoi.

The country has about 1000 km of coastline, reaching to the southern border of China. It is only 100 km from Hanoi to the Chinese border, and a further 1900 km to Nanning, the capital of Yunnan Province.

Vietnam is extremely ethnically diverse and complex, with the Vietnamese forming by far the largest group, comprising almost 90% of the population. There are some 54 ethnic groups throughout Vietnam, as well as the Viet Kieu - Vietnamese living abroad. It is believed that the Vietnamese peoples originate from immigrant groups from southern China.

The official language is Vietnamese, part of the Viet-Muong subbranch of the mon-Khmere (Austro-Asiatic) language family. It is a tonal monosyllabic language written with a Roman script with tonal markings, developed by Jesuit missionaries.

Vietnam has at various times been influenced by Confucianism, Taoism, and Mahayana Buddhism. These have been combined, “Vietnamised” and added to indigenous animist beliefs to form Vietnamese folk religions which is followed across all sectors of society, traditional animist beliefs are still held by many tribal peoples.

Vietnam was a French colony from the mid 1880’s, and in the 1940’s, even though France fell to the Germans in WW2, an agreement with Japan enabled the French to continue their administration of Vietnam. In August 1945, Ho Chi Minh, the founder of the Vietnamese Communist Party and of the Viet Minh, declared Vietnam a Democratic Republic. In July 1954, the French and Vietnamese agreed to partition the country into two states at the 17th parallel. The northern half was known as the Democratic Republic of Vietnam, in the hands of Ho Chi Minh, and the southern half was the Republic of South Vietnam, led by the anti Communist Dinh Diem.

The country was devastated by civil war from 1953, with the US being drawn into the conflict in 1963. The American presence, in support of the south, reached a staggering 543,000 in early 1969.
The last American combat troops left Vietnam in 1973, and in April 1975, victorious NVA forces arrived in Saigon. In July 1976, the Socialist Republic of Vietnam was founded, and close to two million people fled Vietnam either by land through Cambodia or by sea as “the boat people” to escape the new regime's economic policies and reprisals.

Some 1 million hectares of land was laid waste by American bombings, by the use of defoliation agents, concentrated attacks by B52s, and napalm, in an attempt to eradicate the Viet Cong guerilla movement, which had set up an enormous network of tunnels and underground living areas across the country. Much of Saigon was totally destroyed.

**BROADCASTING DEVELOPMENT.**

During the 1950's, HF external broadcasting from Saigon was via Radio France Asie, The Voice of France in the Far East, which was widely heard worldwide with programming in English and several other languages. Its operations were sanctioned by the Franco-Vietnamese Convention of 1949, which allowed it to broadcast on Vietnamese Territory. It closed down on February 27, 1956. From 1956 to 1975, broadcasting in the Republic of Vietnam was through the state-run VTVN, which maintained an extensive network of local, regional, and external broadcasting facilities.

In the same era, broadcasting from the north originated from Hanoi, which included external, local and provincial services.

**BROADCASTING ACTIVITY.**

The government-operated broadcaster is Dai Tieng Noi Viet Nam (TNVN - Radio The Voice of Vietnam), part of the Vietnam Radio and TV Commission, and its origins can be traced back to August 1945, just before the declaration of independence in September of that year. Its studios and administration centre is in downtown Hanoi, at 58 Quan Su Street, operating from a nondescript building not far from the French Embassy.

TNVN has a number of MF, VHF, and HF stations, located in Hanoi and regional centres. The networks originating from Hanoi are:

- **Channel 1:** Vietnamese, Khmer, H'mong, and Ede - news, current affairs and music, 18 hours daily, on MF, VHF and HF
- **Channel 2:** Vietnamese, Khmer, H'mong and Ede, economic, cultural, social, literature, art, and educational programs, 18 hrs daily, MF and HF
- **Channel 3:** Vietnamese, VHF only
- **Channel 4:** H'mong Network. This service is part of the ethnic minority service, on HF only
- **Channel 5:** English, French, Russian and Vietnamese, news and music for foreigners in Vietnam. This operates on 105.5 MHz, from Ha Noi, Ho Chi Minh City, Hai Phong, and Vung Tau

Channel 6: This is the External Service, designated as the Voice of Vietnam International

**PROVINCIAL STATIONS.**

These are located in many centres, using MF, HF and VHF, and their output includes relays of the National Networks from Hanoi, or locally produced programming.

**LOCAL BROADCASTING ON MF AND VHF.**

There is a progressive shift from MF to VHF. A number of main cities have coverage on MF and VHF of the National Networks 1 and 2, and some have their own Provincial services. Some transmitters are dedicated exclusively to either Network 1 or 2, others carry relays at various times, others have a mix of these networks. Most MF services are clustered towards the bottom end of the band, generally below 1000 kHz, and this arrangement was introduced in the 1960's, when many 50/100 kW MF transmitters were brought on line by the Republic of Vietnam Government. This was similar to the frequency distribution matrix which had been introduced for MF stations in the north.

Operation at the low frequency end of the MF band is no accident, being intentionally arranged to optimise long distance coverage during daylight hours. Frequencies used today by many existing stations are identical to channels in use back in the 1960s, taking into account the slight adjustments made as a result of Region 3 (Asia/Pacific) moving to 9 kHz channel separation in the late 1970s.

The MF and VHF bands are sparsely populated. There are no “private” or “commercial” stations authorised, and transmissions are limited to the National Networks 1 and 2, and Provincial services. In several places, broadcasts from neighbouring provinces are audible during local daytime on MF, and even on VHF, due to the relatively short propagation distances. MF transmissions from China, Laos, Cambodia, Taiwan, Philippines, and Singapore are also audible during the day, for propagation distances of up to about 200 km. In Hanoi, only six VHF stations were audible. In Hoi An (near Da Bang) only two local MF stations were audible during the day, carrying the National Networks 1 and 2. In Ho Chi Minh City and Hanoi, five MF stations were available during the day at each locality. Vietnamese frequency planning provides for multiple transmitters on the same MF and VHF channels, at various towns and cities, carrying the same network.

From late afternoon and continuing throughout the evening, the MF band becomes a cacophony of sounds, with every channel occupied by at least one station, from virtually every country in Asia! As the evening progresses, and the terminator extends to the west, stations in Siberia, India, the Korean Peninsula, Pakistan, and the independent Central Asian republics become audible.

**HF RELAYS.**

There are five high powered HF transmitters on the air continuously from 2200-1600, using 5925, 5970, 6020, 7115 and 7210, carrying relays of the National and Provincial Networks.
These transmitters, and their associated antennas, are believed to be relatively recent installations, as frequency stability, signal effectiveness, and modulation quality are assessed as very good. For many years, transmitters carrying relays of the Domestic Services had previously operated on a variety of out-of-band, oddball channels above 10 MHz such as 10044, 10068, 12035, 15012, 10225 and 10020, but those facilities have been diverted to jamming of the Vietnamese broadcasts emanating from Radio Free Asia. Frequencies in use for the presumed new facilities mentioned above are lower than what had been used in the past, to minimise "shadow" blockage caused by skip effects. It should be noted that Vietnam is about 1000 km from north to south, and day and night/day coverage across such relatively short distances is optimised by the use of frequencies below 10 MHz.

At least two of these transmitters are co-sited - 6020 and 7210, as low level spurious radiations were noted on 6005/6035, and 7195/7225, corresponding to carrier +/- 15 kHz. The spur on 6035 causes interference to the Vietnamese network of the Yunnan BS, at Kunming, during morning and evening periods.

Transmitter locations for these five outlets are not known. Based on monitoring observations from Vietnam and Malaysia, as well as from my home location in Melbourne, Australia, I believe that the general sites are as follows:

- 7210: south, likely near Ho Chi Minh City
- 7115: north, likely near Hanoi
- 6020: south, likely near Hanoi
- 5970: south, likely near Ho Chi Minh City
- 5920: north, likely near Hanoi
- 5970: south, likely near Ho Chi Minh City

7115 experiences annoying interference from co-channel Radio Thailand for the entire broadcast span, and also from the Voice of America, Iranawila, Sri Lanka, from *0100-0300* with its English service. That VOA transmission is actually beamed 334 degrees into the Middle East area, and has a very strong back lobe radiation signal to the south east, across Indonesia, and Indo-China. 7115 also is disturbed by co-channel All India Radio, at port Blair, during its afternoon service around 0700.

All five channels carry the National Network news from Hanoi at 2300-2315. Between 1200-1230, corresponding to 7pm local time, there are four separate programs, carrying the following services:

- 7210: 5970 5925 7115 6020
- 7210: Network 1 Provincial Network Network 2 Network 1 Regional Network

The schedule for each outlet is complex, as each frequency is not dedicated permanently to a particular “Network”. Obviously, there is some sort of overall plan, but I couldn’t determine what it was, and it appeared to me that the actual network relayed was almost random, differing from hour to hour and day to day. It is understood that these five transmitters are intended for general reception, and also serve as HF in-band feeders, for providing primary or secondary (back up) programming for MF and HF broadcasts to the Provincial stations in remote areas, many of which do not have direct transmission links to Hanoi.

**H’MONG NETWORK.**

This originates from Hanoi, and is available only on HF. It uses two frequencies, 6165 and 5035, signing on at 2200 for the morning service until 2300 close. There is also a midday service (0500-0600) and an evening release (1200-1330). H’mong is also known as Miao, and is spoken by some 4.5 million people in southern China, Vietnam, northern Laos, and Thailand. Prior to reunification in 1976, the former Republic of South Vietnam broadcasting facilities were quite extensive, known as the Broadcasting System of Vietnam. The Republic actually extended quite some distance to the North, to at least 17 degrees N, which including the cities of Da Lat, Nha Trang, Hue, Da Nang, quin Hon, Ban Me Thuot, Can Tjo, and Quang Ngai. Several high power HF transmitters were sited near Ho Chi Minh City, of up to 200 kW, and the Voice of America operated its MF station from Hue, on 760 kHz. MF and VHF outlets in the South were taken over by the incoming communist controlled northern government in 1976, known as “Liberated Radio Ho Chi Minh City”. The HF outlets from Ho Chi Minh City vanished after 1976, and were believed to have been destroyed. They formerly operated on such frequencies as 4877 6165 7175 7245 9620 and 9755.

As far as can be determined, the only local HF station operating from the area which was formerly the Republic of Vietnam is located in Gia Lai Province, which sits between the 13th and 14th parallels.

**EXTERNAL SERVICES.**

It is believed that two principal HF sites are in use for External Broadcasting. The first is at Son Tay (with two 100 kW transmitters), located about 30 km NW of Hanoi. Son Tay is in Ha Tay Province, which borders the Hanoi region. The second site is at Mi Tri, about 5 km SW of Hanoi, with one 50 kW transmitter. TNVN advises that the total official HF transmitter deployment is eleven, believed to comprise the three units used for External Broadcasts, five transmitters for the National Service relays, and two transmitters carrying the H‘Mong Network, and one “spare”. Only two transmitters are in use from the Son Tay site at any given time for the External Service broadcasts.

Available antennas at Son Tay are at 36, 57, 140, 177, 290 and 320 degrees.

In recent years, the number of Vietnamese-based transmitters used for the External Service has been reduced, and reports suggest that these have been diverted for jamming of Radio Free Asia broadcasts. The number and location of these are unknown.

The Mi Tri site has the transmitter which operates on the single frequency of 7285, 50 kW, with an antenna azimuth of 216 degrees, and it’s used for the external Service:

Of particular interest is that output on this frequency has recently been extended, and is now used for relaying National Network programming from Hanoi, when not engaged for the regular External Service. This is from 0100-1100 with relays of Networks 1 or 2. This is to augment national daytime coverage.
into the southern part of the country of the HF relays on 5925, 5970, 6020, 7115 and 7210. 7285 gave excellent reception during the daytime period throughout Vietnam and all of Malaysia. However, 7285 is also used by Radio Taipei International from 1200-1400 and by the Voice of Asia (Taiwan) 1000-1100.

The regular External Service outlets on 9730, 9840, 12020 and 13740 are regularly heard worldwide, particularly over darkness, or partial-darkness transmission paths.

The following frequencies are in use from Son Tay for the designated External Service transmission blocks, for the international broadcast Summer Period which concludes on the

<table>
<thead>
<tr>
<th>0600-0630</th>
<th>1200-1300 Thai</th>
<th>1300-1330 Russian</th>
<th>1400-1430 Lao</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vietnamese</td>
<td>Russian</td>
<td>Russian</td>
<td>Lao</td>
</tr>
<tr>
<td>0900-1000</td>
<td>1430-1500 Russian</td>
<td>1500-1530 Mandarin</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>Cambodian</td>
<td>Cambodian</td>
<td>Lao</td>
</tr>
<tr>
<td></td>
<td>Lao</td>
<td></td>
<td>Lao</td>
</tr>
</tbody>
</table>

English programming is broadcast at:

There is also a high powered MF transmitter operating on 1242 from Hanoi, between 0900 and 1700, and from 2200-0000, for External Services, carrying programming in Vietnamese, English, Indonesian, Cambodian, Thai, French, Cantonese, Mandarin, and Lao, with some of this output in parallel with the HF External Services.

**EXTERNAL SERVICE RELAYS.**

The Voice of Vietnam uses relays in Canada (Sackville) and Russia (Serpukhov and Moscow) for reaching audiences in the Americas and Europe respectively. Summer frequencies are listed (with alternate winter frequencies and timings):

<table>
<thead>
<tr>
<th>Frequency</th>
<th>0900-1000</th>
<th>1100-1130</th>
<th>1300-1400</th>
<th>1600-2130</th>
</tr>
</thead>
<tbody>
<tr>
<td>9730</td>
<td>1200-1300</td>
<td>1330-1400</td>
<td>1800-1830</td>
<td>2030-2100</td>
</tr>
<tr>
<td>9840</td>
<td>0830-1100</td>
<td>1130-1300</td>
<td>1400-1600</td>
<td>2130-0000</td>
</tr>
<tr>
<td>12020</td>
<td>0830-1100</td>
<td>1130-1300</td>
<td>1400-1600</td>
<td>2130-0000</td>
</tr>
<tr>
<td>13740</td>
<td>0000-0100</td>
<td>1100-1130</td>
<td>1300-1400</td>
<td>1600-2130</td>
</tr>
</tbody>
</table>

**REGIONAL TRANSMITTERS.**

This is where the story becomes complex! There is a handful of HF stations located in various provinces, mainly in the mountainous regions to the west and north of Hanoi, and one in the south, in Gia Lai Province. These HF outlets present interesting DX targets, as frequency and operating stability is not of a high order! Many of them have been in use for a great many years dating back to the early 1970’s. These antiquated facilities carry relays of the National Networks, as well as local and regional programming. They tend to operate for limited periods of up to two hours, typically in the early mornings (commencing at 2200), at mid-mornings (from 0300), and early evening (from about 1000). As well as Vietnamese, languages heard include Lao, Thai, Khmer, and Korean. Relays of the National Networks from Hanoi are also broadcast over these

**EXTERNAL SERVICE RELAYS.**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>0900-1000</th>
<th>1100-1130</th>
<th>1300-1400</th>
<th>1600-2130</th>
</tr>
</thead>
<tbody>
<tr>
<td>9695</td>
<td>1200-1300</td>
<td>1330-1400</td>
<td>1800-1830</td>
<td>2030-2100</td>
</tr>
<tr>
<td>9785</td>
<td>0900-1000</td>
<td>1100-1130</td>
<td>1300-1400</td>
<td>1600-2130</td>
</tr>
<tr>
<td>13070</td>
<td>0830-1100</td>
<td>1130-1300</td>
<td>1400-1600</td>
<td>2130-0000</td>
</tr>
</tbody>
</table>

Actual locations of these transmitters are not known, but identification announcements at the start of each broadcast usually give the name of the Province, and often the town or city. Accurate identification can be quite difficult, due to the similarity of some words to our Western ears. Note that many Provinces take the same name as the main town or city (such as Son La, Lai Chau, Lao Cai, Ha Giang). An exception to this is Gia Lai Province, whose capital city is Play Ku.

Announcements usually are of the form: "Day la dai phat thanh...(station name)".

Operating frequencies of most of these transmitters vary from hour to hour, and from day to day, with fluctuations of up to 50 kHz! Some are not on the air each day, and broadcast times are subject to constant change.

Reports of Vietnamese HF regional stations located in other Provinces appear from time to time in the hobby press, but often turn out to be drifting transmitters of existing stations, or broadcasters from other parts of Asia. There has never been any "official" information provided by the Vietnamese authorities on these HF operations, either pre-, or post-Reunification. The outlet believed to be in Gia Lai Province was first reported in the early 1980’s.

It should be noted that not all broadcasts in Vietnamese in the 5 MHz band are from Vietnam! The Yunnan Broadcasting Station, at Nanning, transmits special external transmissions in Vietnamese on 6035 and 5035 at 2200-0130 and 1000-1300, which are often mis-identified as from Vietnam. China Radio International broadcasts in Vietnamese six times daily, at various times, using 5260 as a feeder frequency.

**QSLs.** At present, the Voice of Vietnam responds readily to correct DX reports for its External Broadcasts, sending a copy of its latest External Service schedule with the QSL.

**FUTURE DEVELOPMENTS.**

TNVN is continuing with an expansive plan to upgrade the state of radio broadcasting technology across the country. There is improvement to program production and transmission facilities, adoption of computerisation and digital technologies, moving towards implementing Digital Audio Broadcasting (DAB) within ten years.
In 1999, TNVN was concentrating its expansion plans on its program-production facilities. The broadcaster signed a contract with Studer to supply and install a complete radio broadcasting system for the new TNBVN Broadcasting H House/the new eight-story facility is located next to the existing broadcast centre in Hanoi. When complete, the new Broadcasting House will be fully DAB-ready.

Studer will install more than 200 workstations including 70 audio workstations running Dalet broadcasting software and 120 news terminals running Dalet TeamNews software. It will also be fitted with more than 10 broadcast consoles and a complex MADI channel matrix TDM routing system. The router network will provide a fibre-optic interface between the new and existing systems.

The new systems will enable TNVN reporters to create more programming as well as better quality programs. The digitisation of the Broadcasting House is part of a plan to make TNVN fully digital by 2010. The broadcaster plans to initiate a DAB pilot project in 2001.

This is not the first step TNVN has taken towards employing digital working methods. Already, the broadcaster produces a daily Web-based on-demand news service at: http://www.vov.org.vn/ with updates in Vietnamese and English.

Currently, TNVN radio broadcasts reach 87% of the population, and 69& of the area. Its official transmission network is advised as consisting of 19 MF, 11 HF, and eight VHF transmitters. Programming is fed to the transmitters via a variety of methods, including cable, microwave, relay stations, and repeaters.

### TELEVISION

Television Vietnam is a separate entity from TNVN. Currently, it operates three channels - VTV1, 2, and 3. In Hanoi, three other stations are available: HTV7, HTV9, and MMDS. Satellite channels include Discovery, ESPN, and Star Movies, and Australia TV.

Foreign language output may be viewed on these channels:

<table>
<thead>
<tr>
<th>VTV1</th>
<th>English and French programming, including films and sports;</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTV2</td>
<td>English lessons and news, and French news</td>
</tr>
<tr>
<td>VTV3</td>
<td>Sports and English features</td>
</tr>
<tr>
<td>HTV7</td>
<td>Sports, cartoons, drama, and features in various languages, including English, Vietnamese</td>
</tr>
<tr>
<td>MMDS</td>
<td>Includes Chinese and Japanese features</td>
</tr>
<tr>
<td>Australia TV</td>
<td>this is satellite based, and is also designated as &quot;CT&quot;. It is essentiall the Australia Channel 7 Network, and includes slightly-delayed broadcasts of Australian Rules Football, Channel 7 News, Channel 7 soaps, and similar material. There is advertising for retail development opportunities in Melbourne, portraying this city as a wonderful place, with gardens, beaches, and mountains! It was interesting to sit back and watch AFL games live, without the frustration of commercial breaks after each goal is scored!</td>
</tr>
</tbody>
</table>

### FUTURE OF EXTERNAL BROADCASTING

I spoke with the Director of the Voice of Vietnam, who told me that there is a continuous review being undertaken of the cost effectiveness of the various leased relays currently in use, from facilities in Canada and Russia. New relays may be introduced, and some deleted, particularly for augmenting coverage into the Americas and Europe. The Internet is regarded as a prime means of distribution of information and entertainment to the global community outside of Vietnam, and is being strongly developed. No plans exist for upgrading or extending HF broadcasting facilities within Vietnam itself for external services.

### Selection of commentators in Indian Context

In view of the key role of the radio commentator in the coverage of any sports, AIR devotes considerable time and attention to the selection of prospective commentators whether from the staff or outside. The prospective commentators are to be given an audition in an actual game situation. Such commentators, who are recorded on the spot, are heard by a local audition committee, to which outside experts are associated. It has to be ensured that the person has adequate knowledge of the game, is able to name players and positions, describe an event as it takes place, and match the sound from behind. A commentator, who passes the audition test is usually given trial bookings on three matches or for all the days in a cricket match. In case of Hindi and English commentaries suitable chunks of broadcast commentaries are to be recorded and sent to Delhi for screening by the Central Screening Committee which has two panels one for cricket and another for other games. Apart from new entrants, there is a continuous evaluation for the existing commentators, which take place after every major event. In order to encourage specialisation, as far as possible different sets of commentators are used for radio and TV. Similarly the existing radio commentators have been advised to confine themselves to three games only. AIR is making a special effort to train new commentators for covering the various events of the 9th Asian Games. AIR is keen on training as commentators and recruit as Producer for Sports, former sportsmen and women who led the country in international sports.

### CONCLUSION

The Vietnamese Government, through TNVN, is strongly committed to modernising its national radio broadcasting infrastructure, and its technological development plans are to be commended. Australia is providing assistance, financial aid, and support in technology training, particularly for transmission planning/ installation/ and service operations, and state-of-the-art studio equipment is being progressively acquired and commissioned. Terrestrial external broadcasting may not be as extensive or visible as that of other Asian countries, but positive efforts are being made to develop, and maintain, a reasonable, strategic and modest presence globally through the mix of leased HF relays, Internet-delivered programming, and direct MF and HF transmissions.

July 26, 2004 Radio Commentary — Democratic National Convention
The Democratic Party is having its national convention this week. You may have seen stories that the plan is to keep things at the convention positive and upbeat, instead of upsetting people with a lot of negativity.

Makes a lot of sense. After all, the past year has only seen us launch the first colonial war since Vietnam, degrade ourselves past all recognition with the kind of acts that always are attendant on colonial wars – take your pick, the systematic torture of innocents, up to and including sodomizing children of women who were taken hostage to make their husbands give themselves up, or the killing of roughly 1000 people, mostly civilians, in order to punish an entire town for the killing of four mercenaries or, after much chest-beating about our vaunted system of democratic accountability, to cover up the torture with the release of an Army report saying that it was just 94 unrelated acts of passion. And along with our seemingly limitless capacity for evil, our capacity to do good seems to have been eroded completely – not only can we not fix Iraq's electricity nearly as well as Saddam Hussein's government did in 1991, it turns out that, after all the rhetoric about American generosity, that as of one month ago of the so-called $18.4 billion we had allocated for Iraq's reconstruction, only $366 million, 2%, had been spent. We've been failing to reconstruct Iraq and using Iraq's money to do it, through the odd mechanism of giving it to the shareholders and executives of Bechtel and Halliburton with no strings attached. We bomb the country, then we rob it.

Or perhaps we should be positive because the United States has now gotten universal international execration for its obstructionist efforts to use bilateral trade deals to keep other countries from using their own resources and ingenuity to deal with the scourge of AIDS.

Or because of our efforts to sabotage the one, small, pitiful step, the Kyoto protocol, to deal with the other paramount international problem, global warming?

But surely, you say, in its own upbeat positive way, the Democratic Party will address all of these issues. Well, with regard to the convention, I can’t predict the future with more than 99.8% certainty, but I've read the Party platform and here's what it says, in a nutshell:

We will do the war on terrorism better, by being more aggressive.

We will do the occupation of Iraq better, by bringing in more foreign troops.

We will do job creation better, by supporting private corporations more.

We think international anti-AIDS efforts should be better.

We think “global climate change” is a problem and we'll do better.

This in support of a candidate whose main plank is that he will do American imperialism better because, unlike his opponent, he has personally gone overseas to kill America's enemies.

You may think that, even if the Democrats are no better on Iraq that they will be on AIDS and global warming. They have, however, said not one word about how. There is no condemnation of the use of American economic clout to force other countries to strengthen intellectual property protections to the point that it becomes impossible to deal with AIDS affordably. Not only is there no commitment to restore the bandaid of the Kyoto protocol, there is no use of the phrase “global warming.”

Dennis Kucinich kept campaigning until the eleventh hour, because, he said, he would bring so many candidates to the convention that the party would have to listen to him. Instead, his delegates were forced to fold on the question of putting an anti-war, anti-occupation plank into the platform. What was obvious in 2000 is obvious now: the Democratic Party will not be changed from within. It's common to decry the Democrats' lack of vision, but the problem is worse than that. At a time when our country has dragged itself through the mud and earned the condemnation of the world in the clearest terms since the Vietnam War, the Democratic Party can’t even take off its rose-colored glasses.
LESSON: 19
VIVIDH BARATI

Objectives
The Radio Club was first set up in 1923-24 in Calcutta and Bombay. Proper and regular broad casting was started on 23rd July, 1927 in Bombay and on 26th August, 1927 in Calcutta. License was obtained from the Government to form the Indian Broad Casting Co. At first the target audience were villagers and officers in remote places. Then, the license fee was Rs.10 with and additional 10% tribute on imported wireless equipments.

Experiments with Radio Broadcasting over the years:
(1) In 1894, Jagdish Chandra Bose tried to form a broadcasting section.
(2) In 1925, Dr. Sisir Kumar Mitra experimented with transmission.
(3) In 1926, BBC took over.

The first Broad Casting Centre of Calcutta was set up near the Calcutta High Court in the Temple Chamber. At that time, the only remuneration paid to the performing artistes was the traveling allowance. In the primary stage, headphone radios were used, for which no batteries or aerials were required. Radio programmes were held under a tent in the Maidan. On 26th August, 1927, the Centre was shifted to 1, Garstin Place, with two studies. In 1940, the number of studios increased to six. In 1958, the center was transferred to Eden Gardens. The organization was then headed by Mr. Nripen Majumdar, Mr. Raichand Boral, Mr. Jogesh Chandra Bose, Mr. Rajen Sen, Mr. R.C. Dey, Mr. Pankaj Mallick, etc.Rabindranath Tagore’s songs were used, for which no batteries or aerials were required. Radio programmes were held under a tent in the Maidan. On 26th August, 1927, the Centre was shifted to 1, Garstin Place, with two studies. In 1940, the number of studios increased to six. In 1958, the center was transferred to Eden Gardens. The organization was then headed by Mr. Nripen Majumdar, Mr. Raichand Boral, Mr. Jogesh Chandra Bose, Mr. Rajen Sen, Mr. R.C. Dey, Mr. Pankaj Mallick, etc.Rabindranath Tagore's songs were first called “Rabindra Sangeet” by Pankaj Mallick. In 1931, Smt. Basanteswari Banikumar joined the organization. In 1932, Raichand conducted the Bengali programme “Mahishasur Mardini” on the day of “Shashti”, which was extremely popular. In 1930, the Indian Broad Casting Co. was liquidated. The Government of India then decided to take over. In 1935, under the Viceroy ship of Lord Linlithgon, the Indian State Broad Casting Service became the “All India Radio”. 2 new stations were set up at Peshwar (N.W. Frontier) and Allahabad (U.P.), to conduct programmes for the rural audience. In 1937, a central news organization (News Service Division) was founded. In 1939, broad casting was started for foreign audiences. In the year 1940, Professor A.S. Bokhari became the controller of Broadcasting and became the D.G. in 1943. In 1947, there were 6 stations in India – Calcutta, Bombay, Madras, Delhi, Lucknow, Trivendrum; and five principle stations at Baroda, Mysore, Trivendrum, Hyderabad & Aurangabad.

EXTERNAL SERVICE DIVISION (E.S.D)
In October 1939, during the Second World War, the Far Eastern Bureau of British Ministry of India and the All India Radio launched the External Service Division.

There were two categories under E.S.D
(1) Indian Overseas – with 8 Indian languages like Bengali, Gujarati, Hindi, Punjabi, Sindhi, Tamil, Telugu, Urdu.
(2) Neighbouring Nations – with 16 languages like Arabic, Baluchi, Burmese, Chinese, Dari, English, French, Indonesian, Nepal, Persian, Pust, Russian, Singhalese, Swahili, Thai, Tibetan.

VIVIDH BHARATI
In the year 1952, film music was regarded cheap by some prominent people. As a result the film producers association terminated their contracts with A.I.R. Vividh Bharti was then commenced by Radio Ceylon in the year 1957 at Bombay and Madras. It was commercialized in the year 1967. The programme composition consists of News, Music and Spoken Word. Music refers to all kinds like Classical, folk, devotional, light, film and western. Spoken word can take the form of talks and discussions and includes programmes on sports, drama, radio features and documentaries as well as special audience programmes on subjects like Farm & Home, Women, Children, Education, Health, Industrial Workers, etc. Interactive broadcast includes phone-ins, radio-bridge, voice mails, apart from listeners forum. In 1947, AIR had 6 stations in India, 18 transmitters, with an area coverage of 2.5% & population coverage of 11%. In 1999-2000, there are 198 stations, 310 transmitters, with 90% area coverage and 97.3% population coverage, in 24 languages and 146 dialects.

F.M.
The F.M. channel was started from April, 1980. In the year 1994, some private parties were introduced in Calcutta, Bombay, Delhi and other states for a better broadcasting system by the Government. In total five private parties were introduced –
(1) HMV FM.
(2) Radio Network Ltd.
(3) Sahu Jain Services Ltd.
(4) Raghuvar India Ltd.
(5) Bennet Coleman & Co. Ltd.

In the beginning, nine hours were allotted to the private parties. They were to pay the Government Rs.3000/- for a prime time slot, and Rs.2000/- for a non-prime time slot. In 1998, the Government called tender again. On 26th June, 1998, programmes of 3 parties were discontinued by the Government. Sahu Jain Services was discontinued from 18th July, 1998 by Calcutta High Court Order and Radio Network was discontinued from 3rd May, 2000, following withdrawal of a court case by the party.

SPECIALITY:
All live programmes are held in the channel.

VARIOUS PROGRAMMES:
(1) BHORAI 5 A.M. to 6.30 A.M. Spiritual programme for the elders.
(2) ALAPON 4 P.M. to 6.00 P.M. Programme for youth audience.
AAJ RATE 10 PM. to 12 PM. Programmes
• Health Magazine
• Womens Magazine
• Cinema Magazine
• Sports Magazine
• Literary Magazine
• Talk Show

PROGRAMMES OF SONG & MUSIC
(4) GANER BHela – 10 A.M. to 12 P.M. & 3 P.M. to 4 P.M.
(5) KICHU KATHA KICHU GAn – 7 A.M. to 8 A.M.
(6) CHAYA LOKE – 8 A.M. to 10 A.M. & 6 P.M. to 8 P.M.
(7) WESTERN MUSIC – 12 P.M. to 1 P.M. & 8 P.M. to 10 P.M.
(8) PROGRAMME OF DRAMA – 2 P.M. to 3 P.M.
(9) PROGRAMMES OF VARIOUS SONG – After 12 A.M.
  • Classical music
  • Beng.-Hindi Film music
  • Rabindra sangeet
  • Modern songs etc.
(10) GULDASTA – 1 P.M. to 2 P.M. – Programmes of song & music like Gazal.

Suggested Readings
2. Baruah U.L. This is all India Radio: A handbook of radio broadcasting in India. New Delhi, Publications Division, 1983.

Notes:
LESSON: 20
FM RADIO AND ITS URBAN IMPACT

Objectives:

CHANNELS AND PROGRAMMES
Broadcasting started in India 1927 with two privately owned transmitters at Bombay and Calcutta. All India Radio came into existence in 1936 and came to be known as Akashvani from 1957. First News Bulletin was broadcast on January 19, 1936.

PRASAR BHARATI
Prasar Bharati the autonomous Broadcasting Corporation of India was constituted by the Government of India to fulfill its commitment to free electronic media from government control. Akashvani and Doordarshan are being managed by Prasar Bharati Board appointed in November 1997.

ALL INDIA RADIO
The phenomenal growth achieved by All India Radio through seven decades had made it to one of the largest media organisations in the world. At the time of Independence the nation had only 6 broadcasting stations and 18 transmitters. Now in the new millennium, it has about 200 stations and 300 transmitters. To serve the communication needs of a plural society of India the network expanded gradually imbibing new technology and programme production techniques.

THREE TIER BROADCASTING
To realise its objectives AIR has evolved over the years, a three-tier system of broadcasting namely national, regional and local. It caters to the information, education and entertainment needs of the audience through its stations in this country of continental dimensions and with plural society. They provide news, music, spoken word and other programmes in 24 languages and 146 dialects to almost the entire population of the country, about 103 crores as per 2001 census.

National Channel broadcasts national programmes. The regional and sub-regional stations provide the second tier of broadcasting giving programmes in the regional languages and promoting regional cultural facets.

Local Radio is a more recent concept of broadcasting in India. Local Radio Stations were mostly set up at District Headquarter towns. Each of the stations serving a small area provides utility services and reaches right into the heart of the society. What distinguishes the Local Radio from the regional network is its down to earth intimate approach. The programmes of the Local Radio are area specific. They are flexible and spontaneous enough to enable the Station to function as the mouthpiece of the local community. There are also community Radio Centres at 5 places in the North-Eastern India to serve the local tribal people, set up recently.

Transmission timings and programme composition by broad categories of a few AIR Stations are given in the following pages. Each represents one type of station.

AIR DELHI - FM CHANNELS

PROGRAMME COMPOSITION OF FM-I CHANNEL

<table>
<thead>
<tr>
<th>Type of Programme</th>
<th>Duration per day</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>News</td>
<td>24 mts.</td>
<td>1.66</td>
</tr>
<tr>
<td>Music</td>
<td>15 hrs. 36 mts.</td>
<td>65.00</td>
</tr>
<tr>
<td>Spoken Words</td>
<td>08 hrs.</td>
<td>33.34</td>
</tr>
<tr>
<td>Total</td>
<td>24 hrs.</td>
<td>100.00</td>
</tr>
</tbody>
</table>

BREAK UP OF MUSIC

<table>
<thead>
<tr>
<th>Type of Programme</th>
<th>Duration per day</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devotional Music</td>
<td>01 hr.</td>
<td>4.2</td>
</tr>
<tr>
<td>Film/Western/pop Music</td>
<td>13 hrs. 36 mts.</td>
<td>56.6</td>
</tr>
<tr>
<td>Classical Music</td>
<td>01 hr.</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>15 hrs. 36 mts.</td>
<td>65.0</td>
</tr>
</tbody>
</table>
**FM-II CHANNEL**

FM-II Channel came on air on September 1, 2001 at Delhi as a niche infotainment channel with 30% of News and Current Affairs component and 70% of Entertainment programming. The total hours of transmission of FM-II channel is 18 hours and 10 minutes.

From November 12, 2001 the programming of FM-II channel has been refurbished as a part of events marking the celebration of Public Service Broadcasting Day at Delhi Station. The thrust of the change is to position FM-II as a channel, which presents programming of a classic kind. This will be in its various genres of programmes like music and spoken word. This channel is trying to provide information inter linked with entertainment and bring information updated on traffic, airlines, railways, weather etc.

Similarly, there are two FM Channels at AIR, Chennai, Mumbai and Kolkata.

**F.M.**

The F.M. channel was started from April, 1980. In the year 1994, some private parties were introduced in Calcutta, Bombay, Delhi and other states for a better broadcasting system by the Government. In total five private parties were introduced –

1. HMV F.M.
2. Radio Network Ltd.
3. Sahu Jain Services Ltd.
4. Raghuvanar India Ltd.
5. Bennet Coleman & Co. Ltd.

In the beginning, nine hours were allotted to the private parties. They were to pay the Government Rs.3000/- for a prime time slot, and Rs.2000/- for a non-prime time slot. In 1998, the Government called tender again.

On 26th June, 1998, programmes of 3 parties were discontinued by the Government. Sahu Jain Services was discontinued from 18th July, 1998 by Calcutta High Court Order and Radio Network was discontinued from 3rd May, 2000, following withdrawal of a court case by the party

**SPECIALITY :**

All live programmes are held in the channel.

**VARIOUS PROGRAMMES :**

1. BHORAI 5 A.M. to 6.30 A.M. Spiritual programme for the elders.
2. ALAPON 4 P.M. to 6.00 P.M. Programme for youth audience.
3. AAJ RATE 10 P.M.to 12 P.M. Programmes
   - Health Magazine
   - Womens Magazine
   - Cinema Magazine
   - Sports Magazine
   - Literary Magazine
   - Talk Show

**PROGRAMMES OF SONG & MUSIC**

(4) GANER BHELA – 10 A.M. to 12 P.M. & 3 P.M. to 4 P.M.
(5) KICHI KATHA KICHI GAN – 7 A.M. to 8 A.M.
(6) CHAYA LOKE – 8 A.M. to 10 A.M. & 6 P.M. to 8 P.M.
(7) WESTERN MUSIC – 12 P.M. to 1 P.M. & 8 P.M. to 10 P.M.
(8) PROGRAMME OF DRAMA – 2 P.M. to 3 P.M.
(9) PROGRAMMES OF VARIOUS SONG – After 12 A.M.
   - Classical music
   - Beng.-Hindi Film music
   - Rabindra sangeet
   - Modern songs etc.
(10) GULDASTA – 1 P.M. to 2 P.M. – Programmes of song & music like Gazal.

**PERCENTAGE OF HOUSEHOLDS WITH FM SET, 2001**

<table>
<thead>
<tr>
<th>SL No.</th>
<th>AIR Stations</th>
<th>RURAL</th>
<th>URBAN</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Delhi</td>
<td>55</td>
<td>66</td>
<td>61</td>
</tr>
<tr>
<td>2</td>
<td>Indore</td>
<td>66</td>
<td>63</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>Lucknow</td>
<td>31</td>
<td>44</td>
<td>37</td>
</tr>
<tr>
<td>4</td>
<td>Jaipur</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Allahabad</td>
<td>28</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>6</td>
<td>Bhopal</td>
<td>20</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td>7</td>
<td>Jalandhar</td>
<td>35</td>
<td>43</td>
<td>39</td>
</tr>
<tr>
<td>8</td>
<td>Jodhpur</td>
<td>37</td>
<td>50</td>
<td>44</td>
</tr>
<tr>
<td>9</td>
<td>Hyderabad</td>
<td>16</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>10</td>
<td>Dharwad</td>
<td>19</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>11</td>
<td>Kozhikode</td>
<td>32</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td>12</td>
<td>Vishakhapatnam</td>
<td>24</td>
<td>38</td>
<td>31</td>
</tr>
<tr>
<td>13</td>
<td>Tiruchirapalli</td>
<td>12</td>
<td>35</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>Coimbatore</td>
<td>28</td>
<td>41</td>
<td>34</td>
</tr>
<tr>
<td>15</td>
<td>Chennai</td>
<td>30</td>
<td>66</td>
<td>48</td>
</tr>
<tr>
<td>16</td>
<td>Thiruvananthapuram</td>
<td>58</td>
<td>63</td>
<td>60</td>
</tr>
<tr>
<td>17</td>
<td>Bangalore</td>
<td>27</td>
<td>52</td>
<td>39</td>
</tr>
<tr>
<td>18</td>
<td>Vijayawada</td>
<td>11</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>19</td>
<td>Panaji</td>
<td>69</td>
<td>60</td>
<td>64</td>
</tr>
</tbody>
</table>
Inaugurating the AIR’s FM (Frequency Modulation) radio station here on Sunday, Union Minister for Health and Family Welfare Sushma Swaraj said that FM radio concept is gaining momentum in the country in the new century. She said the works of FM station had been completed on time. “With this,” she said, “I have kept my word I gave last year that the FM radio station would be started in a year.”

She hoped that the new station would enhance the awareness level of the people besides bringing a host of entertainment programmes to them.

Presiding over the function, Health Minister Kagodu Thimmappa said that electronic media played an important role as a catalyst in social change. He thanked Union Minister on behalf of the State for setting up of a FM station here.

Chief Engineer of the AIR and Doordarshan Mohandas welcomed the gathering and Director of the Engineering Wing, Chennai AIR V K N Perumal proposed a vote of thanks.

14TH FM STATION:
Set up on a four acre of specious area on Belagal road, the FM relay centre would be upgraded to a 10 kv capacity full-fledged centre by 2005.

---

Parimala always wanted to host a radio show. Voice modulation and language skills were the areas she needed to work on. What egged her on was her belief that “no one really cares if a radio presenter is able bodied or disabled. What matters is the way a programme is presented.”

No wonder she benefited from a six-week FM radio programme course conducted by Mithra Jyothi and Voices - two Bangalore based NGOs - under the auspices of National Institute for the VisuallyHandicapped (NIVH) regional centre. “Conducting regular research to identify employment prospects for the visually challenged is a part of our agenda,” explains A K Mittal, regional director, NIVH. “Producing programmes for radio is one of ten potential areas where opportunities for the visually challenged are good. Acting on our proposal, Mithra Jyothi selected candidates and enlisted the support of Voices in conducting the course.

The course focused on details of programme production like identifying a subject of listener interest, deciding a suitable format, etc. “The programme’s designed to provide both the technical and theoretical training, enabling participants to be independent producers,” explains Ashish Sen, director, Voices.

“Our idea was to expose the students to the engineering side of radio as well. So, we took them to AIR and Gyana Vahini, allowing them a first hand experience of a studio. We asked them to produce and present a programme as part of the course which was broadcasted on Gyana Vahini on August 30,” he says.

Students were also given an idea of concepts like Public Service Broadcasting, private and community radios. “Karen McHerj, who runs a community radio station in Canada and Stuart Porteus from Britain finetuned our skills, offering advice on production and presentation skills and analysing our handling of programmes,” says Fiaz Basha, a participant.

“Students can explore opportunities offered by community radios. The government is likely to issue licenses for setting up radios serving specific communities and many of them can set up their own radios,” points out Ashish Sen.

NIVH says it will consider establishing a permanent training course in the near future.

The enduring romance of the radio
Jagadeesh M R harks back to the days when the radio held the whole house in thrall.

The radio conjures a kind of romance that other mediums, especially the TV can never match. Long before the advent of the TV, FM and even before the transistor revolutionised the portable radio, valve radio sets ruled the air waves.

These large box-like valve radios had hypnotic ‘magic eyes’ looking at you. The way the magic eyes moved indicated the signal strength. Many of the valve radio sets sported piano type buttons so that one could choose between shortwave, medium wave or longwave.

As stereophonic sound became popular, valve radio sets decidedly became more hip and included separate dials for bass and treble reception although the reception was mono. I have come across some real beauties from Germany and Holland which had nearly all receivable stations of the world written on the glass display on the front.

At home we had the Philips stereogram which was a living-room cabinet integrated with a record (vinyl) player. The two popular forms of entertainment were cricket and music.

In the seventies, we listened to the historic Port of Spain test match which India won. A choking Ravi Chaturvedi and Tony Cozier’s friendly voice layered with static added to the excitement. Sometimes we would wake up as early as 4 am simply because India was playing in Australia.

It was rather common to see people glued to the radio set in those days – my dad would do this: one ear hugged the speaker while his eyes were closed in intense concentration and his fingers would try to gingerly to balance the dial to catch the station. My grandfather owned a staid looking Ekcomake and I remember listening to Ameen Sayani’s ‘Binaca Geet Mala’.

At night, the whole world would come alive with static and all genres of music. The BBC Rock Hour and the Australian Top Ten hosted by Susan Dowling kept me posted on new music. Remember Dire Straits, the Sultans of Swing? Their music was aired on the radio for the first time around 1980.

I first listened to Eddie Van Halen’s finger-tapping style on BBC’s Rock Hour in 1982 from their debut album Van Halen, much before it was termed as Heavy Metal.

Somewhere along the way I discovered Willis Conover, the legendary jazz host, on Voice of America. In his deep voice, Conover spoke of jazz bands, their roots, the history of jazz and thus began my introduction to jazz music.

A typical radio day would be: Radio Ceylon from 7 am to 9 am, moving on to Radio Kuwait at 11 am on the 19m band and 2.30 pm till 4 pm in the noontime it would be Radio Australia with National and International Top Hits. I would bunk college so that I could be at home to catch Radio Australia at 2.30 pm.

To help improve reception, my friend helped me fashion a ‘parabolic’ antenna – basically two wooden reapers in a cross form with tiny nails on it and copper wire wound around the nails. The reception and signals improved tremendously with this contraption sticking out over my roof.

Weird as it may sound, when we amateur musicians jammed at home, my classmate and bassist Kenny Beale would plug in his guitar through the same pick up slot of the radio while I would plug in through the record player’s amplifier and we’d have a great time. It was probably the absence of equipment that made us improvise.

Today with the kind of technological advancements available you can catch FM radio on your cellphone, a watch or even a pen. Like the phonograph, the valve radio set has also faded into obscurity and with it the classic, romantic notion of the radio may have died as well.

Broadcast course aimed at FM radio market

With private FM channels slated to mushroom after the second phase of FM radio licensing, Prasar Bharati and Indira Gandhi National Open University (IGNOU)’s post-graduate diploma in radio broadcasting could not have come at a better time for aspiring radio professionals.

The course, for which Prasar Bharati and IGNOU entered into an MoU sometime back, will be launched soon and teach students all aspects of broadcasting, from writing to on-air presentation, through the 11,000 study centres of IGNOU. The fee - only Rs 5,000, Prasar Bharati sources said here today.

While IGNOU, with its expertise in academics, is developing the course content, Prasar Bharati will utilise its vast infrastructure to supplement the theory part with hands-on training in All India Radio (AIR) stations and AIR’s Staff Training Institute.

“In India, there are a number of broadcast journalism programmes, but none specifically addressing radio broadcasting. This course will fill that gap, and help aspiring radio jockeys, disc jockeys, announcers, performers, anchors, directors, producers, etc., to be professionally equipped to enter the highly-competitive atmosphere of FM radio stations”, the sources said.

Once the course gets started, Prasar Bharati could look into starting similar courses in radio broadcasting for 10th and 12th standard students also, according to Prasar Bharati CEO K S Sarma. “A graduate’s qualification for such skills is not required, and diplomas, say in programme production, could be given to even undergraduates. We will be exploring such possibilities”, he says.
As an extension to the tie-up, Prasar Bharati is also exploring the possibilities of using the IGNOU infrastructure to start a distance education programme to upgrade the skills of its own technical and engineering staff posted in far-flung areas, they added.

**Voice with a winning edge**

Prakash Paul conducts workshops on voice modulation for youngsters interested in improving their flexibility, tone, pitch and pronunciation. Michael Patrao talks to the presenter on All India Radio about putting one's voice to good use for commercial gain.

With the mushrooming of television channels, FM radio channels, voice-enabled internet, corporate events and entertainment shows, there are opportunities galore for people with a good voice. But Prakash Paul, with his rich resonant voice, did not know how to exploit his natural talent. It was only by trial and error that he learnt he could put his voice to good use. Paul now uses his experience to conduct workshops on voice modulation.

He has been a presenter at FM Rainbow of the All India Radio for the past one year. Earlier he was a staff announcer at Technology Media Group (TMG) Television.

At St Joseph's Indian High School he was active in sports and was the captain of Loyola House. His impressive voice was discovered when he was acting in a skit at Christ College. The college secretary approached him and asked him if he could do the announcements for the college festival. He served as the backstage announcer for the annual spring festival which was then known as Resonance.

After college, Paul did a course in print and television journalism at Media Centre. As a part of the project the students had to make a documentary called 'Against all odds' for a school with specially abled children. The narration of the documentary was done by Paul.

When Ms Indu Ramesh, former director of All India Radio, Bangalore heard the narration, she was impressed by the voice and compared it to that of Melville D'Mello, the legendary news-reader and sports commentator on radio. She wanted to meet the person behind the voice at the radio station, but alas as Paul puts it, ``I didn't know the scope of a good voice.`` Only much later did he realise that he could use his voice for commercial gain.

He was into garment and mineral water business before he finally got a job in TMG Television on the strength of his voice. At TMG he was assistant programmer and producer of `TT Hour` — compiling IT-related news, reports and interviews and generating a segment called Brand IT.

Paul now does a Kannada-English mix programme of Kannada and Hindi songs laced with one-liners, utility information like railway and air flight timing from 6.30 am to 10 am every Thursday in a show called 'Thursday Turns' on FM Rainbow.

He has done voice-over for promotional videos of Vogue Institute of Fashion, Habitat for India, an NGO and Campus Crusade for Christ College. He has done voice-over for multimedia presentation of Mico and BPL and radio spots for BSNL and Sun Ceramics.

Paul discovered that the voice-over industry was not organised and a lot of people with good voices were directionless. He therefore pioneered the voice training and communication workshop - a six weekend programme comprising 12 sessions. He is into training the third batch of students now.

He defines a good voice as one with a lot of character, personality and attitude. His training comprises voice training for flexibility, tone, pitch; refresher on English pronunciation and phonetics. The faculty comprises public speakers and professionals from radio, TV and theatre. A yoga instructor dwells on the importance of breathing and expanding lung power for a strong voice. Paul facilitates placements and has a voice bank and voice casting agency.

The workshop in voice training and communication is held at St Joseph's Boys High School. Prakash Paul can be contacted on 9845470896.

**Exciting cocoons in FM stations**

Welcome to the bold, brash and exciting world of Radio Jockeys. Ruling the airwaves with pomp, these folks have spawned a new entertainment platform that attracts all age groups across social divides of the urban population. From the restricted studio space of the FM stations, the RJs with their innate skills in voice modulation and programme compering have created a new culture among the youth.

A broadside view of this nascent profession, which now has only two private players Times of India's Radio Mirchi (98.3 FM) and Suryan FM (93.5 FM), part of Sun Network, breathing down each other's neck is that the RJs may do better in shifting away from film-based musicals to more utility oriented shows and concepts. But Suchitra, the lead RJ at Radio Mirchi, does not agree. 'No, if you listen to my shows, Hello Chennai, in the morning hours there will be a wealth of information roughout. I keep updating myself on news and current affairs to inform and entertain the public,' she says. Basically an entertainment station, Radio Mirchi revolves around the culture of exactly what you listen to a mix of entertainment plus talks shows in-between film songs. Most of the RJs enjoy what they do and try to innovate to sustain listener interest. There's always the feedback.
‘I get comments and inputs from both listeners and colleagues. Inputs are necessary to keep your shows on popularity charts,’ says Deva, an RJ at Radio Mirchi. But she feels no RJ can change his or her voice and personality completely and can only be selective in ‘paying heed’ to the inputs.

A full-time RJ, Deva says contrary to popular beliefs, ‘there are lots of formalities and procedures for us, but they do not hamper our creativity’. As long as people listen to her Oorampo (5-9 pm), there are any number of ways she can imagine to keep the ‘job different and interesting to all’.

RJs of Suryan FM echo similar sentiments. ‘I will be RJing as long as FM listeners do not get bored with my voice. To keep my shows exciting, I modulate my voice, handle innovative subjects and air good songs without repetitions,’ says Shankar. He says RJs have to make the job exciting for themselves first, before attempting to entertain others. Overwhelmed from public response and direct callers, Chikki keeps exploring to raise the standards of her performance. ‘This is my dream job for since childhood I nurtured a wish to talk over mike,’ she says, and enjoys RJing Mixture Masala and Kadhal Kadhal at prime time in Suryan FM.

She’s semma hot mirchi! Her cheerful disposition is infectious to the core. Her voice is bubbly and delivery crisp and amusing. That’s Suchitra, says a Radio Mirchi addict and an avid listener of Hello Chennai show. Others would only second it.

What makes Suchitra Ramadurai stand apart from other RJs is her natural presentation in a spirited voice that explores all octave ranges with gimmicks, comedy and sarcasm. ‘I am always natural in my presentation. I don’t like mincing words,’ the MBA holder from PSG College, Coimbatore, says.

Her becoming an RJ was by sheer chance. She applied for a script writer post in Radio Mirchi, but, to her amazement passed the audition test, discovering a new personality in her as an RJ. Hailing from Kerala, Suchitra, who was there till her graduation, had a brief stint in advertising and internet business as editor of Sify.

She also came up with ad films and commercials and rendered her voice in films songs composed by leading composers like Harris Jayaraj, Yuvan Shankar Raja, Bharadwaj, Karthik Raja and Vidyasagar.

But it is in Radio Mirchi that she says she rediscovered her true self. ‘In Radio Mirchi I have found my calling. The very fact that I still get that blood-rush in my head every time I switch on the mike to speak, shows that the job still excites me as much as it did on day one,’ she declares. Besides RJing, she likes cooking, watching movies, music and reading for she aspires to be a ‘multidimensional personality who achieves many more things in life’.

On Radio Mirchi, Suchitra is candid. ‘We are very open people, have freedom to speak our mind, no red tape and have built a culture of own, though it is a year old’. She advocates expansion of the FM concept to rest of the country, and says, Radio Mirchi will enjoy the ‘first mover advantage’ vis-a-vis listeners’ space when competition hots up in FM airwaves. Sounds good.

Theatre activist Shiva, who describes radio as a ‘theatre of mind’, is ebullient on RJing at Radio Mirchi. ‘Playing music to satisfy others gives an outstanding feeling, difficult to express,’ he says. He sees listeners as friends ‘whom you have to cultivate for a long rapport’. Quite popular with Kadhala Kadhala, Mirchi Talkies and other shows, Shiva declares there is no limit to versatility in RJing.

Everyday is new and challenging for the RJ. ‘We are also supposed to do other back-up work like celebs interviews, concept creations, lending voice to ads and jingles, promos and so on. As private FMs grow in number, RJs will carve a niche in the mind space of the public,’ says Senthil Kumar, Radio Mirchi. Holder of a masters degree in Finance and Control (MFC), Senthil who earlier worked as research analyst says ‘I am happy to have made the switch to RJing as there is no hierarchy, but only the responsibility to deliver’.

How are the FM channels of All India Radio coping with the competition? AIR officials say its Rainbow (107.1 FM) and Gold (105 FM) stations have nothing to fear from the private stations. ‘We don’t feel that they are competitors for our motto is public service with a content that is utility oriented interspersed with entertainment mix,’ says R Balasubramanian, Deputy Director, Programme, AIR. While Rainbow caters to youth with infotainment varieties that include film songs, all genres of music and topical news items, Gold is restricted to airing classical music, relay news from Delhi, current affairs and sports commentaries.
AIR FM programmes are compered by part-time RJs from different professions, “There is a range of variety in our content and sometimes programme executives conduct the shows, assisted by part-time RJs,” he says. Niladri Bose, who worked in Radio Mirchi before joining Rainbow FM, puts things in perspective: “programming is versatile in AIR FMs as they cater to diverse people in this cosmo city. Plus, the amount of exposure they give to the RJs, though part-time, is really worth it”, he says.

‘Radio is something like a buffet. It should offer a whole range of variety in different languages. There is nothing wrong in AIR having part-time RJs as this is in vogue even in Western countries,’ Bose says. Hansraj Saxena, vice-president, Programming, Sun Network, says RJs by lending their voice to ads, commercials and films have become popular. ‘But people of varied professional backgrounds can render RJing, now lucrative too, as part-time if they have quality voice and social awareness, are witty and have the presence of mind,’ he avers.

But all said and done, RJs of Chennai are just a year old. One has to see how they sustain themselves in the long, gruelling innings ahead.

Notes:
Objectives:

**Microwave Signals**
In general the term 'microwave' refers to current signals with frequencies between 300 MHz and 300 GHz. The use of high frequencies and small wavelengths adds difficulties in the analysis of the fields and design of the components since at this frequencies the components size is comparable to the wavelength. But the high frequencies and small wavelengths provide unique advantages as greater antenna gain, more bandwidth and several more advantages regarding their application in radar, communication links, medical diagnostics and treatment and remote sensing.

**Microwave Communication Systems**
Microwave communication systems can be grouped in two types: guided wave systems where the propagation is over a cable or a wave-guide, and radio links where the signals propagate through space. An essential part of a radio link is the receiver which will be the subject of this design.

**Basic Circuit Theory and Transmission Line Theory**
The key difference between circuit theory and transmission line theory is electrical size. Circuit analysis assumes that the physical dimensions of a network are much smaller than the electrical wavelength, while transmission lines may be a considerable fraction of a wavelength, or many wavelengths, in size. If the frequency is low enough or the circuit size is small enough, actual lumped elements capacitors and inductors can be used. This may be feasible for frequencies up to 1 GHz or so, although modern microwave integrated circuits may be small enough so that lumped elements can be used at higher frequencies as well. The receiver of this report will operate at radio frequencies, about 900 MHz and therefore, lumped elements will be used for this design.

**Radio Transmission**
In a basic communication link is shown, where is the transmitter power, and are the transmit and receive antenna gains, and R is the distance between the antennas. It is desired to find, the power received at the receiver antenna. Assuming that the main beams of the two antennas (transmitting and receiving) are aligned with each other, the power density S (watts per square meter) at distance R from the transmitter antenna is:

The power intercepted by the receiver antenna is equal to the power density multiplied by the effective area of the antenna.

The above result does not include impedance mismatch effects, polarization mismatch and propagation losses. The loss between isotropic radiators is called the basic transmission loss and for free space is given by:

**TELEGRAPH CARRIER MEDIA**
The electrical impulses that make up telegraph messages may be carried through wire circuits or may be broadcast as radio waves.

When Morse invented the telegraph, the only way that a message could be carried from one point to another was by wires strung directly from the transmitting device to the receiver, regardless of the distance. The wire could carry only one message at a time, and reamplification and signal correction devices had to be set up at regular points along the line. By utilizing carrier currents, which are alternating currents of a number of different frequencies, a single pair of wires can simultaneously transmit hundreds of messages, for each frequency represents a transmission channel (see Carrier Wave; Frequency). The various channels are combined at the sending station into the carrier current transmitted by the telegraph wires. At the receiving end the carrier current is passed through electrical filters, each of which transmits only a particular frequency to an appropriate receiving device. Thus, a great number of individual channels may be obtained with only one electrical circuit.

**V. MICROWAVE TRANSMISSION**
The use of microwave radio transmission for long-distance telegraphic communication all over the world grew to be of major importance after World War II ended in 1945 (see Radar). The first commercial microwave radio link in telegraphy began operation between Philadelphia and New York City in 1947. It was followed in 1948 by a three-way network linking New York City, Washington, D.C., and Pittsburgh. The system then spread rapidly across the United States through the use of microwave relay antenna towers.

Microwave telegraphy is capable of carrying vocal, printed, graphic, photographic, and video communication almost instantaneously and in large quantities. It operates in the 4000-megahertz range of the commercial communications band. In this range, 40 voice bands are available in either direction, providing about 800 telegraph channels. The radio signals...
originating at the broadcast source are relayed to their destination by a series of parabolic reflector antennas mounted at the top of tall masts. In order to overcome weakening of the signal by distance and the curvature of the earth, these microwave relay antennas are placed at line-of-sight intervals about 48 km (about 30 mi) apart. This microwave transmission service was established in the U.S. by the Western Union Telegraph Company. For intercontinental communication, artificial geosynchronous satellites are used as relay antennas for voice, data, graphic, and video signals between ground-based stations.

V MODERN TELEGRAPH SERVICES

In the 1950s and 1960s a variety of public and private telegraphic services became available from various carriers.

A Telex

In 1958 a system of direct-dial teleprinter exchange, called Telex, was introduced, and within ten years it had more than 25,000 subscribers. The Telex system enabled subscribers to send messages and data directly to other subscribers in North America and, through the facilities of international carriers, in many other parts of the world. In some areas, Telex subscribers could also send messages to nonsubscribers by dialing special communications centers that delivered the messages as telegrams. This service, introduced in 1964, provided subscribers with a choice of high-quality radio channels for the rapid transmission of data in various forms, for facsimile and other record communications, and for voice communication. Improvements to the system made it possible to achieve high-speed transmission—up to 5000 characters per second—between computers and business machines.

C Private Wire Systems

These services, used for high-speed exchange of data, are leased by businesses or government agencies that have branches in many parts of the world. They operate through digital computer centers by means of punched cards, perforated tape, and magnetic tape. The largest and most advanced of these systems is the Automatic Digital Data Network (AUTODIN), which serves the U.S. Department of Defense. The Advanced Record System (ARS) serves the General Services Administration of the federal government. Other private wire systems serve large brokerage firms and banks.

D Computer Centers

In response to the needs of subscribers for a variety of communication and information services, “computer-library” centers have been established to provide exchange of data and collection of information of every possible type. The computer centers are available to subscribers through the Telex system and through normal telephone lines.

Microwave Tower

High-frequency microwave transmissions are beamed from point to point using tall antennas. The antennas must be within sight of each other, since the microwave signals travel in straight, narrow paths.

Communications Satellite

The Syncom 4 communications satellite was launched from the space shuttle Discovery. Modern communications satellites receive, amplify, and retransmit information back to earth, providing television, telefax, telephone, radio, and digital data links around the world. Syncom 4 follows a geosynchronous orbit—that is, it orbits at the same speed as the earth spins, keeping the satellite in a fixed position above earth. This type of orbit enables uninterrupted communication links between ground stations.

Microwave Transmission

Microwave communication can take two forms: terrestrial (ground) links and satellite links. The frequencies and technologies employed by these two forms are similar, but as you’ll see, distinct differences exist between them.

Terrestrial Microwave

Terrestrial microwave communication employs Earth-based transmitters and receivers. The frequencies used are in the low-gigahertz range, which limits all communications to line-of-sight. Microwave transmissions typically use a parabolic antenna that produces a narrow, highly directional signal. A similar antenna at the receiving site is sensitive to signals only within a narrow focus. Because the transmitter and receiver are highly focused, they must be adjusted carefully so that the transmitted signal is aligned with the receiver. A microwave link frequently is used to transmit signals in instances in which it would be impractical to run cables. If you need to connect two networks separated by a public road, for example, you might find that regulations restrict you from running cables above or below the road. In such a case, a microwave link is an ideal solution.

Some LANs operate at microwave frequencies at low power and use nondirectional transmitters and receivers. Network hubs can be placed strategically throughout an organization, and workstations can be mobile or fixed. This approach is one way to enable mobile workstations in an office setting.
Microwave systems are highly susceptible to atmospheric interference and also can be vulnerable to electronic eavesdropping. For this reason, signals transmitted through microwave are frequently encrypted.

Satellite Microwave
Satellite microwave systems relay transmissions through communication satellites that operate in geosynchronous orbits 22,300 miles above the earth. Satellites orbiting at this distance remain located above a fixed point on earth. Earth stations use parabolic antennas (satellite dishes) to communicate with satellites. These satellites then can retransmit signals in broad or narrow beams, depending on the locations set to receive the signals. When the destination is on the opposite side of the earth, for example, the first satellite cannot transmit directly to the receiver and thus must relay the signal through another satellite. Because no cables are required, satellite microwave communication is possible with most remote sites and with mobile devices, which enables transmission with ships at sea and motor vehicles.

Hubs
Hubs, also called wiring concentrators, provide a central attachment point for network cabling. Coaxial cable Ethernet is the only LAN standard that doesn't use hubs.

Hubs come in three types:

Passive Hubs
Passive hubs do not contain any electronic components and do not process the data signal in any way. The only purpose of a passive hub is to combine the signals from several network cable segments. All devices attached to a passive hub receive all the packets that pass through the hub. Because the hub doesn't clean up or amplify the signals (in fact, the hub absorbs a small part of the signal), the distance between a computer and the hub can be no more than half the maximum permissible distance between two computers on the network. For example, if the network design limits the distance between two computers to 200 meters, the maximum distance between a computer and the hub is 100 meters. As you might guess, the limited functionality of passive hubs makes them inexpensive and easy to configure. That limited functionality, however, is also the biggest disadvantage of passive hubs. ARCnet networks commonly use passive hubs. Token Ring networks also can use passive hubs, although the industry trend is to utilize active hubs to obtain the advantages cited in the following section.

Active Hubs
Active hubs incorporate electronic components that can amplify and clean up the electronic signals that flow between devices on the network. This process of cleaning up the signals is called signal regeneration.

Signal regeneration has the following benefits:

- The network is more robust (less sensitive to errors)
- Distances between devices can be increased.

These advantages generally outweigh the fact that active hubs cost considerably more than passive hubs. Active hubs function in part as repeaters, they occasionally are called multiport repeaters.

Intelligent Hubs
Intelligent hubs are enhanced active hubs. Several functions can add intelligence to a hub:

- Hub management.
  Hubs now support network management protocols that enable the hub to send packets to a central network console. These protocols also enable the console to control the hub; for example, a network administrator can order the hub to shut down a connection that is generating network errors.

- Switching hubs.
  The latest development in hubs is the switching hub, which includes circuitry that very quickly routes signals between ports on the hub. Instead of repeating a packet to all ports on the hub, a switching hub repeats a packet only to the port that connects to the destination computer for the packet. Many switching hubs have the capability of switching packets to the fastest of several alternative paths. Switching hubs are replacing bridges and routers on many networks.

Switches
A switch can be thought of as a bridge with many ports and low latency. The reasoning behind switches is one of "divide and conquer". We divide the network into many small networks, thus conquering a congestion problem. It is also worth noting that each of the new sub-networks each have the full Repeater Count available to it. Switches are thus useful in segmenting networks that exceed the maximum number of repeaters allowed.

In a "traditional" Ethernet network, there is 10 Mbps of bandwidth available. This bandwidth is shared among all of the...
users of the network who wish to transmit or receive information at any one time. In a large network, there is a very high probability that several users will make a demand on the network at the same time, and if these demands occur faster than the network can handle them, eventually the network seems to slow to a crawl for all users.

Switches allow us to create a “dedicated path” between individual users (or small groups of users) and their destination (usually a file server). The way they work is by providing many individual ports, each running at 10 Mbps interconnected through a high speed backplane. Each frame, or piece of information, arriving on any port has a Destination Address field which identifies where it is going to. The switch examines each frame’s Destination Address field and forwards it only to the port which is attached to the destination device. It does not send it anywhere else. Several of these conversations can go through the switch at one time, effectively multiplying the network’s bandwidth by the number of conversations happening at any particular moment.

Types Of Switches

There are three basic types of switches on the market at this time. They all perform the same basic function of dividing a large network into smaller subnetworks, however the manner in which they work internally is different. The types are known as Store and Forward, Cut Through, and Hybrid. A description of each type is shown below:

Store and Forward

A Store and Forward switch operates much as its name implies; first it stores each incoming frame in a buffer, checks it for errors, and if the frame is good it then forwards it to its destination port. The advantage of this type of switch is that it prevents wasting bandwidth on the destination network by invalid or damaged frames. The disadvantage is that it increases the latency of the switch slightly. In a network with few errors, this results in lower overall throughput through the switch. Store and Forward is most useful in networks which may experience high error rates.

Cut Through

A Cut Through switch operates differently than a Store and Forward type. In a Cut Through switch, the switch begins forwarding the frame immediately upon receiving the Destination Address. This results in a very low latency and is somewhat faster than a Store and Forward switch, as each frame is in the switch for less time. However, this scheme can propagate errors from one subnetwork to another, which can result in bandwidth being wasted in the forwarding of invalid or damaged frames. Cut Through switches work best in networks which experience few errors.

Hybrid

A Hybrid switch is an attempt to get the best of both Store and Forward switches and Cut Through switches. A Hybrid switch normally operates in Cut Through mode, but constantly monitors the rate at which invalid or damaged frames are forwarded. If these errors occur at a frequency higher than a certain threshold value, the switch then stops operating as a Cut Through switch and begins operating like a Store and Forward unit. If the error rate drops back below the threshold, then the switch will again go into a Cut Through mode. This gives the performance advantage of Cut Through switches when error rates are low and the error trapping of Store and Forward switches when error rates are high. Please note that the above three switch types only apply when the source and destination ports are running at the same speed. If the switch has to perform a speed conversion, as is usually the case when using a High Speed Backbone, then the switch must operate in a Store and Forward mode, and the difference between the switch types becomes a non-issue.

Repeaters

All media attenuate the signals they carry. Each media type, therefore, has a maximum range that it can reliably carry data. The purpose of a repeater is to extend the maximum range for the network cabling. A repeater is a network device that repeats a signal from one port onto the other ports to which it is connected. Repeaters operate at the OSI Physical layer.

A repeater does not filter or interpret—it merely repeats (regenerates) a signal, passing all network traffic in all directions. A repeater doesn’t require any addressing information from the data frame because a repeater merely repeats bits of data. This means that if data is corrupt, a repeater will repeat it anyway. A repeater will even repeat a broadcast storm caused by a malfunctioning adapter.

The advantages of repeaters are that they are inexpensive and simple. Also, although they cannot connect networks with dissimilar data frames (such as a Token Ring network and an Ethernet network), some repeaters can connect segments with similar frame types but dissimilar cabling. Some repeaters simply amplify signals. Although this increases the strength of the data signal, it also amplifies any noise on the network. In addition, if the original signal has been distorted in any way, an amplifying repeater cannot clean up the distortion. Certainly, it would be nice if repeaters could be used to extend networks indefinitely, but all network designs limit the size of the network. The most important reason for this limitation is signal propagation. Networks must work with reasonable expectations about the maximum time a signal might be in transit. This is known as propagation delay—the time it takes for a signal to reach the farthest point on the network. If this maximum propagation delay interval expires and no signals are encountered, a network error condition is assumed. Given the maximum propagation delay allowed, it is possible to calculate the maximum permissible cable length for the network. Even though repeaters enable signals to travel farther, the maximum
propagation delay still sets a limit to the maximum size of the network.

**Bridges**

Bridges can extend the maximum size of a network. Bridges operate at the MAC sublayer of the OSI Data Link layer. A repeater passes on all signals that it receives. A bridge, on the other hand, is more selective and passes only those signals targeted for a computer on the other side. A bridge can make this determination because each device on the network is identified by a unique address. Each packet that is transmitted bears the address of the device to which it should be delivered. The process works as follows:

1. The bridge receives every packet on LAN A and LAN B.
2. The bridge learns from the packets which device addresses are located on LAN A and which are on LAN B. The bridge then builds a table with this information.
3. Packets on LAN A that are addressed to devices on LAN A are discarded, as are packets on LAN B that are addressed to devices on LAN B. These packets can be delivered without the help of the bridge.
4. Packets on LAN A addressed to devices on LAN B are retransmitted to LAN B for delivery. Similarly, the appropriate packets on LAN B are retransmitted to LAN A.

On older bridges, the network administrator had to manually configure the address tables. Newer bridges are called learning bridges. Learning bridges function as described in step 2, automatically updating their address tables as devices are added to or removed from the network.

Bridges accomplish several things. First, they divide busy networks into smaller segments. If the network is designed so that most packets can be delivered without crossing a bridge, traffic on the individual network segments can be reduced. Bridges also can extend the physical size of a network. Although the individual segments are still restricted by the maximum size imposed by the network design limits, bridges enable network designers to stretch the distances between segments and extend the overall size of the network. Bridges, however, cannot join dissimilar types of LANs. This is because bridges depend on the physical addresses of devices. Physical device addresses are functions of the Data Link layer, and different Data Link layer protocols are used for each type of network. A bridge, therefore, cannot be used to join an Ethernet segment to a Token Ring segment.

Bridges sometimes are also used to link a LAN segment through a synchronous modem connection to another LAN segment at a remote location. A so-called remote bridge minimizes modem traffic by filtering signals that won't need to cross the modem line.

**Routers**

Routers organize a large network in terms of logical network segments. Each network segment is assigned an address so that every packet has both a destination network address and a destination device address. Recall that an internetwork consists of two or more logically separate but physically connected networks. By this definition, any network segmented with routers is an internetwork. Routers are more "intelligent" than bridges. Not only do routers build tables of network locations, but they also use algorithms to determine the most efficient path for sending a packet to any given network. Even if a particular network segment isn't directly attached to the router, the router knows the best way to send a packet to a device on that network. One consequence of all the processing a router performs on a packet is that routers generally are slower than bridges. You can use routers to divide large, busy LANs into smaller segments, much as you can use bridges.

Routers also can connect different network types. The protocols used to send data through a router must be specifically designed to support routing functions. IP, IPX, and DDP (the AppleTalk Network-layer protocol) are routable protocols. NetBEUI is a nonroutable protocol. Because routers can determine route efficiencies, they usually are employed to connect a LAN to a wide area network (WAN). WANs frequently are designed with multiple paths, and routers can ensure that the various paths are used most efficiently.

The Network layer functions independently of the physical cabling system and the cabling system protocols, independently that is, of the Physical and Data Link layers. This is the reason that routers easily can translate packets between different cabling systems. Bridges, on the other hand, cannot translate packets in this way because they function at the Data Link layer, which is closely tied to physical specifications.

Routers come in two types:.

**Static Routers.**

These routers do not determine paths. Instead, you must configure the routing table, specifying potential routes for packets.

**Dynamic Routers.**

These routers have the capability to determine routes (and to find the optimum path among redundant routes) based on packet information and information obtained from other routers. To determine the best path for a packet, routers employ some form of routing algorithm.

**Routing Algorithms**

Routing refers to the process of forwarding messages through switching networks. In some cases, routing information is programmed into the switching devices. However, preprogrammed switches cannot adjust to changing network conditions. Most routing devices, therefore, are dynamic, which means that they have the capability of discovering routes through the internetwork and then storing the route information in route tables. Route tables do not store only path information. They also store estimates of the time taken to send a message through a given route. This time estimate is known as the cost of a particular path.
Some of the methods of estimating routing costs are as follows:

**Hop count**—This method describes the number of routers that a message might cross before it reaches its destination. If all hops are assumed to take the same amount of time, the optimum path is the path with the smallest hop count.

**Tic count**—This method provides an actual time estimate, where a tic is a time unit as defined by the routing implementation.

**Relative expense**—This method calculates any defined measure of the cost (including the monetary cost) to use a given link.

After costs are established, routers can select routes, either statically or dynamically, as follows:

**Static route selection.**
This selection method uses routes that have been programmed by the network administrator.

**Dynamic route selection.**
Under this selection method, routing cost information is used to select the most cost-effective route for a given packet. As network conditions change and are reflected in routing tables, the router can select different paths to maintain low costs.

Two common methods of discovering routes are distance vector routing and link-state routing.

**Distance Vector Routing**
Distance vector routers advertise their presence to other routers on the network. Periodically, each router on the network broadcasts the information in its routing table. Other routers can use this information to update their own router tables. Distance vector routing is an effective algorithm, but it can be fairly inefficient. Because changes must ripple through the network from router to router, it might take a while for a change to become known to all routers on the network. In addition, the frequent broadcasts of routing information produce high levels of network traffic that can hurt performance on larger networks.

**Link-State Routing**
Link-state routing reduces the network traffic required to update routing tables. Routers that are newly attached to the network can request routing information from a nearby router. After routers have exchanged routing information about the network, routers broadcast messages only when something changes.

**Bouters**
A bouter is a router that also can act as a bridge. A bouter attempts to deliver packets based on network protocol information, but if a particular Network layer protocol isn’t supported, the brouter bridges the packet using device addresses.

**Gateways**
The term “gateway” originally was used in the Internet protocol suite to refer to a router. Today, the term “gateway” more commonly refers to a system functioning at the top levels of the OSI model that enables communication between dissimilar protocol systems. A gateway generally is dedicated to a specific conversion, and the exact functioning of the gateway depends on the protocol translations it must perform. Gateways commonly function at the OSI Application layer.

Gateways connect dissimilar environments by removing the layered protocol information of incoming packets and replacing it with the packet information necessary for the dissimilar environment. Gateways convert packet protocol information to connect dissimilar environments. Gateways can be implemented as software, hardware, or a combination of both.

**Modems**
Standard telephone lines can transmit only analog signals. Computers, however, store and transmit data digitally. Modems can transmit digital computer signals over telephone lines by converting them to analog form. Converting one signal form to another (digital to analog in this case) is called modulation. Recovering the original signal is called demodulation. The word “modem” derives from the terms modulation/demodulation. Modems can be used to connect computer devices or entire networks that are at distant locations. (Before digital telephone lines existed, modems were about the only way to link distant devices.) Some modems operate constantly over dedicated phone lines. Others use standard public switched-telephone network (PSTN) dial-up lines and make a connection only when one is required.

Modems enable networks to exchange e-mail and to perform limited data transfers, but the connectivity made possible is extremely limited. By themselves, modems don’t enable remote networks to connect to each other and directly exchange data. In other words, a modem is not an internetwork device. Nevertheless, modems can be used in conjunction with an internetwork device, such as a router, to connect remote networks through the PSTN or through an analog service, such as a 56 KB line.

Until recently, modem manufacturers used a parameter called baud rate to gauge modem performance. The baud rate is the oscillation speed of the sound wave transmitted or received by the modem. Although baud rate is still an important parameter, recent advances in compression technology have made it less meaningful. Some modems now provide a data transfer rate (in bits per second—a more meaningful measure of network performance) that exceeds the baud rate. In other words, you can no longer assume the baud rate and the data transfer rate are equal. Modems are classified according to the transmission method they use for sending and receiving data.
The two basic types of modems are as follows: Asynchronous modems. Synchronous modems

Overview
Communication between distant points is expensive. The faster the communication channel and the higher the bandwidth the more expensive it becomes. Few organisations can afford dedicated WAN links so a number of commercial options have been developed to enable affordable access to most people and organisations. These services are grouped into two main categories:

The Public Switched Telephone Network (PSTN)
Digital subscriber lines (leased lines)

The following pages describe the various services associated

PSTN
Dial-up services.
The customer pays on a per-use basis. Subscribers don't have exclusive access to a particular data path. The PSTN maintains large numbers of paths but not nearly enough to service all customers simultaneously. When a customer requests service, a path is switched in to service the customer's needs. When the customer hangs up, the path is reused for other customers. In situations in which the customer doesn't need full-time network access, switched service is extremely cost-effective.

An obvious example is the way many home users access the Internet via a modem and dial into their ISP.

Newer technologies designed to use the existing telephone wiring are collectively known as xDSL and they offer a dial-up service at greatly improved connection speeds.

Two very important network protocols that haven't been mentioned yet are the Point to Point Protocol (PPP) and the Serial Line Internet Protocol (SLIP). They were designed to support dial-up access to networks based on the Internet protocols. SLIP is a simple protocol that functions at the Physical layer, whereas PPP is a considerably enhanced protocol that provides Physical layer and Data Link layer functionality.

Leased Line Types
When organisations require full-time access to a communication path, a dedicated, leased line serves as one option. Several levels of digital lines are available, including those detailed in the following list:

Packet Routed Services
Many organizations must communicate among several points. Leasing a line between each pair of points can prove too costly. Many services now are available that route packets between different sites. Some of the packet-routing services discussed in this chapter are as follows:

NOTES:
Objectives:
Satellite Communications

Contents
Introduction; History and Development; Geosynchronous Orbit; Commercial Communications Satellites; Services; Recent Technical Advances.

Introduction
Communications Satellite, any earth-orbiting spacecraft that provides communication over long distances by reflecting or relaying radio-frequency signals.

I HISTORY AND DEVELOPMENT

Some of the first communications satellites were designed to operate in a passive mode. Instead of actively transmitting radio signals, they served merely to reflect signals that were beamed up to them by transmitting stations on the ground. Signals were reflected in all directions, so they could be picked up by receiving stations around the world. Echo 1, launched by the United States in 1960, consisted of an aluminized plastic balloon 30 m (100 ft) in diameter. Launched in 1964, Echo 2 was 41 m (135 ft) in diameter. The capacity of such systems was severely limited by the need for powerful transmitters and large ground antennas.

Satellite communications currently make exclusive use of active systems, in which each satellite carries its own equipment for reception and transmission. Score, launched by the United States in 1958, was the first active communications satellite. It was equipped with a tape recorder that stored messages received while passing over a transmitting ground station. These messages were retransmitted when the satellite passed over a receiving station. These messages were retransmitted when the satellite passed over a receiving station. Telstar 1, launched by American Telephone and Telegraph Company in 1962, provided direct television transmission between the United States, Europe, and Japan and could also relay several hundred voice channels. Launched into an elliptical orbit inclined 45° to the equatorial plane, Telstar could only relay signals between two ground stations for a short period during each revolution, when both stations were in its line of sight.

II GEOSYNCHRONOUS ORBIT

A satellite in a geosynchronous orbit follows a circular orbit over the equator at an altitude of 35,800 km (22,300 mi), completing one orbit every 24 hours, in the time that it takes the earth to rotate once. Moving in the same direction as the earth’s rotation, the satellite remains in a fixed position over a point on the equator, thereby providing uninterrupted contact between ground stations in its line of sight. The first communications satellite to be placed in this type of orbit was Syncom 2, launched by the National Aeronautics and Space Administration (NASA) in 1963. Most communications satellites that followed were also placed in geosynchronous orbit.

V COMMERCIAL COMMUNICATIONS

Deployment and operation of communications satellites on a commercial basis began with the founding of the Communications Satellite Corporation (COMSAT) in 1963. When the International Telecommunications Satellite Organization (INTELSAT) was formed in 1964, COMSAT became the U.S. member. Based in Washington, D.C., INTELSAT is owned by more than 120 nations. Intelsat 1, known as Early Bird, launched in 1965, provided either 240 voice circuits or one two-way television channel between the United States and Europe. During the 1960s and 1970s, message capacity and transmission power of the Intelsat 2, 3, and 4 generations were progressively increased. The first of the Intelsat 4s, launched in 1971, provided 4,000 voice circuits. With the Intelsat 5 series (1980), innovations in signal focusing resulted in additional increases in capacity. A satellite’s power could now be concentrated on small regions of the earth, making possible smaller-aperture, lower-cost ground stations.
An Intelsat 5 satellite can typically carry 12,000 voice circuits. The Intelsat 6 satellites, which entered service in 1989, can carry 24,000 circuits and feature dynamic on-board switching of telephone capacity among six beams, using a technique called SS-TDMA (satellite-switched time division multiple access). In the early 2000s, INTELSAT had 21 satellites in orbit, providing the world's most extensive telecommunications system. Other systems also provide international service in competition with INTELSAT. The growth of international systems has been paralleled by domestic and regional systems, such as the U.S. Telstar, Galaxy, and Spacenet programs and Europe's Eutelsat and Telecom.

V SERVICES

Commercial satellites provide a wide range of communications services. Television programs are relayed internationally, giving rise to the phenomenon known as the "global village." Satellites also relay programs to cable television systems as well as to homes equipped with dish antennas. In addition, very small aperture terminals (VSATs) relay digital data for a multitude of business services. Intelsat satellites now carry over 100,000 telephone circuits, with growing use of digital transmission. Digital source coding methods (see Telecommunications) have resulted in a ten-fold reduction in the transmission rate needed to carry a voice channel, thus enhancing the capacity of existing facilities and reducing the size of ground stations that provide telephone service.

The International Mobile Satellite Organization (INMARSAT), founded in 1979 as the International Maritime Satellite Organization, is a mobile telecommunications network, providing digital data links, telephone, and facsimile transmission, or fax, service between ships, offshore facilities, and shore-based stations throughout the world. It is also now extending satellite links for voice and fax transmission to aircraft on international routes.

VI RECENT TECHNICAL ADVANCES

Communications satellite systems have entered a period of transition from point-to-point high-capacity trunk communications between large, costly ground terminals to multipoint-to-multipoint communications between small, low-cost stations. The development of multiple access methods has both hastened and facilitated this transition. With TDMA, each ground station is assigned a time slot on the same channel for use in transmitting its communications; all other stations monitor these slots and select the communications directed to them. By amplifying a single carrier frequency in each satellite repeater, TDMA ensures the most efficient use of the satellite's onboard power supply.

A technique called frequency reuse allows satellites to communicate with a number of ground stations using the same frequency by transmitting in narrow beams pointed toward each of the stations. Beam widths can be adjusted to cover areas as large as the entire United States or as small as a state like Maryland. Two stations far enough apart can receive different messages transmitted on the same frequency. Satellite antennas have been designed to transmit several beams in different directions, using the same reflector.

A method for interconnecting many ground stations spread over great distances was demonstrated in 1993 with the launch of NASA's ACTS (Advanced Communications Technology Satellite). The satellite uses what is known as the hopping spot beam technique to combine the advantages of frequency reuse, spot beams, and TDMA. By concentrating the energy of the satellite's transmitted signal, ACTS can use ground stations that have smaller antennas and reduced power requirements.

The concept of multiple spot beam communications was successfully demonstrated in 1991 with the launch of Italsat, developed by the Italian Research Council. With six spot beams operating at 30 GHZ (uplink) and 20 GHZ (downlink), the satellite interconnects TDMA transmissions between ground stations in all the major economic centers of Italy. It does this by demodulating uplink signals, routing them between up- and downlink beams, and combining and remodulating them for downlink transmission.

Satellite communication and broadcasting

Satellite news gathering (SNG) is the use of mobile communications equipment for the purpose of worldwide newscasting. Mobile units are usually vans equipped with advanced, two-way audio and video transmitters and receivers, using dish antennas that can be aimed at geostationary satellites. The earliest SNG equipment used analog modulation, similar to conventional television and radio. The technology first demonstrated its capability during the war between England and Argentina over the Falkland Islands in 1982. Analog SNG was used extensively during the Desert Shield and Desert Storm operations in the Persian Gulf. During the 1990s, digital modulation supplanted analog modulation, giving rise to the newer technology of digital satellite news gathering (DSNG). A modern DSNG van is a sophisticated affair, capable of deployment practically anywhere in the civilized world. Signals are beamed between a geostationary satellite and the van, and between the satellite and a control room run by a broadcast station or network. In the most advanced systems, Internet Protocol (IP) is used. Broadcast engineers are currently working on designs for remotely controlled, robotic DSNG vehicles that can be teleoperated in hostile environments such as battle zones, deep space missions, and undersea explorations without endangering the lives of human operators.
Objectives:

Digital Communications
Once there is a digital link between two sites, there is still the question of how to transfer data between them. Different practices are used for voice, digital and video communications. These document explains some of the methods used, as well as explains terms in digital multiplexing.

Analog to Digital conversion
The human voice is a continues signal in the range 0-4 KHz. Digital communication on the other hand, is based on discrete bits (0 and 1). Therefore, there is a need for converting the human voice into a stream of bits and vice versa.

The analog to digital conversion is done by sampling the sound wave and denoting the level of the wave by a number which is transmitted over the digital link. The reverse process is done by creating a wave according to the received numbers. According to Nyquist law, the minimum number of such wave samples needed for complete reconstruction of the wave is twice the number of the maximum frequency of that wave.

This yields: \(2 \times 4K = 8K\) Samples per second.

The most common method for denoting the level of the wave is called PCM. These method divides the level into 256 levels (8 bits).

Thus, if sampling 8K times a second, each sample in the range of 0-255 we need 8K * 8 = 64K bits per second per voice line.

What is multiplexing?
Clearly there is a need to transfer much more than a single channel between two sites. However, stretching a separate line for every channel is clearly not a good solution.

Multiplexing is a way of sending several (indeed - many) channels over a single line. This is done by using TDM - Time Division Multiplexing. Suppose we have 32 channels, each with a rate of 64Kbs, that we wish to transfer to the other end. The multiplexer takes from each of the 32 lines a single byte and sends them one after the other. After doing so, it takes the next byte from every channel, and so on.

Clearly, if we don’t want bytes to get lost, the multiplexer must be able to send all the 32*8 bits from the 32 channels without the second byte of the first channel getting lost.

This implies that the output rate of the multiplexer should be at least 32*64Kbs or 2048 Kbs. This method is called Time Division Multiplexing (TDM) because the multiplexer took the 1/8000 sec needed for transferring a single byte of a single channel, and divided it between the 32 channels by increasing the rate so that each byte of a channel will take 1/(8000 * 32) sec to send.

Here is an example of multiplexing 3 channels of 64Kbs each:

This method could be further used for increasing the number of channels yet again from 32 channels to 4*32 channels and so on. Each increase is of course accompanied by a suitable increase in the bit rate of the line.

Well, we succeeded in sending 32 channels over a single line, but how will the receiving end (the demultiplexer) know which bit belongs to which channel?

Synchronization
Special bits in the bit stream are used for synchronization. These bits tell the demultiplexer where a new 32 byte group starts so it will know how to divide the following bits between the channels. No synchronization is needed for distinguishing between each of the 32 channels.

If we multiplex several 32 channels together, more synchronization bits are added for distinguishing between the different groups.
Digital data and Video

The upside for transmitting digital data or video is that no analog to digital conversion is needed. Instead, the bit stream is directly inserted into the multiplexer. Video, which needs a much higher bit rate than 64Kbs is usually inserted directly into the second level multiplexer, thus allowing a bit rate of 1.5-2 Mbs.

Standards

Obviously, standards have to be made if we would like equipment from different manufacturers to work with each other. Alas, there are more than one standard.

The most important ones are CEPT/E1 which is used mainly in Europe and T1 which is used mainly in the US. and some far-eastern countries.

Although both standards start with a single channel rate being 64Kbs those channels are still incompatible because of the different ways by which the voice was digitized.

CEPT/E1

The first hierarchy of E1 is composed of 32 channels totaling 32*64Kbs = 2048 Kbs. Two of the channels are not used for transmitting data but for frame synchronization and signaling. The bit rate is 2.048 Mbit/s. The hierarchies are presented in the following table:

<table>
<thead>
<tr>
<th>Bit rate</th>
<th>Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.048 Mbit/s</td>
<td>30</td>
</tr>
<tr>
<td>8.448 Mbit/s</td>
<td>120</td>
</tr>
<tr>
<td>34.368 Mbit/s</td>
<td>480</td>
</tr>
<tr>
<td>139.264 Mbit/s</td>
<td>1920</td>
</tr>
</tbody>
</table>

T1

The first hierarchy of T1 is composed of 24 64Kbs channels plus 8 Kbs used for signaling totaling 24*64 + 8 = 1544 Kbs. The hierarchies are presented in the following table:

<table>
<thead>
<tr>
<th>Name</th>
<th>Bit rate</th>
<th>Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSl</td>
<td>1.544 Mbit/s</td>
<td>24</td>
</tr>
<tr>
<td>DS2</td>
<td>6.312 Mbit/s</td>
<td>96</td>
</tr>
<tr>
<td>DS3</td>
<td>44.736 Mbit/s</td>
<td>672</td>
</tr>
<tr>
<td>DS4</td>
<td>139.264 Mbit/s</td>
<td>2016</td>
</tr>
</tbody>
</table>

1. What is Computer-Mediated Communication?

Computer-mediated communication is the exchange of information between persons by way of computer networks, this can be all kinds of information, for example text, images, audio, and video. The exchange of information can be real time communication or synchronous, this means that people are communicating with each other at the same time. An other form of communication is asynchronous, this means that people are communicating at different times. They can send and receive their messages at any time they want.

2. Systems for Computer-Mediated Communication

Now that CMC is defined an overview is given of systems that can be used for computer-mediated communication:

E-mail.

The user produces, sends and receives mail at a computer. The messages will be stored on a server and the user can get his mail when he wants to. Usually the message will contain only text, but it’s also possible to attach files to the messages with images, audio etc. although this feature isn’t supported by all e-mail software. Examples are Netscape mail and Pegasus mail.

World Wide Web (WWW)

is the part of the Internet that brings together all of the different kinds of online resources available (e.g. file archives, remotely accessible databases, newsgroup discussions) via wordprocessor-like documents. Web documents, which can integrate text, graphics, sound, and motion, usually contain links to other Internet resources (Harris, 1995). On the WWW some communication facilities are available, for instance it is possible to put your comments on a web-page in a synchronous or asynchronous manner and other people can add their comments. For example l’ Hotel Chat.

Newsgroups or bulletin board systems

are public discussions on more than 10,000 different topics on the Internet. Single copies of articles are stored in a publicly accessible place. With a newsreader program users can read what others have written, respond publicly or privately to the article’s author, and post new ideas, questions or requests to the newsgroup (Harris, 1995). An example is Netscape news.

Computer conferencing

allows a group of people to hold a discussion by computer. Members of the group can use the system to post messages to the whole group, and discussions can thus take place over a period of time. These systems have also possibilities for real time interaction. The members of the group are in a separate network (Winnips, 1996) this in addition to newsgroups. An example is First class.

Audio conferencing

is the simultaneous connection of many different telephone lines (Walters, 1995). In this way a group of people can communicate with each other by way of the telephone. This system is mentioned here because nowadays it is also available on the Internet. In the continuation of this paper only the latter possibility is considered. This is possible with Microsoft Netmeeting.

Video conferencing

is real time video and audio communication between people in different locations. A videocamera, a monitor and some features
to control them are needed to send and receive the information. This system is also available on the Internet and this possibility is only considered in this paper. A system for videoconferencing is CU-SeeMe.

**Voice mail systems**

Are electronic mail systems for spoken messages (Palme, 1995). The telephone can also be used to send messages en receive them so a computer is not necessary. An example of this is IPhone.

**IRC**

Is a mode of interaction on the Internet in which people are able to communicate synchronistically on different 'channels' from disparate locations (Baym, 1995). This communication is text-based, but it is possible to send images as an attachment. Examples are Microsoft Netmeeting and mIRC.

**MUD/MOO**

means Multi User Dungeons/MUD Object Oriented. It is a synchronous system in which users can interact in real time by typing text. It is virtual reality because it describes (in text) objects like rooms or buildings and users that are in the same place that you are. You are a character in this environment that can take actions by typing commands like walk, whisper, kick etc. (Winnips, 1996). For example MUD.

**Whiteboard environments**

Are virtual meetings where each participant can use the mouse to draw sketches on the whiteboard. As each user is drawing, every other user connected to the server sees the updates almost immediately. Most whiteboard programs also have a chat window where participants can type messages to each other (Tang, 1995). This is possible with Microsoft Netmeeting.

**Work flow applications**

Have intrinsic and interactive rules that embody the business process. So the work flow management rules underlie the movement of data from person to machine, control the manner in which the data is processed, and control the way data is stored (Walters, 1995). A work flow application can for instance make sure that some actions are taken by certain people. This in addition to computer conferencing software which has no direct control over the process a group of people is involved in. An example of this application is Lotus Notes.

For all of these CMC systems you will need a common computer, a network connection and special software. If you want to use audio conferencing or voice mail you also need a microphone and a soundcard. And for video conferencing you will need besides all former mentioned equipment a special video camera. Now that an overview is given of CMC systems and some characteristics of these systems are mentioned, the use of CMC systems in a learning context will be discussed.

2.1 Media supported by computer-mediated communication

These different CMC systems support different kinds of media. Five kinds of media will be distinguished here: text, graphics, images, audio and video (Walters, 1995, Agnew & Kellerman, 1996):

(a) text consists of letters, numbers, punctuation, special characters, and controls,
(b) graphics are lines, circles, boxes, shading, fill colors etc.,
(c) images are still pictures, expressed as the colors of many small individual picture elements (pixels), this can be photographs or paintings,
(d) audio consists of sound, including voice, music, and special effects, and
(e) video consists of successive pictures presented sufficiently rapidly to give the appearance of smooth motion.

The kind of media that the CMC system supports is very important for the learning process, because it defines which information can be communicated. If graphics or diagrams are very important in the learning content, then it is necessary that they can be communicated between students and teachers, in that case the CMC system needs to support graphics. Another possibility is that the teacher wants to communicate some attitude to the students, in that case it is important that the CMC system supports video. Table 1 gives an overview of the kinds of media that can be transmitted by each system.

Table 1 Overview of CMC systems and the kind of media they support

<table>
<thead>
<tr>
<th>CMC / Media</th>
<th>Text</th>
<th>Graphics</th>
<th>Image</th>
<th>Video</th>
<th>Audio</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>WWW</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newsgroups</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer conferencing</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio conferencing</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video conferencing</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Voice mail</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>IRC</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>MUD/MOO</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whiteboard environment</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work flow</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

a As an attachment and not available in all software. b Not available in all software.

2.2 Synchronous and Asynchronous Communication

The synchrony or asynchrony of the communication is also an important factor in the learning process. They both have some positive and negative influences on this process. In synchronous communication the student is heavily dependent on understanding the presentation and discussions as they happen, and on taking good notes, or on a good memory. At the same time the contributions of both teacher and student are spontaneous (Bates, 1995; Mason, 1994). In asynchronous communication the other hand the learner has more time to think about his contribution, but their is less pressure to respond. Which form of communication is most suitable depends on which activities it will be used for. For example asynchronous communication is best suitable for exercises.
synchronous communication is very useful for socializing and for discussion both can be used.

Table 2 CMC systems and synchronous and asynchronous communication

<table>
<thead>
<tr>
<th>CMC System</th>
<th>Synchronous</th>
<th>Asynchronous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>WWW</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Newsgroups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer conferencing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Audio conferencing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Video conferencing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Voice mail</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>IRC</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>MUD/MOO</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Whiteboard environment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Workflow</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

3. Interaction in Distance Education

3.1 Three Ways of Interaction in Distance Education

In Chapter 1 is already mentioned that CMC is very important in distance education. It can facilitate the interaction between spatially separated learners (Jonassen, 1995). Within the learning context different ways of interaction can be distinguished: student-content, student-student and student-teacher interaction (Moore, 1989). Here only the last two will be considered, student-content interaction will be discussed in the next section.

This interaction between students and between students and teachers can take place in different ways: the students can ask questions either to other students or the teacher, they can answer questions from students or teachers, they can work on assignments alone or with other students and they can discuss certain subjects with other students or the teacher. Teachers can answer questions of students, they can ask the students questions or give them assignments, they can give feedback on their answers and they can discuss with the students (Jonassen et al., 1995).

3.2 Computer-Mediated Communication and Computer-Based Learning

CMC is not a technology that suits all types of learning, courses or learners. It is usually best used in conjunction with other technologies, particularly when there is a need for information transmission as well as discussion (Bates, 1995). For this information transmission another technology should be used, such as courseware, books or television, although some of the systems such as video conferencing can be used. In this section courseware or computer-based learning will be considered as a tool for presenting the content.

There are two quite different forms of teaching by way of a computer: pre-programmed computer-based learning or CBL and computer-mediated communications. With CBL the student works through pre-designed material, interacting by answering questions embedded within the materials and choosing options or routes through the learning material. The computer program is also capable of using students' responses to questions to control routes through the material, and/or to provide feedback on learner responses to questions. CBL programs can also be designed to assess students, and keep records of progress. These records can be assessed by a tutor or instructor. Within these CBL programs different kinds of media can be used such as audio and video. A major drawback of CBL is that by restricting interaction between humans, and limiting the learners’ ability to responding within pre-determined boundaries, it constrains the capacity of the individual to personalize the learning, or to create constructions of knowledge that are unanticipated in the design of the teaching material (Bates, 1995). By using CMC in combination with CBL this problem can be solved, because the students has the possibility then to interact with other students and the teacher.

4. Advantages and Disadvantages of CMC Systems

From the previous text it appeared that CMC is very important in distance education. The question is which CMC systems are useful in a certain learning context. They all have some advantages and disadvantages. These will be discussed for each CMC system:

**E-mail.**

This system has some advantages according to Tang (1995): e-mail can be sent at your convenience, it is a fast and worldwide communication tool, e-mail can be sent as easily to one person, to several or to many, e-mail can be sent with an attached file, messages can be retained as reminders and it is an inexpensive communication tool. Another advantage according to Palme (1995) is that the equality between people increases, more people are allowed to have their say, there is less risk of one single person dominating. Mason (1994) mentions as a disadvantage, that this asynchronous communication has no pressure to respond. Palme (1995) mentions that it can be difficult to reach consensus, because of the lack of body language, voice inflections and facial expressions.

**WWW.**

Winnips (1996) mentions as a disadvantage that it is difficult to put graphics on the pages. On the WWW synchronous and asynchronous communication can be used. A disadvantage of synchronous communication is that readers need good typing skills (Winnips, 1996). A disadvantage of asynchronous communication is that it has no pressure to respond (Mason, 1994).

**Computer conferencing.**

Mason (1994) mentions some advantages of computer conferencing: interactivity, it develops written communication skills, it facilitates collaborative discussions and peer activities, it develops the independence and self-directed approach of the learner, learners can benefit from the expertise of other learners, it is motivating for the learners, it has a democratic and equalizing tendency and it facilitates interaction among people from different cultural backgrounds, because it is easier to write in a second language then to speak the language. Walters (1995) mentions as an advantage that participants can enter and leave the conference as they wish and automatically have access to a record of all past interchanges. Some disadvantages according to Mason (1994) are that there is no pressure to respond, it can lead to chaos and an overwhelming number of messages, it's
time-consuming, only a small number of students dominate the interaction, it is not good for decision-making processes or group consensus, there is a chance for online rows, usually arising from misunderstandings and because of the costs it is not available to everyone.

**Audio conferencing.**
An advantage of this system is that it supports spoken text. This can be very helpful for students who have a problem with writing. A disadvantage of this system is according to Walters (1995) that it is difficult to manage, it can be difficult to ascertain who is talking when there are more than two persons involved. Palme (1995) mentions as a disadvantage that everyone has to participate at the same time.

**Video conferencing.**
Advantages of video conferencing are according to Mason (1994): it allows visual communication and in this way creates social presence and a comfortable environment for learning, students can interact in a very natural and spontaneous way and it gives the opportunity for lectures of people living abroad. He also mentions some disadvantages: the costs of equipment and usage and it demands a lot of concentration, because of the lack of complete lip synchronization.

**Newsgroups.**
Tang (1995) mentions as an advantage of newsgroups that the messages do not take space on your computer unless you save them. Because newsgroups are about the same as computer conferences the same advantages and disadvantages can be mentioned here.

**Voice mail.**
An advantage of this system is that spoken text is used. This can be helpful for students who are not good writers. Other advantages are that voice mail can be sent at your convenience, voice mail can be sent as easily to one person, to several or to many, voice mail can be sent with an attached file and messages can be retained as reminders. Mason (1994) mentions as a disadvantage, that this asynchronous communication has no pressure to respond. Another disadvantage is that special equipment is needed, such as a microphone and soundcard.

**IRC.**
Advantages of IRC are that students get direct feedback on their remarks and their is some pressure to react because of the synchronous nature. Other advantages are that communication is possible with a group of people and with one person, files can be sent in real time, it is an inexpensive tool and it can be motivating for the students, because they have a sense of real communication. Disadvantages of the synchronous nature are that the students should have good typing skills and the students and teachers must be on IRC at the same time.

**MUD/MOO.**
This can be very motivational for students, because it simulates an environment where students are free to explore new knowledge and meet new people, but it will take a lot of programming to set up a MUD. Another disadvantage can be that the students should have good typing skills, because it is a synchronous system (Winnips, 1996). And because of the synchronous nature of the system students and teachers should be behind their computers at the same time.

**Whiteboard environments.**
An advantage of whiteboard systems is that it is possible to draw pictures and give an explanation at the same time. In this way it is easy to explain certain kind of things. Because of it's synchronous nature, there is some pressure to respond. This synchronous nature also has some disadvantages: the participants should have good typing and drawing skills and they should be behind their computers at the same time.

**Work flow applications.**
Walters (1995) mentions as an advantage of this system that it is not passive. The system makes sure that messages will be answered and actions are completed.

5. The Selection of a CMC System
From the overview in Chapter 1 it appears that not every system is useful in all learning situations. In this chapter some questions will be discussed for the selection of a CMC system in a certain learning situation (Bates, 1995; Heeren, 1996; Reiser and Gagné, 1983). These questions are divided into three groups: Users, learning, and equipment:

**Users.**
Are the users good readers? Are the users good writers? How do the users of the CMC system think of new technologies?

**Learning.**
What kind of media are necessary? What kind of communication is needed? What is the role of CMC in the course? How much control is allowed to the students?

**Equipment.**
Which CMC systems are already in use in the institution and can also be used in this situation? Do the users have access to the necessary equipment? How much money is available for the equipment? How much time is available for the development?

5.1 Users
It is very important to consider if the students are good writers or readers, because for some CMC systems this is very essential, e.g. e-mail and IRC. If the students are not good readers and/ or writers then audio or video conferencing should be used. It is also important to know how people think of new technologies. New technologies can motivate certain people, but can also provoke strong negative reactions from others (Bates, 1995).

5.2 Learning
What kind of media are necessary depends on the activities the CMC system will be used for, this was mentioned in section 2.1. When the necessary media are established, Table 1 can be used to select the matching CMC system or systems. What kind of communication is needed, synchronous or asynchronous, also depends on the activities, as mentioned in section 2.2. Table 2 can be used to select the matching CMC system or
systems. The role of CMC in the course is connected to the former two questions. When the role of CMC is to put questions to the teacher and receive answers, the necessary media and kind of communication can be established. How much control is allowed to the students? For example, are students allowed to set up their own conference and are their time limits for them being online? Some CMC systems can limit access or extent of use for any individual account. In general institutions should avoid exercising control over the content of conferences, especially if the students are adults (Bates, 1995).

5.3 Equipment

Are there already systems in use that can be used in this situation? It is always useful to look at CMC systems that are already in use in the institution. If it is possible to use these systems, it will save a lot of time and money. Another important question is whether the students have access to the necessary equipment. For instance, they need a good telephone line, a computer and modem, and for video conferencing even more equipment is needed. If the learners don’t have access to this equipment then the question is whether it is possible, mostly financial, to provide them with this equipment. So the costs of the CMC systems are also an important factor. It is necessary to look at an early stage how much money is available for equipment, software, and telephone charges. Some software can be freely downloaded from the Internet; other software such as workflow applications can be very expensive. Asynchronous systems account for small telephone charges, while synchronous communication can lead to very high telephone charges.

In this chapter some questions were given to help select the appropriate CMC system in a certain learning context. The emphasis is on help, because there are too many factors that influence this decision and so it is impossible to give some rules that will always lead to a good solution.

Satellite Distribution System (SADIS)
(Meteorological Telecommunication Home)

SADIS is an operational system dedicated to primarily to aeronautical meteorological information in line with ICAO (International Civil Aviation Organisation) worldwide provision. It provides a point to multipoint service on a 24-hrs. basis via satellite. The SADIS uplink is situated at the Mercury Communications at Whitehill Earthstation in UK. The meteorological data and products are provided from WAFC London and are uplinked from the hub at Whitehill to the INTELSAT satellite 604 located at the Indian Ocean at 60° E. The data is downlinked via a global beam to user anywhere in the AFI & MID regions and in the Asia and EVR regions as far eastwards as 140° E. The receiving system consists of a 2.4 m diameter-receiving antenna at the receiving unit mounted indoors. A processing displayed system connected to the receiver for generating/viewing/printing the SADIS products. The products received by SADIS are 1. Upper air wind / temperature, tropopause and maximum wind forecast in GRIB code. 2. Coded digital facsimile charts for upper wind/temperature at selected flight level and SIGWX forecasts. 3. OPMET (operational meteorological) information like METER, TAFS, SIGMET, AIREPs, Volcanic ash and tropical cyclone advisory messages.

NOTES:
LESSON: 24
GROUND RECEIVING AND TRANSMISSION SYSTEMS
(UPLINING AND DOWNLINING SYSTEMS)

Objectives:

GUIDELINES FOR UPLINKING FROM INDIA
The Union Government has taken a decision on 25th July, 2000 to further liberalise its Uplinking Policy and permit the Indian private companies to set up uplinking hub/teleports for licensing/hiring out to other broadcasters. The new policy also permits uplinking of any television channel from India. It also allows the Indian news agencies to have their own uplinking facilities for purposes of newsgathering and its further distribution. The salient features of eligibility criteria, basic conditions/obligations and procedure for obtaining the necessary permission for these services are briefly described below. For details, reference should be made to the relevant terms and conditions of Licences/Permission/Approval.

1. LICENCE FOR SETTING UP OF UPLINK HUB/TELEPORTS:

(i) ELIGIBILITY CRITERIA:
1. Company to be incorporated in India
2. Foreign equity holding including NRI/OCB/PIO not to exceed 49%

1. PERIOD OF LICENCE:
1.10 years.

2. BASIC CONDITIONS/OBLIGATIONS:
1. To uplink only those TV channels which are specifically approved or permitted by the Ministry of I&B for uplinking from India.
2. To stop uplinking of TV channels whenever permission/approval to such a channel is withdrawn by the Ministry of I&B.
3. Can uplink both to Indian as well as foreign satellites.
   However, proposals envisaging use of Indian satellite will be accorded preferential treatment.
4. To keep record of materials uplinked for a period of 90 days and to produce the same before any agency of the Government as and when required.
5. To permit the Government agencies to inspect the facilities as and when required.
6. To furnish such information as may be required by the Ministry of I&B from time to time.
7. To provide the necessary monitoring facility at its own cost for monitoring of programme or content by the representative of the Ministry of I&B or any other Government agency as and when required.
8. To comply with the terms and conditions of the licensing Agreement to be signed between the Applicant and the Ministry of I&B.
9. To comply with the terms and conditions of the Wireless Operational licence to be issued by WPC.
10. To uplink in C-Band only.
11. The satellite to which uplinking is proposed should have been co-ordinated with Insat system.
12. Failure to comply with the terms and conditions of above licences would result in termination/cancellation of the licences.

(iv) PROCEDURE:
1. To apply to the Secretary, Ministry of I&B, in triplicate, in the prescribed proforma (Form 1).
2. On the basis of information furnished in the application form, if the applicant is found eligible for setting up uplinking hub/teleport, its application will be sent for security clearance to the Ministry of Home Affairs and for clearance of satellite use to the Department of Space (wherever proposal is made for use of satellite).
3. As soon as these clearances are obtained, the applicant would be required to sign a licensing agreement with the Ministry of I&B as per prescribed proforma (Form 1A).
4. After signing the licensing agreement with the Ministry of I&B, the applicant can approach to the Wireless Planning & Coordination (WPC) Wing of the Ministry of Communications for seeking operating licence for establishment, maintenance and operation of uplinking facility.
5. The applicant will pay the licence fee and royalty, as prescribed by WPC Wing from time to time, annually, for the total amount of spectrum assigned to Hub/Teleport station, as per norms & rules of the WPC Wing.
6. The Hub/Teleport station owner will inform WPC Wing the full technical and operations details of TV channels proposed to be uplinked through his/her Hub/Teleport in prescribed format.

2. PERMISSION/APPROVAL FOR UPLINKING A TV CHANNEL FROM INDIA
(In case a TV channel proposes to set up its own uplinking facility/earth station, it has to apply separately for the same after following the procedure as in case of ‘1’ above.)

(i) ELIGIBILITY CRITERIA
1. Any TV channel irrespective of its ownership, equity structure or management control which is aimed at Indian viewership.

(ii) PERIOD OF APPROVAL/PERMISSION
2.10 years.

(iii) BASIC CONDITIONS/OBLIGATIONS:
12. To undertake to comply with the Broadcasting (Programme & Advertising) Codes laid down by Ministry of Information & Broadcasting.

13. To keep record of materials uplinked for a period of 90 days and to produce the same before any agency of the Government as and when required.

14. To furnish such information as may be required by the Ministry of I&B from time to time.

15. To provide the necessary monitoring facility at its own cost for monitoring of programme or content by the representative of the Ministry of I&B or any other Government agency as and when required.

16. If the applicant hires its own transponder on a satellite, the same should be in C-Band and should have been co-ordinated with INSAT system.

17. To comply with the terms and conditions of the permission/approval of the Ministry of I&B.

8. Failure to comply with the terms and conditions of the permission/approval would result in withdrawal of such permission approval.

iv) PROCEDURE:

7. To apply to the Secretary, Ministry of Information & Broadcasting in triplicate in the prescribed proforma (Form-2) along with an affidavit in Form 2 A.

8. After receiving the application and the affidavit as provided above, if the applicant is found eligible, the same will be sent for security clearance to the Ministry of Home Affairs and for clearance of satellite use to the Department of Space (Only in respect of those case where the applicant proposes use of a particular satellite instead of leasing it out from the uplink service provider).

9. As soon as these clearances are obtained, the applicant would be permitted to uplink its channel(s) through a hub/teleport as requested.

10. After receiving the permission for uplinking from India, the applicant can approach the uplinking hub(teleports) owner for providing the necessary uplinking facility for their channel(s).

3. LICENCE FOR UPLINKING TO INDIAN NEWS AGENCIES:

i) ELIGIBILITY CRITERIA

1. The Company/Agency to be incorporated in India
2. Accredited by Press Information Bureau (PIB).
3. 100% owned by Indian with Indian Management Control.

ii) PERIOD OF LICENCE

1. As per WPC licence.

iii) BASIC CONDITIONS/

OBLIGATIONS:

19. To use uplinking for news-gathering and its further distribution to other news agencies/broadcasters only.

20. Not to uplink TV programmes/channels for direct reception by public.

21. To keep record of materials uplinked for a period of 90 days and to produce the same before any agency of the Government as and when required.

22. To furnish such information as may be required by the Ministry of I&B from time to time.

23. To provide the necessary monitoring facility at its own cost for monitoring of programme or content by the representative of the Ministry of I&B or any other Government agency as and when required.

24. Conformity with the provisions of inter-system coordination agreement between INSAT & the satellite to be used.

25. To comply with the terms and conditions of the ‘No Objection Certificate’ to be issued by the Ministry of Information & Broadcasting.

26. To comply with the terms and conditions of Wireless Operational Licence to be issued by the WPC.

27. Failure to comply with the terms and conditions of the ‘No Objection Certificate’ or the Wireless Operational Licence would result in withdrawal or cancellation of such certificate or licence.

iv) PROCEDURE:

11. To apply to the Secretary, Ministry of Information & Broadcasting in triplicate in the prescribed proforma (Form-3).

12. On the basis of information furnished in the application form, if the applicant is found eligible for setting up uplinking facility, its application will be sent for security clearance to the Ministry of Home Affairs and for clearance of satellite use to the Department of Space.

13. As soon as these clearances are obtained, the applicant would be issued No Objection Certificate for uplinking by Ministry of Information & Broadcasting.

14. After issue of No Objection Certificate by Ministry of Information & Broadcasting, the applicant can approach the Wireless Planning & Coordination (WPC) Wing of the Ministry of Communications for seeking operating licence for establishment, maintenance and operation of its own uplinking facility or approach another licensee of uplinking for hiring or leasing the hub/teleport facility.

15. The applicant will pay the licence fee and royalty as prescribed by WPC Wing from time to time, annually, for use of spectrum, as per norms and rules of the WPC (in case of its own facility).

The Secretary
Ministry of Information & Broadcasting
‘A’ Wing, Shastri Bhawan
New Delhi-110 001
1. Name of Applicant Company
2. Particulars of the Directors
   Sl.No. Name Nationality Address
   1. Regional Office
   2. Regional Office

   ii) Telephone Number (s)
   iii) Registration details (enclose certificate of incorporation/registration)

3. Structure of Equity Capital
   1. Authorised share capital
   2. Paid up share capital

4. Share-Holding pattern (Enclose details as per Annexure)
   1. Direct investment
      1. Indian _______%
      2. Foreign _______%
   2. Break-up of Foreign Direct Investment
      Individual..........%
      Company...........%
      NRI................%
      OCB...............%
      PIO...............%
   2. Foreign Portfolio Investments
      1. Indian..........%
      2. Foreign.......%
   3. Break-up of Foreign portfolio Investment
      FII
      NRI
      OCB
      PIO

5. Present field of activity

6. Details of teleport
   i) Location of teleport
   3. Capacity of teleport (Proposed)
      (a) No. of channels:
      (b) No. of satellites:
      (c) No. of proposed earth stations constituting teleport
      (d) Approximate date for commissioning the teleport
      (e) Antenna size of the teleport, EIRP

   7. If the company proposes to lease satellites/transponders also for providing to the broadcasters, give details as under:
      Name of satellites proposed to be hired
      Orbital location
      Type and No. of transponders with bandwidth
      Signal strength in primary zone over India
      Name of the Company from which the satellite/transponder is to be leased
      (Enclose Lease Agreement and footprint of each satellite proposed to be hired)

   I/We, ________________________________ the applicant(s) do hereby declare that the above facts are correct in all respects.
   Place :
   Date :
   Name
   Office Address:
   Enclosures:
   S.No. Category of Shareholders.
   Share Holding
   Direct Investment
   Portfolio Investment
   No. of Shares
   % of total paid up shares
   No. of Shares
   % of total paid up shares
   1. 2. 3. 4. 5. 6. 7. 8. 9. 10. Indian individual
      Indian company
      Foreign individual
      Foreign company
      NRI
      OCB
      FII
      PIO
      Any other
      S.No.
      Share Holding
      Direct Investment
      Portfolio Investment
      No. of Shares
      % of total paid up shares
      No. of Shares
      % of total paid up shares
NOW THIS AGREEMENT WITNESSEE AS UNDER:

1. Unless otherwise mentioned in the subject or context appearing hereinafter, the Schedule annexed hereto including the guidelines issued/or to be issued from time to time by the Ministry of Information and Broadcasting and the terms and conditions of the Wireless Operational Licence to be issued by the Wireless Planning & Coordination Wing in the Ministry of Communications, Government of India shall form part and parcel of this Licence Agreement.

Provided, however, in case of conflict or variance or an issue relating to the same, the terms set out in the main body of this Agreement read with all the Schedules annexed hereto shall prevail.

2. The Licence shall be governed by the provisions of the Indian Telegraph Act, 1885 and Indian Wireless Telegraphy Act, 1933 as modified from time to time and any other Act which may come in to force.

3. The Licensee shall use its teleport facility for uplinking only such TV channels, which have been specifically approved/permitted by the licensor for uplinking by the licensee and shall stop uplinking their TV channels forthwith in respect of which the permission/approval have been withdrawn by the Licensor.

4. The Licensee shall abide by all the terms and conditions required for issuance of operational licence by the WPC.

5. The Licensee shall furnish such information and returns as required by the Licensor from time to time.

6.4 All foreign personnel likely to be deployed by way of appointment, contract, consultancy, etc. by the Licensee for installation, maintenance and operation of the Licensee's services shall be required to obtain security clearance from the Government of India prior to their deployment.

6.5 Licensee should make available detailed information about the equipment & its location as and when required by the licensor or its authorized representatives including authorized officers of Ministry of Home Affairs.

ARTICLE-7

8.1 The Licensee shall provide the necessary facility for continuous monitoring of the broadcasting service at its own cost and preserve the recordings of broadcast material for a period of three months from the date of broadcast and produce the same to the Licensor or its authorised representative, as and when required.

8.2 The Licensee shall furnish any such information at periodic intervals as may be required by the Licensor concerning Channels being uplinked, Technical Parameters etc. relating to the uplinked channels in the format as may be prescribed by the Licensor from time to time.

ARTICLE-9

INSPECTION BY THE GOVERNMENT

9.1 The Licensor or its authorised representative shall have the right to inspect the uplinking facilities. The Licensor shall, in particular but not limited to, have the right to access to the uplinking infrastructure namely teleport & monitoring facilities & records. No prior permission/intimation shall be required to exercise the right of Licensor to carry out the inspection. The
Licensee will, if required by the Licensor or its authorised representative, provide necessary facilities for continuous monitoring for any particular aspect of the Licensee’s activities and operations.

9.2 The Licensor will ordinarily carry out the inspection after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

ARTICLE-11
REQUIREMENT TO FURNISH INFORMATION TO THE LICENSOR

11. The Licensee shall furnish to the Licensor, such information at periodic intervals or at such times as the Licensor may require, including, but not limited to, documents, reports, accounts, estimates, returns or other information such as change in board of Directors, equity holding pattern etc.

ARTICLE-16
MISCELLANEOUS

16.1 Notwithstanding any clause anywhere else in the Licence, the licence will be subject to the condition that as and when any regulatory authority to regulate and monitor the Broadcast Services in the country is constituted, the Licensee’s will have to adhere to the norms, rules and regulations prescribed by such authority.

16.2 The Licensee shall abide by all the conditions required for the issuance of the Wireless Operational Licence by the WPC and has to also conform with the Technical Parameters as laid down in this Agreement. The Licensee shall also have all the environmental clearances. The Licensee has to also comply with the Electricity Act, Factories Act and other allied Acts. In case of non-compliance of any of the aforesaid requirement, the Licensor shall have the right to revoke the Licence of the Licensee.

ARTICLE 17
CONFORMITY TO PROVISIONS OF INTERSYSTEM CO-ORDINATION AGREEMENT

17 The licensee shall ensure that the uplinking hub (teleports) operation will conform to the provisions of inter-system coordination agreement between INSAT and the satellite being used by the licensee.

ARTICLE 18
WPC WING’S LICENCE

18.1 A separate specific licence shall be required from the WPC Wing of Ministry of Communications for operation of teleport/uplink hub under usual terms and conditions of the licence. Grant of licence will be governed by normal rules, procedures and guidelines and will be subject to completion of all formalities.

18.2 For this purpose, an application shall be made to the “Wireless Advisor to the Government of India, WPC Wing, Ministry of Communications, Dak Bhavan, Parliament Street, New Delhi-110001” in a prescribed application form available from WPC Wing.

18.3 The Licence fee and royalty, as prescribed by WPC from time to time, shall have to be paid by Licensee, annually for the total amount of spectrum assigned to Hub/Teleport station.

18.4 The Licensee shall not cause harmful interference to other authorised users of radio spectrum. WPC Wing will have the sole discretion to take practicable and necessary steps for elimination of harmful interference, if any, to other licensed users.

18.5 The Wireless Planning and Coordination Wing shall have the right to inspect from time to time the installation from technical angles to check conformity with WPC Wing’s licence.

18.6 The Licensee shall inform WPC Wing the full technical and operational details of TV channels proposed to be uplinked through his/her Hub/Teleport in the prescribed format.

1. The proposed set up for uplinking earth station (Hub/Teleport) shall not be used for any telecom service/application without prior approval and/or license from TelecomAuthority.

Application Form for permission to uplink a TV Channel from India

The Secretary
Ministry of Information & Broadcasting
‘A’ Wing, Shastri Bhawan
New Delhi-110 001

Application for permission to uplink a TV Channel from India through VSNL/Teleport Station

1. i) Name of Applicant Company

   ii) Particulars of Directors

   SL.No.
   Name
   Nationality
   Address

2. i) Address (Office)

   (a) Head Office
   (b) Regional Office

   ii) Telephone Number (s)

   iii) Registration details (enclose certificate of incorporation/registration)

3. Present field of activity

4. Details of transponder(s) for uplinking and downlinking:
FORM-2 A
AFFIDAVIT/UNDERTAKING

WHEREAS I, Shri ………………… in the capacity of …………… have applied to the Ministry of Information & Broadcasting on behalf of M/s…………………… for approval/permission for uplinking of my TV channel ………………. From ……………….. (place).

WHEREAS as condition precedent to above approval/permission, I am required to abide by the Broadcasting (Programme & Advertising) Codes laid down by Ministry of Information & Broadcasting.

WHEREAS I undertake that the permission/approval so granted can be withdrawn, if I fail to abide by the said Programme & Advertising Codes.

WHEREAS I have read the Broadcasting (Programme & Advertising) Codes laid down by Ministry of Information & Broadcasting.

Now, therefore, I hereby undertake as follows:

1. I undertake to abide by the Programme & Advertising Codes laid down by the Ministry of Information & Broadcasting, Government of India from time to time.
2. I undertake to furnish a periodic information relating to public complaints, programme contents and any other information in respect of above mentioned TV channels as may be laid down by the Ministry of Information & Broadcasting from time to time.
3. I undertake to provide the necessary equipment and facility for continuous monitoring of the broadcaster service at my own cost and preserve the recordings of broadcasting materials for a period of 3 months from the date of broadcast and produce the same to Ministry of Information & Broadcasting or to its authorized representative as and when required.

I/We, __________________________ the applicant(s) do hereby declare that the above facts are correct in all respects.

Place :

(Signature of Applicant)

Date :

Office Address:

Name

******
I/We ......................... the applicant(s) do hereby declare that the above facts are correct in all respect.

Enclosers:

Signature of Applicant

Name

Office Address

Place :

Date :

The Union Government has taken a decision on 25th July, 2000 to further liberalise its Uplinking Policy and permit the Indian private companies to set up uplinking hub/teleports for licensing/hiring out to other broadcasters. The new policy also permits uplinking of any television channel from India. It also allows the Indian news agencies to have their own uplinking facilities for purposes of newsgathering and its further distribution. The salient features of eligibility criteria, basic conditions/obligations and procedure for obtaining the necessary permission for these services are briefly described below. For details, reference should be made to the relevant terms and conditions of Licences/Permission/Approval.

1. LICENCE FOR SETTING UP OF UPLINK HUB/TELEPORTS:

(i) ELIGIBILITY CRITERIA:

1. Company to be incorporated in India
2. Foreign equity holding including NRI/OCB/PIO not to exceed 49%

1. PERIOD OF LICENCE:
1. 10 years.

2. BASIC CONDITIONS/OBLIGATIONS:
1. To uplink only those TV channels which are specifically approved or permitted by the Ministry of I&B for uplinking from India.
2. To stop uplinking of TV channels whenever permission/approval to such a channel is withdrawn by the Ministry of I&B.
3. Can uplink both to Indian as well as foreign satellites. However, proposals envisaging use of Indian satellite will be accorded preferential treatment.
4. To keep record of materials uplinked for a period of 90 days and to produce the same before any agency of the Government as and when required.
5. To permit the Government agencies to inspect the facilities as and when required.
6. To furnish such information as may be required by the Ministry of I&B from time to time.
7. To provide the necessary monitoring facility at its own cost for monitoring of programme or content by the representative of the Ministry of I&B or any other Government agency as and when required.
8. To comply with the terms and conditions of the licensing Agreement to be signed between the Applicant and the Ministry of I&B.
9. To comply with the terms and conditions of the Wireless Operational licence to be issued by WPC.
10. To uplink in C-Band only.
11. The satellite to which uplinking is proposed should have been co-ordinated with Insat system.
12. Failure to comply with the terms and conditions of above licences would result in termination/cancellation of the licences.

(iv) PROCEDURE:

1. To apply to the Secretary, Ministry of I&B, in triplicate, in the prescribed proforma (Form 1).
2. On the basis of information furnished in the application form, if the applicant is found eligible for setting up uplinking hub/teleport, its application will be sent for security clearance to the Ministry of Home Affairs and for clearance of satellite use to the Department of Space (wherever proposal is made for use of satellite).
3. As soon as these clearances are obtained, the applicant would be required to sign a licensing agreement with the Ministry of I&B as per prescribed proforma (Form-1 A).
4. After signing the licensing agreement with the Ministry of I&B, the applicant can approach to the Wireless Planning & Coordination (WPC) Wing of the Ministry of Communications for seeking operating licence for establishment, maintenance and operation of uplinking facility.
5. The applicant will pay the licence fee and royalty, as prescribed by WPC Wing from time to time, annually, for the total amount of spectrum assigned to Hub/Teleport station, as per norms & rules of the WPC Wing.
6. The Hub/Teleport station owner will inform WPC Wing the full technical and operations details of TV channels proposed to be uplinked through his/her Hub/Teleport in prescribed format.

2. PERMISSION/APPROVAL FOR UPLINKING A TV CHANNEL FROM INDIA

(In case a TV channel proposes to set up its own uplinking facility/earth station, it has to apply separately for the same after following the procedure as in case of ‘1’ above.)

i) ELIGIBILITY CRITERIA

1. Any TV channel irrespective of its ownership, equity structure or management control which is aimed at Indian viewership.

ii) PERIOD OF APPROVAL/PERMISSION

2. 10 years.

iii) BASIC CONDITIONS/OBLIGATIONS:

12. To undertake to comply with the Broadcasting (Programme & Advertising) Codes laid down by Ministry of Information & Broadcasting.
13. To keep record of materials uplinked for a period of 90 days and to produce the same before any agency of the Government as and when required.
14. To furnish such information as may be required by the Ministry of I&B from time to time.
15. To provide the necessary monitoring facility at its own cost for monitoring of programme or content by the representative of the Ministry of I&B or any other Government agency as and when required.
16. If the applicant hires its own transponder on a satellite, the same should be in C-Band and should have been co-ordinated with INSAT system.
17. To comply with the terms and conditions of the permission/approval of the Ministry of I&B.
18. Failure to comply with the terms and conditions of the permission/approval would result in withdrawal of such permission approval.

(iv) PROCEDURE:

7. To apply to the Secretary, Ministry of Information & Broadcasting in triplicate in the prescribed proforma (Form-2) along with an affidavit in Form 2 A.
8. After receiving the application and the affidavit as provided above, if the applicant is found eligible, the same will be sent for security clearance to the Ministry of Home Affairs and for clearance of satellite use to the Department of Space (Only in respect of those case where the applicant proposes use of a particular satellite instead of leasing it out from the uplink service provider).
9. As soon as these clearances are obtained, the applicant would be permitted to uplink its channel(s) through a hub/teleport as requested.
10. After receiving the permission for uplinking from India, the applicant can approach to the uplinking hub(teleports) owner for providing the necessary uplinking facility for their channel(s).

3. LICENCE FOR UPLINKING TO INDIAN NEWS AGENCIES:

i) ELIGIBILITY CRITERIA

1. The Company/Agency to be incorporated in India
2. Accredited by Press Information Bureau (PIB).
3. 100% owned by Indian with Indian Management Control.

(ii) PERIOD OF LICENCE

1. As per WPC licence.

(iii) BASIC CONDITIONS/OBLIGATIONS:

19. To use uplinking for news-gathering and its further distribution to other news agencies/broadcasters only.
20. Not to uplink TV programmes/channels for direct reception by public.
21. To keep record of materials uplinked for a period of 90 days and to produce the same before any agency of the Government as and when required.
22. To furnish such information as may be required by the Ministry of I&B from time to time.
23. To provide the necessary monitoring facility at its own cost for monitoring of programme or content by the representative of the Ministry of I&B or any other Government agency as and when required.
24. Conformity with the provisions of inter-system coordination agreement between INSAT & the satellite to be used.
25. To comply with the terms and conditions of the 'No Objection Certificate' to be issued by the Ministry of Information & Broadcasting.
26. To comply with the terms and conditions of Wireless Operational Licence to be issued by the WPC.
27. Failure to comply with the terms and conditions of the 'No Objection Certificate' or the Wireless Operational Licence would result in withdrawal or cancellation of such certificate or licence.

(iv) PROCEDURE:

11. To apply to the Secretary, Ministry of Information & Broadcasting in triplicate in the prescribed proforma (Form-3).
12. On the basis of information furnished in the application form, if the applicant is found eligible for setting up uplinking facility, its application will be sent for security clearance to the Ministry of Home Affairs and for clearance of satellite use to the Department of Space.
13. As soon as these clearances are obtained, the applicant would be issued No Objection Certificate for uplinking by Ministry of Information & Broadcasting.
14. After issue of No Objection Certificate by Ministry of Information & Broadcasting, the applicant can approach the Wireless Planning & Coordination (WPC) Wing of the Ministry of Communications for seeking operating licence for establishment, maintenance and operation of its own uplinking facility or approach another licensee of uplinking for hiring or leasing the hub/teleport facility.
15. The applicant will pay the licence fee and royalty as prescribed by WPC Wing from time to time, annually, for use of spectrum, as per norms and rules of the WPC (in case of its own facility).

The Secretary
Ministry of Information & Broadcasting
'A' Wing, Shastri Bhawan
New Delhi-110 001

1. i) Name of Applicant Company
    ii) Particulars of the Directors

SL.No.

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Head Office</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Regional Office</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>i) Telephone Number (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ii) Registration details (enclose certificate of incorporation/registration)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. Structure of Equity Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Authorised share capital</td>
</tr>
<tr>
<td>2. Paid up share capital</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Share-Holding pattern: (Enclose details as per Annexure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct investment</td>
</tr>
<tr>
<td>2. Foreign investment</td>
</tr>
</tbody>
</table>

Break-up of Foreign Direct Investment

<table>
<thead>
<tr>
<th>Individual</th>
<th>Company</th>
<th>NRI</th>
<th>OCB</th>
<th>PIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>............%</td>
<td>..........%</td>
<td>..........%</td>
<td>..........%</td>
<td>..........%</td>
</tr>
</tbody>
</table>

Break-up of Foreign portfolio Investment

<table>
<thead>
<tr>
<th>FIIs</th>
<th>NRIs</th>
<th>OCBs</th>
<th>PIOS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Present field of activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Details of teleport</td>
</tr>
<tr>
<td>i) Location of teleport</td>
</tr>
<tr>
<td>3. Capacity of teleport (Proposed)</td>
</tr>
</tbody>
</table>

| (a) No. of channels: |
| (b) No. of satellites: |
(c) No. of proposed earth stations constituting teleport
(d) Approximate date for commissioning the teleport
(e) Antenna size of the teleport, EIRP

7. If the company proposes to lease satellites/transponders also for providing to the broadcasters, give details as under:

Name of satellites proposed to be hired
Orbital location
Type and No. of transponders with band-width
Signal strength in primary zone over India
Name of the Company from which the satellite/transponder is to be leased
(Enclose Lease Agreement and footprint of each satellite proposed to be hired)

I/We, _________________________________ the applicant(s) do hereby declare that the above facts are correct in all respects.

Place:
(Signature of Applicant)
Date:
Name: Office Address:

Enclosures:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Category of Shareholders.</th>
<th>Direct Investment</th>
<th>Portfolio Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Share Holding</td>
<td>% of total paid up shares</td>
<td>% of total paid up shares</td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indian individual
Indian company
Foreign individual
Foreign company
NRI
OCB
FII
PIO
Any other

ii) - Do -

iii) - Do -
Note: Repeat same information about each Indian company holding share in the applicant company

NOW THIS AGREEMENT WITNESSETH AS UNDER:
1. Unless otherwise mentioned in the subject or context appearing hereinafter, the Schedule annexed hereto including the guidelines issued/or to be issued from time to time by the Ministry of Information and Broadcasting and the terms and conditions of the Wireless Operational Licence to be issued by the Wireless Planning & Coordination Wing in
the Ministry of Communications, Government of India shall form part and parcel of this Licence Agreement. Provided, however, in case of conflict or variance or an issue relating to the same, the terms set out in the main body of this Agreement read with all the Schedules annexed hereto shall prevail.

2. The Licence shall be governed by the provisions of the Indian Telegraph Act, 1885 and Indian Wireless Telegraphy Act, 1933 as modified from time to time and any other Act which may come in to force.

3. The Licensee shall use its teleport facility for uplinking only such TV channels, which have been specifically approved/ permitted by the licensor for uplinking by the licensee and shall stop uplinking their TV channels forthwith in respect of which the permission/approval have been withdrawn by the Licensor.

4. The Licensee shall abide by all the terms and conditions required for issuance of operational licence by the WPC. representatives, the day, month and year as mentioned above.

Signed Executed and Delivered on behalf of President of India by ________________

Signed Executed & Delivered on behalf of ________________________ by its holder of General Power of Attorney dated _______ executed in accordance with Board Resolution dated _______ by ________________.

1.1 The licensee shall be a company registered in India under the Indian Companies Act, 1956. Not more than 49% of the equity shares in the company shall be held by foreign entities including NRI/OCB/PIO. The licensee shall continue to comply with these conditions during the currency of the licence.

NATIONAL SECURITY AND OTHER CONDITIONS

used by them for technical scrutiny and detailed inspection.

6.4 All foreign personnel likely to be deployed by way of appointment, contract, consultancy, etc. by the Licensee for installation, maintenance and operation of the Licensee’s services shall be required to obtain security clearance from the Government of India prior to their deployment.

6.5 Licensee should make available detailed information about the equipment & its location as and when required by the licensor or its authorized representatives including authorized officers of Ministry of Home Affairs.

ARTICLE-7

8.1 The Licensee shall provide the necessary facility for continuous monitoring of the broadcasting service at its own cost and preserve the recordings of broadcast material for a period of three months from the date of broadcast and produce the same to the Licenser or its authorised representative, as and when required.

ARTICLE-9

INSPECTION BY THE GOVERNMENT

9.1 The Licenser or its authorised representative shall have the right to inspect the uplinking facilities. The Licenser shall, in particular but not limited to, have the right to access to the uplinking infrastructure namely teleport & monitoring facilities & records. No prior permission/intimation shall be required to exercise the right of Licenser to carry out the inspection. The Licensee will, if required by the Licensor or its authorised representative, provide necessary facilities for continuous monitoring for any particular aspect of the Licensee’s activities and operations.

9.2 The Licenser will ordinarily carry out the inspection after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

ARTICLE-11

REQUIREMENT TO FURNISH INFORMATION TO THE LICENSOR

11. The Licensee shall furnish to the Licensor, such information at periodic intervals or at such times as the Licenser may require, including, but, not limited to, documents, reports, accounts, estimates, returns or other information such as change in board of Directors, equity holding pattern etc.

ARTICLE-16

MISCELLANEOUS

16.1 Notwithstanding any clause anywhere else in the Licence, the Licence will be subject to the condition that as and when any regulatory authority to regulate and monitor the Broadcast Services in the country is constituted, the Licensee’s will have to adhere to the norms, rules and regulations prescribed by such authority.

16.2 The Licensee shall abide by all the conditions required for the issuance of the Wireless Operational Licence by the WPC and has to also conform with the Technical Parameters as laid down in this Agreement. The Licensee should also have all the environmental clearances. The Licensee has to also comply with the Electricity Act, Factories Act and other allied Acts. In case of non-compliance of any of the aforesaid requirement, the Licenser shall have the right to revoke the Licence of the Licensee.

ARTICLE 17

CONFORMITY TO PROVISIONS OF INTERSYSTEM CO-ORDINATION AGREEMENT
The licensee shall ensure that the uplinking hub (teleports) operation will conform to the provisions of inter-system co-ordination agreement between INSAT and the satellite being used by the licensee.

**ARTICLE 18**

**WPC WING’S LICENCE**

18.1 A separate specific licence shall be required from the WPC Wing of Ministry of Communications for operation of teleport/uplink hub under usual terms and conditions of the licence. Grant of licence will be governed by normal rules, procedures and guidelines and will be subject to completion of all formalities.

18.2 For this purpose, an application shall be made to the “Wireless Advisor to the Government of India, WPC Wing, Ministry of Communications, Dak Bhavan, Parliament Street, New Delhi-110001” in a prescribed application form available from WPC Wing.

18.3 The Licence fee and royalty, as prescribed by WPC from time to time, shall have to be paid by Licensee, annually for the total amount of spectrum assigned to Hub/Teleport station.

18.4 The Licensee shall not cause harmful interference to other authorised users of radio spectrum. WPC Wing will have the sole discretion to take practicable and necessary steps for elimination of harmful interference, if any, to other licensed users.

18.5 The Wireless Planning and Coordination Wing shall have the right to inspect from time to time the installation from technical angles to check conformity with WPC Wing’s licence.

18.6 The Licensee shall inform WPC Wing the full technical and operational details of TV channels proposed to be uplinked through his/her Hub/Teleport in the prescribed format.

1. The proposed set up for uplinking earth station (Hub/Teleport) shall not be used for any telecom service/application without prior approval and/or license from Telecom Authority.

Application Form for permission to uplink a TV Channel from India

The Secretary
Ministry of Information & Broadcasting
‘X’ Wing, Shastri Bhawan
New Delhi-110 001

Application for permission to uplink a TV Channel from India through VSNL/Teleport Station

1. i) Name of Applicant Company

ii) Particulars of Directors

SL.No.
Name
Nationality
Address
2. i) Address (Office)

(a) Head Office

(b) Regional Office

ii) Telephone Number (s)

iii) Registration details (enclose certificate of incorporation/registration)

3. Present field of activity

4. Details of transponder(s) for uplinking and downlinking:
   (Only in case the applicant arranges its own satellite/transponders.)

   Name of satellites proposed to be hired

   Orbital location

   Type and No. of transponders with band-width

   Signal strength in primary zone over India

   Name of the Company from which the satellite/transponder is to be leased

   Uplink & downlink frequencies.
   (Enclose lease Agreement & footprint of each satellite proposed to be hired)

5. Details of uplinking hub (Teleport)

   a) Name and address of the company providing the Teleport for uplinking.

   b) Location of proposed teleport

   c) Antenna size of teleport, EIRP

6. Number & name of channel(s) to be uplinked indicating the proposed date of commencement of uplinking from proposed hub/teleports.

   Sl.No.
   Name of the Channel
   Language
   Digital or Analog
   Free to Air or Encrypted
   Proposed date of commencement of uplinking

7. Whether declaration in form 2 (A) enclosed
   Yes/No

I/We, ____________________________ the applicant(s) do hereby declare that the above facts are correct in all respects.

Place:
(Signature of Applicant)

Date:
Name Office Address:
FORM-2 A

AFFIDAVIT/UNDERTAKING

WHEREAS I, Shri ………………… in the capacity of …………………….have applied to the Ministry of Information & Broadcasting on behalf of M/s……………………….for approval/permission for uplinking of my TV channel …………………. From ……………….. (place).

WHEREAS as condition precedent to above approval/permission, I am required to abide by the Broadcasting (Programme & Advertising) Codes laid down by Ministry of Information & Broadcasting.

WHEREAS I undertake that the permission/approval so granted can be withdrawn, if I fail to abide by the said Programme & Advertising Codes.

WHEREAS I have read the Broadcasting (Programme & Advertising) Codes laid down by Ministry of Information & Broadcasting.

Now, therefore, I hereby undertake as follows:

1. I undertake to abide by the Programme & Advertising Codes laid down by the Ministry of Information & Broadcasting, Government of India from time to time.

2. I undertake to furnish a periodic information relating to public complaints, programme contents and any other information in respect of above mentioned TV channels as may be laid down by the Ministry of Information & Broadcasting from time to time.

3. I undertake to provide the necessary equipment and facility for continuous monitoring of the broadcaster service at my own cost and preserve the recordings of broadcasting materials for a period of 3 months from the date of broadcast and produce the same to Ministry of Information & Broadcasting or to its authorized representative as and when required.

Signature
Name
Designation
Seal of Company
Place:
Date:

The Secretary
Ministry of Information & Broadcasting
‘A’ Wing, Shastri Bhawan
New Delhi-110 001

Application for permission to uplink newsgathering material & its distribution

1. i) Name of Applicant Company (News agency)

ii) Particulars of Directors

Sl.No.
Name
Nationality
Address

2. i) Address (Office)

(a) Head Office
(b) Regional Office

ii) Telephone Number (s)

iii) Registration details (enclose certificate of incorporation/registration)

3. If, accredited by Press Information Bureau (PIB) ? (Enclose certificate of accreditation)

4. Is the news agency 100% owned by Indians, if so, enclose shareholding pattern with details as per Annexure.

Contd…/-

// 2 //

5. Give details of equipment for (i) SNG (ii) DSNG, (iii) Permanent Earth Station distribution of news material

6. Give details of the equipment to be used (i) SNG (ii) DSNG for collecting news material

7. Location(s) at which newsgathering/distribution equipment to be installed.

8. Details of transponder/satellite(s) proposed to be leased

Name of satellites proposed to be hired

Orbital location

Type and No. of transponder(s) with band-width

Signal strength in primary zone over India

Name of the Company from which the satellite/transponder is to be leased

Uplink & downlink frequencies

(Enclose lease Agreement & footprint of each satellite proposed to be hired)
9. Whether information on shareholding pattern in enclosed proformas as per Table-1 & Table-2 enclosed?

I/We ………………………… the applicant(s) do hereby declare that the above facts are correct in all respect.

Enclosers:

Signature of Applicant

Name

Office Address

Place :

Date :

NOTES:
Objectives:

Radio Networking

When Dean and Karen Wang sold their calves this fall they had specific instructions written into the contract. The Baker, MT, ranchers wanted to be sure the buyer, an Iowa farmer-feeder, would leave the radio frequency identification (RFID) tags in the calves’ ears and cooperate in returning performance data.

In fact, the calves will be followed all the way through slaughter — and the Wangs hope to capitalize on the information flow that began when they tagged the calves on the ranch.

Like a few dozen other Montana ranchers, the Wangs are using the services of the Montana Beef Network (MBN), a program designed to help the state’s cattle producers receive added value for their calves. This will be Wang’s sixth year in the program — plus two years in his own individual ID program.

A major MBN component involves identifying cattle that meet specific beef quality and consistency targets. The foundation of the network is data collection and information exchange based on the use of RFID tags.

Not A Perfect World

This is the fourth year the Wangs have specified they want data back on their calves as a condition of sale. They’ve included similar wording in direct sales to a large commercial feeder, while selling on the Internet and through an agreement with an order buyer.

Dean Wang admits that MBN’s individual ID system hasn’t worked perfectly, and he realizes “mistakes happen.” Yet, he’s been able to get data back on his calves in all but two of the eight years he’s kept close tabs on his calf crops.

“One year, someone at the feedlot decided to cut all the tags out of the calves’ ears when they received them,” he says. He still got pen performance data back. But what he was really looking for — individual performance data — was a wash-out. Still, Dean and Karen have stayed with the MBN.

“When we bought into this program we felt that if it was going to do us any good, we had to be consistent about getting performance data back year after year,” he says. “That’s why we decided to write the contract the way we did this year. I thought I’d run into resistance, but the buyers were more than happy to work with us. They’ll obviously benefit, too.”

The Wangs recently finished tagging all of their 700+ cows with RFID. Come next spring, his crew, led by Darin Buerkle, will tag each calf with an RFID tag at branding. That tag will correspond to the cow’s cartag.

“...have gone through some ups and downs in getting information back from feeders and packers,” says Buerkle. “But, it looks like we’re getting to the point where we have the kinks worked out of the system.”

Linking With BQA

Producers who become certified through the Montana Beef Quality Assurance (BQA) program are eligible to become involved in the MBN Feeder Cattle Certification program. Although not all producers who become BQA certified take this next step, it’s an important component of the “systems approach” utilized by the MBN. So far this year, the MBN has about 16,000 head of cattle carrying RFID tags.

A set of specific records are entered into a database when animals are tagged with MBN tags, says Lisa Duffey of Bozeman, MT, the MBN project coordinator. She’s also a graduate student in agricultural education at Montana State University-Bozeman (MSU).

These private records include detailed vaccination records and dates of weaning and shipping. Duffey’s job is to follow the animals through the production chain, and enter and compile the data collected by feeders and packers.

“Prior to shipping, we need detailed feedlot contact information in order to track the animals through the remaining production segments,” says Duffey. “If we don’t have the complete information we can’t follow up on the animals.”

Big-Time Tagging Guys

Brian Rainey and Travis Standley, MSU graduate students in animal science, provide the main field labor force for MBN. In the past two years, they’ve tagged nearly 12,000 head of...
ranchers’ calves with Allflex Electronic Identification Ultra Tags. They also supply scanned tags to producers in a do-it-yourself operation.

“If we can’t get to a ranch because of our class commitments, we can scan the tags into the computer and send the producer a worksheet,” Standley says. “Then the producer can fill it out and send the form back to us after he works his calves. We’ll record the data in the computer system for him.”

Rainey says the MBN advisory committee has recently hooked up with eMerge Interactive of Sebastian, FL, to crunch their data. eMerge’s CattleLog individual animal data collection and reporting system is used for data analysis and information exchange.

“The compatibility among tags and scanning systems is critical to the success of any data tracking/management program,” says Rainey.

“The durability of the tags has improved a lot over the past year,” he adds. “I haven’t had a mis-scan yet — and the retention rate is great. As long as the tags are put in correctly, we haven’t seen them come out.”

**Growing Pains Paying Off**
The Montana Stockgrowers Association (MSGA) and MSU have collaborated on the MBN from its inception. The program is supported through a federal grant.

“Our members clearly endorse this kind of effort,” says MSGA president John Swanz, Judith Gap. “We’ve already seen benefits in terms of better markets from network cattle.”

“Now, rather than me making the calls to a feedlot or packing plant and requesting data,” he says. “I have the support and name recognition of the Montana Beef Network.”

**National Radio Networking Research Testbed (NRNRT)**

The radio frequency (RF) spectrum is a significant national, natural, and renewable resource. Recently, a number of themes have converged to cause significant reconsideration of how radio frequency spectrum is managed in the United States and elsewhere. The important themes are: advances in radio system engineering; end-user interest in mobile access to information; requirements of national defense and homeland security; recognition that spectrum is woefully under-utilized; and proposals to dramatically change the modes and mechanisms for using radio frequency.

For many decades building radios has been relegated to radio engineers. However, new ways to communicate while on the move and new mobile services are emerging. Building mobile networking devices and services requires integrating multiple disciplines including: electromagnetics, circuit design, signal processing, network protocols, and service development. The emergence of multiple mobile communication devices and the urge to always be connected is driving research and investment in new communication services and devices.
“The lesson content has been compiled from various sources in public domain including but not limited to the internet for the convenience of the users. The university has no proprietary right on the same.”