DIRECTORATE GENERAL
ALL INDIA RADIO
NEW DELHI

REPORT ON CADRE REVIEW OF INDIAN BROADCASTING ENGINEERS SERVICE OF ALL INDIA RADIO & DOORDARSHAN

CADRE REVIEW COMMITTEE
2009

FOREWORD

At the outset, I must thank the Chief Executive Officer, Prasar Bharati, for entrusting the sensitive task of Cadre Review of I.B.(E).S. (Indian Broadcasting Engineers Service) to me and to a small team of dedicated officers. The I.B.(E).S, constituted in 1981, is one of the organised Group "A" services of the Govt. Of India, for which cadre review/restructuring has not been done since the time of its inception. All efforts have been made to restructure the I.B.(E).S. to increase the efficiency and effectiveness of the Organization. Measures have been suggested in conformity with the policies, procedures and practices prescribed by DOPT for cadre reviews/restructuring of the I.B.(E).S. The timing of this Report at a stage when Govt. Of India has already implemented the recommendations of the Sixth Central Pay Commission for Central Government employees and also circulated a Pay Parity Scheme with regard to I.A.S. officers, is right one as these positive developments would substantially reduce any additional financial impact as a result of cadre review and restructuring recommended by the Cadre Review Committee. I would like to place on record my sincere and deep sense of appreciation to each and every member of this Committee and also the vast number of engineering employees of All India Radio & Doordarshan who have studied the draft report in depth and given their valuable suggestions through emails addressed to me. I do hope that the Report on the Cadre Review of the I.B.(E).S. Group "A" officers of AIR & Doordarshan, shall be considered favourably by the competent authority, for an early implementation.

(R. K. Singh)
Chief Engineer (Development)
&
Chairman, Cadre Review Committee

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The Organization

All India Radio and Doordarshan are national public service broadcasters of India. The engineers of All India Radio and Doordarshan have done pioneering work in the last five decades to bring the all the parts of our vast country including remote and inaccessible regions and a sizable chunk of listeners abroad within the coverage of All India Radio and Doordarshan. In respect of time tested procedures and experience of executing various types of Radio and TV projects the organization has no parallel. The broadcast engineers have played the role of providing well-engineered, safe, efficient, sustainable and broadcast installations in our country.

Doordarshan is the one of the largest broadcasters in the world. Now almost 90 per cent of population of the country can receive Doordarshan programmes through a network of nearly 1399 terrestrial transmitters. 66 Doordarshan Studios are producing TV software. There are 126 Maintenance Centres spread throughout the country to maintain the broadcast services of hundreds of Low Power and Very Low Power Transmitters. Presently, Doordarshan operates 30 channels – seven All India channels (DD National, DD News, DD Sports, DD Gyandarshan, DD Bharti, DD Rajya Sabha and DD Urdu), eleven Regional Languages Satellite Channels (RLSC), eleven State Networks (SN) and an International channel. DD is also providing multi-channel TV coverage in the country through its free to air DTH service, 'DD-Direct Plus'.

All India Radio is also one of the largest broadcasting organizations of the world. It has a network of 232 broadcasting centres with 149 medium frequency(MW), 54 high frequency (SW) and 171 FM transmitters. The coverage is 91.79% of the area, serving 99.14% of the people in the largest democracy of the world. AIR covers 24 Languages and 146 dialects in home services. In External services, it covers 27 languages; 17 national and 10 foreign languages.

The Indian Broadcasting Engineers Service(I.B.E.S.) is primarily responsible for planning, design, installation and maintenance of the broadcast infrastructure of Doordarshan and All India Radio. The I.B.E.S. is also responsible for carrying out R&D and training activities. The Indian Broadcasting (Engineers) Service (I.B.E.S.) was constituted in November, 1981. The relentless efforts of the IBES cadre and the sub-ordinate engineering staff of AIR and Doordarshan made it possible for AIR and DD network to expand many fold : To cite a few examples, in 1983 television

signals were available to just 28% of the population, this had doubled by the end of 1985 and by 1990 over 90% of the population had access to television signals. Such a rapid expansion of television transmitting network in a vast country like India is one of the greatest engineering feats achieved anywhere in the world. All India Radio started its FM service in Chennai in 1977. FM transmissions quickly expanded in the eighties and nineties and today AIR has a network of 171 high power FM Transmitters.

There is a global trend towards digitalization of broadcasting and the AIR and Doordarshan engineers have taken initiative and played a key role in the introduction of digital radio and TV broadcasting in India. AIR conducted trial transmissions of DRM service(digital radio) since January 2007 and it has formally launched its DRM(digital radio) service w.e.f. 16th of January 2009. Doordarshan has taken a lead in introducing mobile TV in May 2007. The 1982 Asian Games gave Indian viewers a gift - colour television. The Common-wealth Games next year is set to unveil the next generation of TV viewing. Doordarshan has planned to launch high definition television (HDTV) broadcast, which will provide viewers a picture that is 16 times sharper than standard television.

Growth of the Organization

Over a period of time AIR and Doordarshan, have grown many fold. At the end of 6th Five year Plan there were only 97 AIR stations, however by the end of 10th Plan the figure has gone up to 225. In Doordarshan, there were only 17 Programme Production Centre, this figure has jumped to 66. The total nos. of TV transmitters were 173, the figure has jumped to 1399. The total number of AIR transmitters were 178, the figure has jumped to 361.

Among the TV homes also about 58 % TV home in rural and 30 % TV home in urban do not have cable connection. Doordarshan reached out this population through DD Direct Plus which is a free DTH service and it needs only one time investment of about Rs 3000/ - for set top box. Doordarshan has already distributed 10000 DTH sets in the remote areas of North- East States, M.P., Rajasthan, Gujrat, Himachal Pradesh and installed in public places like Panchayat Ghar, School, Club House, Community Centre etc. About 75000 sets have already been distributed. DD Direct Plus is the cheapest DTH service and the people of low income groups can afford it since it is a free service. Presently DD Direct Plus has 36 TV channels

and 20 Radio channels. It has been recently upgraded for transmission of 50 TV channels and there is plan to raise the no. of TV channels to 100 in the bouquet of DD Direct Plus. The service is available anywhere in the country and the quality of reception is much better than that of cable TV. This is one of the biggest achievements of Doordarshan engineers in recent times and this has been accomplished in a record time.

Growth of the Doordarshan network:

Sl. No.	Major items/functions of DD network (facts at glance)	At the end of the 6th Five Year Plan	At the end of the 7th Five Year Plan	At the end of the 8th Five Year Plan	At the end of the 9th Five Year Plan	At the end of the 10th Five Year Plan
1	Total No. of the Programme Production Centres /DDK	17	19	43	58	66
2	Total No. of Terrestrial Transmitters	173	523	921	1308	1399
3	Total No. of Channels	1	1	17	22	30
4	Broadcast Coverage (population)	56%	76.3%	86.9%	89.6%	92 %
5	Broadcast Coverage (area)	36.5%	54.5%	71.6%	77.5%	80%
6	Total No. of the Satellite Channels on DTH	-	-	-	-	43
7	Total No. of DD Maintenance centres	22				126
8	Total No. of Satellite uplinks	1				36
9	Group 'A' cadre staff (Total Nos. & % of the total Engg. strength)				653 (5.37%)	648 (5.27 %)
10	Total Engg. staff in DD	Not Available			12,162 (55.83 %)	12,292 (55.10 %)
11	Total staff strength in all the disciplines	Not Available			21,783	22,308

Growth of the All India Radio network:

Sl. No.	Major items/ functions of AIR network	At the end of the 6th Five Year Plan	At the end of the 7th Five Year Plan	At the end of the 8th Five Year Plan	At the end of the 9th Five Year Plan	At the end of the 10th Five Year Plan
1	Total No. of Broadcasting Centres/AIR Stations	97	126	187	208	225
2	Total No. of Transmitters	178	220	297	334	361
3	Total No. of FM Transmitters	5	37	98	130	161
4	Total No. of SW Transmitters	36	43	52	55	54
5	Total No. of MW Transmitters	137	140	147	149	146
6	Broadcast Coverage (population)	94.91	95.90	97.30	98.84	99.14 %
7	Broadcast Coverage (area)	83.71	85.40	90.00	89.66	91.78 %
8	Satellite Channels on DTH (Nos.)	NIL	NIL	NIL	NIL	20
9	Total No. of Captive Earth Stations (Up-Links)				24	28
10	Total No. of RN Terminals (Digital) (Down-Links)				52	207
11	Total No. of Zonal CE Offices	4	4	4	5	5
12	Total No. of RSTI(T)s	-	-	1	2	5
13	Group 'A' cadre staff (Total Nos. & % of the total Engg. strength)		852	1,049	826 (13.40%)	825 (13.44 %)
14	Total Engg. staff in AIR	Not Available	7,113	8,904	6,163 (24.28%)	6,140 (23.19%)
15	Total staff strength of AIR in all the disciplines	Not Available	24,197	27,485	25,388	26,475

Growth of the total manpower of All India Radio & Doordarshan (combined):

Although the network has grown manifold in the last 25 years, there has hardly been any increase in the manpower commensurate with the tremendous increase in the technical infrastructure and facilities. There were 42,000 employees at the end of 6th Five Year Plan. Now the total number of sanctioned posts is 48,783 by the end of 10th Five Year Plan. As far as engineering personnel are concerned, there were about 14,000 employees at the end of 6th Five Year Plan. The figure is now about 18,000. There have been a number of instances when radio and television stations with very sophisticated equipments have been installed and tested but could not be commissioned and put to full use due to required manpower not being approved to operate and run these installations. The details of manpower of both the networks are given in the table below :

Sl. No.	Major items/functions of AIR & DD network	At the end of the 6th Five Year Plan	At the end of the 7th Five Year Plan	At the end of the 8th Five Year Plan	At the end of the 9th Five Year Plan	At the end of the 10th Five Year Plan
1	Growth of all the disciplines- group-cadre (total) staff strength of AIR & DD *	42,000 approx.	45,000 approx.	46,000 approx.	47,079 (25,296+21,783)	48,783 (26,475+22,308)
2	Total No. & % of all the Engg. staff of AIR & DD to the total staff strength	14,000 approx. (33.33 %)	16,000 approx. (35.56 %)	16,400 approx. (35.65 %)	18,428 (39.14%)	18,432 (37.78%)
3	Total No. and, % of the Group 'A' cadre-Engg. staff of the total engg. staff strength of AIR & DD	1121 (8 %)	1509 (9.43 %)	1358 (8.28 %)	1,448 (8 %)	1,448 (8 %)

(d) Present Strength Of I.B.E.S. Cadres as on 1.02.2009

Cadre	AIR			DD			Total		
Posts	Sanctioned Posts	Filled Posts	Vacant Posts	Sanctioned Posts	Filled Posts	Vacant Posts	Sanctioned Posts	Filled Posts	Vacant Posts &
E-in-C	1	1	0	1	0	1	2	1	1
SAG	15	11	4	7	5	2	22	6	6
JAG	94	79	15	49	44	5	143	123	20
STS	275	174	101	296	201	95	571	375	196
JTS	440	192	248	270	118	152	710	310	400
Total Strength *	825	457	368	623	368	265	1448	815	633

*Sanctioned Strength excludes temporary installation posts.

REQUIREMENT OF ENGINEERING MANPOWER FOR THE NEXT FIVE YEARS

One of the main objectives of the cadre review is to take in to account the manpower requirements of the next five years. The next five years are a critical phase for IBES officers as they have to implement a grand plan for digitalization of AIR and Doordarshan. Broadcasting organizations all over the world have been switching over to digital technology as it has an edge over the conventional analogue technology. Manufacturers are switching over to production of digital transmission equipments and in coming five to seven years the production of conventional analogue broadcast equipment may be totally stopped.

Sub-Group for " Going Digital"

As digitalization is a compulsion, a sub-group of the Planning Commission on 'Going Digital' has been formed. It is headed by the Member Secretary, Planning Commission. It has laid down a path for migration from analogue transmission to digital domain. Member Secretary has suggested an eleven stage process:

i. Testing, publication and adoption of technical standard for digital terrestrial

transmission.

ii. Publication and adoption of national standards for digital cable television.

Iii Prasar Bharati's roll out of transmission conversion from analogue terrestrial to digital terrestrial both for radio (AIR) and Doordarshan (DD).

iv. Introduction of addressability and conditional access system in cable and satellite TV environment.

v. Road map and commencement of indigenous production of STBs containing features such as

(a) Digital analogue convertors for delivery of digital signal at subscribers' end

(b) Conditional access and addressability features.

vi. Publication and adoption of national digital television standards for manufacture of digital receivers.

vii. Commencement of indigenous production of digital receivers.

viii. Commencement of digital terrestrial broadcast in selected cities by AIR & Doordarshan

(a) Step I - Delhi -2010

(b) Step II - All mega cities -2011

(c) Step III - All Tier II & Tier III cities -2012

(d) Step IV - All other areas -2013

ix. Commencement of HDTV broadcast for Commonwealth Games 2010 by Doordarshan

x. Commencements of digital signal delivery at subscribers end in Cable and Satellite (C & S) homes.

xi. Nationwide switch off of analogue broadcast both for terrestrial and C & S homes by 2015.

All India Radio : " Going Digital"

AIR's technical facilities broadly comprise of three set-ups: (a) studios (b) transmitters and (c) studio-transmitter links. Digitalization of AIR will essentially comprise of digitalization of these three set-ups. Accordingly, AIR has prepared a Grand Plan for complete digitalization of studios, transmissions and terrestrial and satellite links by the end of XII Plan (by the year 2017).

Digitalization of AIR Transmitters

All India Radio has adopted Digital Radio Mondiale (DRM) technology for digitalization of transmissions. DRM is the universal, openly standardised, digital radio system for short-wave, medium-wave and long-wave - digital radio for the radio frequencies below 30MHz. It has been endorsed by the ITU, and is standardised as ETSI ES 201 980. DRM provides near-FM sound quality plus the ease-of-use that comes from digital transmissions. The improvement over AM is immediately noticeable. DRM can be used for a range of audio content, and has the capacity to integrate text and data. This additional content can be displayed on DRM receivers to enhance the listening experience.

In the FM band this technology is called DRM+ and its trials have been successful and technical specifications are expected to be finalized in 2009. This technology aims to use same FM band and can be introduced in existing FM band for switching over to digital. DRM+ will offer CD quality with surround sound.

DRM operation will result in substantial savings in power consumption and also provide additional channels within the existing band width for earning revenue. The DRM system makes use of the existing band of frequency allocated for MW and SW broadcast. Due to its long-range coverage in SW band, AIR can beam its signals across the continents carrying digital programmes without any fading and interference. The technology is fully developed and more than 60 broadcasters are already having digital transmission all over the world. The cost of DRM receiver is expected to come down with mass production. Our neighboring countries like China and Sri Lanka have already started DRM transmission. AIR has launched regular DRM transmissions in Short Wave band w.e.f. 16th January 2009. The DRM signals are being beamed in to U.K. and West Europe on 9550 KHz. AIR has also started DRM transmission in NVIS mode for coverage around Delhi up to a radius of 800 kilometers in Short Wave Band on 6100 KHz w.e.f. 16th January 2009.

Replacement/ up-gradation of existing Medium Wave Transmitters

At present 148 Medium Wave Transmitters are operational in the network. The following Medium Wave Transmitters are proposed to be replaced by digital transmitters in the XI Plan as below:

- Replacement/ upgradation of 41 Medium Wave Transmitters by DRM Transmitter:

(a) 300 KW MW DRM Transmitter at Jammu, Dibrugarh, Suratgarh, Rajkot, Jalandhar, Lucknow

(b) 200 KW MW DRM Transmitter at Delhi'A', Ahmedabad, Bangalore, Dharwad, Jabalpur, Ajmer, Chennai'A', Siliguri, Kolkata, Itanagar

(c) 100 KW MW DRM Transmitter at Vijaywada, Patna, Panaji, Ranchi, Mumbai'A', Mumbai'B', Pune, Tiruchirapalli, Kolkata'A', Passighat, Varanasi

(d) 50 KW MW DRM transmitter at Mumbai'C'

(e) 20 KW MW DRM Transmitter at Barmer, Bikaner, Chennai(VB), Lucknow, Guwahati'B', Delhi(VB), Tawang

(f) 10 KW MW DRM transmitter at Jaipur, Kurseong, Keonjhar, Jamshedpur, Adilabad, Cuttack

- Conversion of 36 Medium Wave Transmitters for DRM operation as under:

(a) 300 KW MW DRM Transmitter at Cuttack, Srinagar, Imphal, Jodhpur, Nagpur

(b) 200 KW MW DRM Transmitter at Kargil, Indore, Najibabad

(c) 100 KW MW DRM Transmitter at Cuddapah, Delhi B, Kohima, Portblair, Shillong, Shimla & Raipur

(d) 20 KW MW DRM Transmitter at Aizwal, Ambikapur, Bhuj, Chattarpur, Chennai, Darbhanga, Gangtok, Jalgaon, Kota, Udippi, Rewa, Hyderabad, Leh, Ratnagiri, Rohtak, Silchar, Trivandrum, Tirunelveli, Tura, Kupwara & Naushera

- Replacement of six old Mobile MW Transmitters by Mobile DRM MW Transmitters.
- Rest of the MW Transmitters are to be replaced by DRM transmitters in the XII Plan.

Installation of DRM+ compatible FM Transmitters

At present, 171 FM transmitters are operational in AIR Network. FM expansion in Analogue mode is necessary because it is the most preferred mode of broadcasting. The quality of FM broadcast is very good and receivers are very cheap. Mobile phone manufactures have integrated FM listening in mobile sets and

there is a big demand for setting up FM transmitters in small town, rural and backward areas.

In the XI plan, AIR proposes to set up low power FM transmitters at existing MW Centres/DD LPTs where there is no AIR FM Coverage. Thus, AIR will be able to expand FM coverage by about 10% by population. These transmitters will have the capability to switchover to DRM+ as and when DRM+ receiver will be available to masses at affordable cost.

- In order to augment FM coverage, 37 new 1 kW FM Transmitters & 1 new 5 kW FM Transmitter at the existing sites and 300 nos. of 100 watt FM transmitters at LPT DD sites have been proposed. These transmitters shall be DRM+ (Digital Technology in FM) compatible.
- Replacement of 34 nos. of outlived FM Transmitters are also proposed by DRM+ compatible FM transmitters. These transmitters at present carry content for public service broadcasting. The Transmitters can be modified for DRM + operation for which technical standards are expected to be finalized during the year 2009.

Replacement of Short Wave Transmitters

External Services are one of the important services of AIR to keep the people of Indian origin and the world informed about the policy of Indian Government at the national & international level. The information is being provided through SW transmitters installed at Delhi, Bangalore, Panaji, Aligarh, Mumbai, Chennai, Gorakhpur. The operation of Short Wave Transmitters in DRM mode shall help to beam the programme to distant places in our country and abroad with crisp and clear audio quality, free from fading and interference commonly found in conventional short wave reception. At present there are 54 short wave transmitters under operation. The short wave transmitters are required to be replaced by DRM transmitters. One of the 250 KW shortwave transmitters at Khampur(Delhi) has already been converted for DRM operation. Conversion of 4 nos of 250 kW SW Transmitters to DRM mode is under process. AIR proposes replacement of 500 kW SW Transmitter at Bangalore which provides Vividh Bharati programme to most parts of India, by a DRM Transmitter. AIR proposes to replace another 4 short wave

Transmitters, 2 nos of 100 KW Transmitters at Delhi and 2 nos of 250 KW Transmitters at Aligarh, by DRM transmitter. Due to constraint of funds in the XI Plan, rest of the short wave transmitters shall be replaced by DRM transmitters in XII Plan.

Disaster Management/Emergency Management

During an earthquake, flood or super-cyclone, AIR has performed its duty of disseminating the correct and timely information to the public. During occurrence of such disasters, the broadcasting services of AIR also are affected. Although all these above mentioned events are extremely unpredictable, AIR has always been to tide over the breakdown in its services due to these events in the shortest possible time. This could be possible because AIR has always kept itself in a state of preparedness to meet any man-made or natural calamity. Mobile transmitters have played an important role in Disaster management. These are also deployed to maintain continuity of service while replacing old transmitters and also in the event of long breakdowns of a particular high power transmitter. AIR proposes the replacement of existing MW mobile transmitters (6 nos.) by new medium wave DRM compatible mobile transmitter with folded antenna.

Digitalization of Programme Production facilities

There are 211 studio set-ups in the AIR network and 40 new studios are under implementation as part of spill-over scheme of X Plan. The studios of AIR have been categorized according to the facilities are provided at the centres . i.e Type –I, Type-II,Type –III,Type- IV, Above Type IV, MP(Multipurpose) and VOR(Voice Over Relay). Digitalization of Studio has already been undertaken by AIR in the 10th plan period. NBH (New Broadcasting House) is fully digital. 137 Studios have been made partially digitalized and 48 studio are being partially digitalized as part of spill-over scheme of X plan by providing Hard Disc Based System (HDBS).

All the 211 AIR Studios would be fully digitalized in XI & XII Plan. It is proposed to fully digitalize 98 studios in the XI Plan and the rest of studios in XII Plan. In order to preserve rich cultural heritage programmes and important recordings of

VIPs, five Archival centres i.e. at Delhi, CBS Mumbai, Kolkata, Chennai and Hyderabad are proposed in the XI Plan.

Automation of News Services

At present, 44 RNUs(Regional News Units) are functioning. Seven new RNUs are proposed to be set up during the XI Plan. All the 51 RNUs are proposed to be fully automated and fully modernized. At present, News-on-Phone service is available in 14 RNUs. During XI Plan, News-on-Phone service shall be started from all the RNUs. At the end of Grand Plan, there will be a total of 64 RNUs in the network. NSD Headquarters will also have its own Data Centre and would be accessible to all the RNUs. Exclusive networking of NSD Headquarters with all the RNUs is proposed during the XI Plan for exchange of data/ news for seamless operation. Networking of NSD Headquarters with all the RNUs is proposed during the XI Plan for exchange of data/ news for seamless operation.

Digitalization of Programme links

- All connectivity will be digitalized during XI Plan.
- Analogue CES will be digitalized.
- In addition new Captive Earth Stations (CES) at six locations has also been proposed.

Augmentation of DTH Channels

No. of Radio channels on DTH platform are proposed to be increased from 21 to 30.

continue using analogue equipments. Further the exchange of programmes among various AIR Kendras and for international events, conversion of all analogue studio equipment to digital is an essential requirement.

E-Governance and up-gradation of IT facilities in All India Radio

As per the PMO's directions, all office management and project management activities should be computerized. All India Radio has already made a beginning by

providing computers at all the centres. However, as the technology is changing very fast, up-gradation of the IT facilities is necessary. Following schemes are proposed in this regard :

- Customized ERP (Enterprise Resource Planning) Solution
- Strengthening of IT network.

Augmentation of Training facilities

In order to meet challenges in programme Production, new Technology and management skills, the staff would need training. It is proposed to augment facilities in existing Training Institutes and start new Training Centres. In addition to in-house training, it is recommended to have a MOU with one or two premier engineering colleges(e.g, IIT s or IIMs) so that at least 10 -15 meritorious officers from the grade of ADE/DDE are sponsored for undertaking M. Tech/MBA programmes every year.

Research & Development

In present scenario technological developments are taking place very fast, therefore the role of R&D has become crucial. Besides technology trend forecasts, R&D will provide necessary technical support to the network. The following schemes for Research Department have been proposed during XI Plan:

I. Development of Propagation Measurements & reception Survey System for Digital Radio Transmission.
II. Development of High Power FM Transmitting Antenna.
III. Development of Advanced Monitoring and Control (Telemetry) System for Broadcast Transmitters.
IV. Pilot project for setting up of a Low Power DRM Transmitter in Metros/Zonal Headquarters in 26 MHz SW Band.
V. Modernization of Acoustic Laboratory.
VI. Up-gradation of Technical Monitoring Facilities at Monitoring Station, Todapur, New Delhi.
VII. Up-gradation of R&D Support Facilities

VIII. Strengthening of Prototype and Production Centre in Research Department.

Webcasting & Podcasting

There is a growing trend of operating internet radio channels by broadcasters all over the world. With the expansion of internet services in India, there is a tremendous opportunity to provide internet streaming of programmes. All India Radio has got a rich depository of music and other items. All India Radio will be streaming 20 channels on internet by the end of 2009. During XII Plan, it is proposed to put all AIR channels on internet.

Revenue Generation

In addition to normal sources of revenue generation through advertising , AIR could possible earn revenue by launching multi-media service with multiple channels of programmes (sound, data and video) in satellite mode duly supported by terrestrial mode in metropolitan cities. With digital transmission , it is possible to transmit value added services also which are helpful in revenue generation. A number of value added services like dynamic label, Interactive Text Transmission, Broadcast website, Multimedia Object Transfer (MOT), Slide show, Paging, Emergency warning, traffic and travel information using Transport Protocol Expert Group (TPEG) transmission, Differential Global Positioning System(DGPS) transmission, etc. are possible using digital broadcasting systems. All India Radio can start these value added services, which will not only cater to the needs of various sections of listeners but also provide scope to enhance revenue earnings through private investments.

Additional channels will be available on a single carrier of DRM and DRM+ transmitters within the same bandwidth. AIR has proposed in DRM+ mode a number of new FM transmitters most of them in semi-urban/ rural areas where private broadcasters may hesitate to invest. Thus AIR can lease out some of these channels at these places to private operators on rental basis. This will lead to substantial revenue generation and pave way for Public Private Participation. With the help of these high quality multi channel broadcasts, AIR will be able to attract advertisers in a big way and its earnings will increase.

Interactive Radio

Interactive radio service or visual radio is offered by some broadcasters in collaboration with mobile phone service providers. Through visual mobile radio, subscribers can, apart from audio, also get visuals, information and other details about the singer and the song being played. Apart from all these services, visual radio offers listeners a chance to participate in opinion polls, quizzes, and even the facility to download ring tones and wallpaper related to a particular song. Depending on the additional services provided by the service provider, visual mobile radio users can also buy tickets for movies from which the song is being played.

Common Transmission Infrastructure with Private Broadcasters

In the course of private FM expansion, the infrastructure facilities available with Prasar Bharati, have been leased out to private operators in a number of cases. The same practice can be continued after digitalization to earn revenue.

DOORDARSHAN: "GOING DIGITAL"

Doordarshan's technical facilities basically comprise of three setups. They are (i) Studios (ii) Transmitters & (iii) Satellite uplinks. All the three technical areas/setups viz; Studios, Transmitters & Satellite uplinks have to be digitalized for attaining a complete digitalization of Doordarshan.

In the 10th Plan period a few studio setups and satellite uplink setups were digitalized in a fragmented manner. In the grand plan for digitalization, all the remaining areas/setups are proposed to be converted into a digital mode thereby targeting complete digitalization of Doordarshan. The projects enumerated below are proposed to be taken up to achieve complete digitalization of Doordarshan:

(a) Digitalization of Transmitters

(b) Digitalization of Studios

(c) Modernization, Augmentation & Replacement of Satellite uplink

Digitalization of Transmitters

At present DD has approximately 1400 TV transmitters in the country. Under digitalization, all the existing analogue TV transmitters are required to be replaced by Digital Television Transmitters (D.T.T). The DTTs shall be installed at those locations where at present analogue terrestrial transmitters are functioning and there are some new locations also proposed for DTT High Power Transmitters(HPT). The analog transmitters cannot be switched off suddenly after the installation of DTTs

since the viewers have to buy a STB (Set Top Box) to view a programme transmitted from a DTT. Therefore, some reasonable time is required to be provided to the viewers to buy STBs so that they are able to view DTT transmission. At present a STB is costing Rs.3000 to 4000. Therefore the analog transmitters as well as DTTs are to be continued simultaneously for some time. This will facilitate smooth transition from analogue to digital in a developing country like India. The present status of analogue TV transmitters & digital transmitters required are provided below:

Type of Transmitters.	Present Analogue Transmitters	Required digital Transmitters (DTT)	Remarks
High Power Transmitter (HPT)	199	230	* All VLPTs will be closed down after completing useful life and will not be replaced
Low Power Transmitter (LPT)	830	400	
Very Low Power Transmitter(VLPT)	372	Nil *	
Total	1401	630	

High Power Transmitter(HPT) -It means a Transmitter Power of 1 KW and above
Low Power Transmitter(LPT) -It means a Transmitter Power of less than 1Kilowatt
Very Low Power Transmitter(VLPT) -It means Transmitter Power of less than 100 watt

It may be further mentioned that there are 130 existing locations of Analogue HPTs where DTT HPTs shall be installed while there will be 100 additional locations where DTT HPTs shall be installed by upgrading the existing analogue LPTs to provide the same coverage which is being provided by existing analogue HPTs including that being covered by some of the existing analogue LPTs. The existing 199 analogue HPTs include the independent HPTs transmitting National service, DD News service and Regional service. In case of DTT HPTs, a single HPT will be able to radiate 6 to 8 programme channels. It means the separate analogue HPTs required for DD National and DD News and Regional service, now in case of DTT, will not be required and only one DTT HPT will suffice for all the three services. The same is also applicable for analogue to digital LPTs. Digitalization plan has been

made with the aim to provide current level of population coverage of about 91%. Presently the total numbers of transmitters are 1400 whereas after complete digitalization the number of DTTs will only be 630 which will substantially save the spectrum resource, power supply consumption, space, manpower requirement etc.

The phasing out of analogue transmitters by installing DTTs is also a technological compulsion since the manufacturing of analogue transmitters and their spares, will be stopped in near future by the OEMs (Original Equipment Manufacturers) of these transmitters. The DTTs will be networked, using the satellite up-linking by providing one earth station for combining all the 8 TV channels in one bouquet to be down-linked and relayed by each of the DTTs. It is proposed that the 5KW Digital Terrestrial Transmitters will be installed at the existing analogue HPT sites by utilizing the present infrastructure like building and tower and also at new sites by acquiring of lands, construction of the transmitter buildings, towers etc. It is expected that the digital transmitters would provide TV coverage up to the area presently being covered by the existing analogue transmitter. The TV signal transmitted from either an analog or a digital terrestrial transmitter can be received using a rooftop-receiving antenna commonly called a Yagi antenna. The digital terrestrial transmitter is proposed to be operated on UHF Channel in Band IV and will relay a bouquet of about 6 to 8 TV programme channels having an appropriate mix of national, regional and local programming.

DTT implementation will have the following advantages:

i. Digital Terrestrial Transmitters will be provided at locations where already analogue transmitters are operational as well as at new locations too. Once the DTT is installed and commissioned successfully, the analogue transmission shall be closed in the analogue switch-off year.
ii. Digital Terrestrial Transmitters will be able to relay six to eight channels of TV programme simultaneously instead of the only one channel of programme being relayed by an analogue transmitter. This will save substantial amount of power consumption in a transmitting station & frequency resource.
iii. The Digital Terrestrial Transmitters shall also save scare resources of spectrum since one UHF TV channel shall be used for transmitting 6 to 8 channels of programme by single D.T.T multiplex whereas six to eight transmitters are required in analogue mode.

iv. With a Digital Terrestrial Transmitters 6 to 8 programme channels can be transmitted over one transmitter multiplex at the slightly high cost of 1.3 as compared to analogue transmitter cost thus attaining a substantial saving in capital cost/programme or transmitter hardware.

v. The Digital Terrestrial Transmitters are already being installed in most of the developed countries like USA, UK, France, Japan and Australia etc. all around the world. The most of the developed countries have planned to switch off analogue transmission by 2012 to 2014.

vi. The equipment, spares of analogue transmitters are being phased out and they may not be available in world market in future. Therefore, it is the technological compulsion to switch over from analogue to digital transmission.

vii. Quality of the reception will be undoubtedly better than that of the analogue signal thereby increasing viewer's satisfaction level.

viii. The coverage area of the DTT is expected to be the same as that of the analogue transmitter.

ix. 3 Nos. of staff per DTT HPT at those locations where analogue HPT is existing and additional staff per DTT HPT at new locations where analogue LPTs are existing shall be worked out in due course for operation & maintenance because the analogue services will also continue in addition to DTT at all the existing locations till analog switch-off since viewers has to buy a S. T. B. [Set Top Box] for viewing DTT service.

x. The reduction of total number of transmitters from 1400 to 630 after complete digitalization of terrestrial transmitter and closing down of 361 VLPTs, the requirement of maintenance Centres shall reduce from existing 126 Nos. to 50, bringing down the requirement of manpower for operation & maintenance. Additional staff shall be required for DTT operation as mentioned in Sl. No. ix, the manpower spared due to reduction of Maintenance Centres shall be fully utilized for DTT operation.

xi. The present analogue transmitters operational in DD network [except a few analogue HPTs purchased in the last three to four years] cannot be converted into digital transmitters. However at present the analogue transmitters available in the market can be easily converted in to a digital transmitter by incorporating some modifications which is quite economical compared to a new DTT.

xii. It is also not possible to transmit both analogue & digital signal simultaneously from the same transmitter. Two separate transmitters are required to transmit . analog and digital signals at the same time, in order to ensure a smooth transition from analogue to digital.

xiii. DVB-H: (Digital Video Broadcast to handheld) --- DTT is also being used for telecasting the TV signal to mobile handsets which is called DVB-H service. Doordarshan has commissioned its pilot project on DVB-H in Delhi in May 2007 with a coverage range of approximately 10 Kms radius. A consultant is being engaged for developing a suitable PPP model for expansion of this service in other parts of the country. Therefore the requirements of funds for DVB-H are not being proposed at this stage.

Remote monitoring/switching of VLPTs

In the previous plan, projects have been framed and executed for monitoring the VLPTs from remote location. The remote location is none other than the Doordarshan Maintenance Centre, the controlling authority of the VLPT. Since these VLPTs are in general unmanned, hence switching and monitoring these transmitters is essential from a remote location to ensure its healthiness. This proposal will enable to continue providing this facility at locations where remote monitoring & switching is not yet made available.

Conversion of analogue HPTs to digital HPTs

In this project it is proposed to convert 10 Nos. of analog HPTs to digital HPTs. These analogue HPTs can be converted to a digital HPT after some minor changes in its baseband equipments etc, which wiil cost less than a new digital transmitter.

Conversion of analogue HPTs to digital LPTs

In this project it is proposed to convert 60 Nos. of analogue LPTs to digital LPTs. These analogue LPTs can be converted to a digital LPT after some minor changes in its baseband equipments etc, which will cost less than a new digital transmitter.

Modernization of measurement & testing facility

With the digitalization of the existing terrestrial transmitters there will be a need to have the measuring and testing facilities also. Hence there will be a requirement for measuring and test equipments to measure and ensure the quality of output signals. These equipments shall be provided at all the DTTs & DMCs.

Frequency conversion of existing analogue HPTs & LPTs

Each terrestrial transmitter, whether a HPT or a LPT, uses only one frequency for transmitting its signal. This frequency is allocated after obtaining the clearance from the WPC [Wireless Planning Commission], for which a payment is required to be paid to the WPC. Each transmitter is frequency dependent and whenever another transmitter is installed and operated having the same frequency, interference will occur between the signals transmitted from these two separate transmitters. In order to avoid this interference separate frequency has to be got approved from the WPC for that location.

DTH sets in places of VLPTs closed down

With the digitalization of the terrestrial transmitters there will be a reduction in the numbers of the transmitter and some VLPTs [Very Low Power Transmitter] will be closed down. These VLPTs will be closed down because the cost of a digital VLPT will prove to be expensive vis-à-vis the DTH service which is already available in these areas. Once these VLPTs are wound up, their coverage areas will be provided with DTH systems for viewing the DD programmes. It is estimated that 200 Nos. of DTH systems shall be supplied per VLPT being closed and there will be 375 Nos. of VLPTs which shall be closed.

Value added service over Digital Terrestrial Transmitters

The digital transmitters can also be used for providing value added services to the viewers. These value added services will come in demand after the DTTs become operational. These value added services will be like data broadcasting, T-commerce, encryption system, SMS over DTT etc.

Disaster Management/Emergency Management

In the past there have been several occasions when Doordarshan has played a very crucial role as a public broadcaster during emergencies like natural calamities, war, major accidents, terrorist activities, riots etc. by using its existing infrastructure for communicating the information relevant to the catastrophe. Whether it is an earthquake, flood or super-cyclone, Doordarshan, as a public broadcaster, performed its duty of disseminating the correct information to the viewers inside the country & abroad. During occurrence of such disaster, the broadcasting services of

Doordarshan also are affected. Although all these above mentioned events are extremely unpredictable, DD has been able to tide over the breakdown in its services due to these events in the shortest possible time. This could be possible because Doordarshan has been in a state of preparedness which is solely based on the foresightedness of the organization.

After taking a stock of its past experiences, Doordarshan proposes in the 11th Plan, a disaster management/emergency requirement scheme. This kind of planning is not only desirable after taking cue from the guidelines issued from time to time by the Government of India but essential too in the larger interest of the viewers of the country. The proposal has been framed to prepare DD to meet the emergency requirements arising during the occurrence of any disasters including those perpetrated by mankind. The following items have been decided to be taken up in the 11th Plan period:

1) Procurement of Transmitters, broadcasting antennas, RF feeder cables & all the essential accessories.
2) Repair/replacement of guyed mast or self supporting towers.
3) Procurement of diesel generators, UPS & Batteries etc.
4) SPV [Solar Photo Voltaic] panels to be used at transmitters.
5) Supply & Installation of Porta-cabins for housing transmitters.
6) Shifting of existing transmitters.

Digitalization of Studios

(I) Full digitalization of the existing partially digitalized studios at 31 locations in Doordarshan network in India

(II) Full digitalization of the existing analogue studios at 12 locations in Doordarshan network in India

(III) Digitalization of Archiving facilities in Doordarshan network

(IV) Digitalization of Automation of News Production & Transmission related facilities in Doordarshan network

(V) Modernization & Augmentation of studios by providing digital cameras, digital production switchers, character generators, frame synchronizers, video

servers, logo generators, robotic camera setup etc. at existing 66 locations

(VI) Augmentation of recording and post production facilities by providing digital VCRs, Edit suites etc. at existing 66 locations

(VII) Augmentation of field production facilities in the existing OB/EFP/ENG vans at 25 locations out of the existing 66 studio center locations by providing digital camcorders etc.

(VIII) Strengthening of audio facilities, monitoring & measuring facilities, studio & ENG lighting facilities etc. at existing 66 locations

(IX) Augmentation of power supply system equipment etc. at existing 25 locations

(X) Replacement of essential services equipment including air-conditioning plant, lighting system, diesel generators, power supply equipments, acoustic treatments, technical furniture etc. existing 66 locations

(XI) Providing latest state of the art equipments at the studio centres for modernizing the already existing production and post production facilities at existing 66 locations

(XII) e-Governance, IT related schemes:

(XIII) R&D and training

(XIV) Induction of new technologies in the Network

(XV) Introduction of High Definition Television(HDTV)

(XVI) Expansion of DD services by setting up of 5 new digital studio setups

The above mentioned 16 projects are explained below for describing their need & justification of the same:

There are 66 studio locations in the Doordarshan network. Each location is commonly called a Doordarshan Kendra [DDK]. In each Doordarshan Kendra there is either one or multiple studios. All these 66 locations/Kendras are classified into two broad categories (i) Major Kendra & (ii) Other Kendra. There are 17 major Kendras having multiple studios and remaining 49 are Other Kendras. The digitalization of studio centers (Kendra) of Doordarshan was the mandate of the Government in the 10th Plan itself. It was decided to digitalize all the studios across the country in a phased-wise manner. As a result, all the 17 numbers of the existing major Kendras were fully digitalized and 31 existing smaller Kendras were partially digitalized in the 10th plan. Now the status of the 66 Kendras is as follows:

Fully digitalized major Kendras : 17 Nos.

Smaller Kendra installed fully digital : 03 Nos.

Digital Kendras under implementation

in fully digital set-up : 03 Nos.

Partially digitalized Kendras : 31 Nos.

Analogue Kendras due for digitalization : 12 Nos.

Total: 66 nos

The digitalization of the studios will have to continue to achieve a total digitalization of all the studios in the network. This is necessary in order to ensure better quality of program production thereby ensuring a better quality of service to the viewers. This will also enable Doordarshan as a Public Broadcaster to compete technologically & commercially with various private broadcasters who are operating nationally as well as internationally. Secondly, it is also a technological compulsion now to switch over to digital since the manufacturers globally have started abandoning the production of analogue equipments and its spares thereby creating scarcity of analogue equipments, spares and services. Economically it will also prove to be expensive to continue using analogue equipments. Further to facilitate the exchange of programmes among various DD Kendras and for international events, conversion of all analog studio equipment to digital is an essential requirement.

In view of above, full digitalization of existing partially digitalized studio centers at 31 locations will be undertaken by providing digital production facilities, digital field production facilities, digital preview and post-production facilities. Full digitalization of the existing analogue studios centres at 12 locations will also be undertaken. The digitalization project will focus on the digitalization of the archiving facilities, which is need of the time, for preservation and re-purposing of the rare, old and precious program contents available exclusive with Doordarshan and also Automation of News production & Transmission related facilities which will ensure smooth flawless production & transmission of News & Current Affairs. The archiving facilities envisaged will be for strengthening the central archive at Delhi, setting up new

regional archives [Delhi, Kolkata, Hyderabad, Jallandhar, Ahmedabad & Guwahati] and dedicated archives for SAARC countries.

The Central archive at Delhi will be strengthened by providing full resolution MAM system with sufficient online & near line storage, independent website for archive, provision of servers, digital VCRs, NLEs, Noise reducers etc. New regional archives will be set-up by providing high quality real time digital restoration system, advance noise reduction system, software based restoration system with NLE, Digital VCRs, standard noise reducers, video tape cleaners, DVD players/recorders, low resolution Media asset management system with limited storage. Similarly a dedicated archive for SAARC countries is also proposed to be set-up to share multicultural, historical heritage, economical, ecological and developmental contents.

In the above projects the activities mainly focuses on the modernization of the existing studio facilities through augmentation & replacement methods and each of the activities have been grouped together on the basis of functionality to the area of operation specific. The existing digital studio equipments which have become obsolete after useful life period shall be replaced with the latest state of the art digital technology.

In the recent past, the broadcasting technology has changed drastically and old technology/equipment is getting obsolete frequently. Modernization and augmentation of existing digital studio production facilities is a necessity in order to keep pace with the fast changing digital technology and to ensure better quality of program production and equally good quality of reception by the viewers. This will ensure that Doordarshan maintains its standard and consumer/viewer base in the present age of competitiveness does not deplete. This is essential since there is stiff competition from the private broadcasters who leave no stone unturned to woo away the viewers. In addition the programme/context exchange between DD Kendra and among various broadcasters for international events clips etc. is also easier using the latest digital equipments because of compatibility.

One more advantage of replacement will come in the nature of manpower saving because with the latest state of the art technology robotic controlled units prove highly reliable, accurate & multi-task-able.

These projects are only for modernization of the existing studio equipments by providing the latest state art of the equipments at the selected studio locations.

Information Technology(IT)

IT is the buzz word of the 21st century. The developments in the field of computation have metamorphosed into a composite engine and invaded the world as IT. Information technology is the latest state of the art for operating any activity be it production, planning, supply chain management, infotainment or broadcasting to optimize its resources for deriving maximum benefits. Doordarshan is no exception.

Since the last couple of years, Ministry has also been insisting DD to spend 3% to 5% of the sanctioned budget grant towards IT and related activities. Although the TV programme production nowadays are completely dependent on IT based studio equipments, yet gray areas in the organizational architecture still persist, which need to be addressed for attaining a satisfactory level of IT proliferation. Therefore in the 11th Plan, Doordarshan proposes to adopt a few IT tools for improving its operational efficiency. These are summarized below:

a) Modernization of Project Monitoring system by Implementing ERP [Enterprise Resource Planning].
b) Augmentation of the existing computer infrastructure at the DD Centres by providing the latest IT logistics viz; computers and peripherals
c) Augmentation of the existing IT logistics at DG: Doordarshan

The scope and facilities proposed to be provided under the items mentioned above are further elaborated in the succeeding paragraphs one by one:

(a) Modernization of Project monitoring system by Implementing [Enterprise Resource Planning(ERP):-

Doordarshan uses the Plan allocation to frame various schemes that are being implemented simultaneously in a plan period of five years & sometimes beyond. Although the broad objective of incurring such expenditure is to improve the

technical infrastructure in the network for the benefit of programmers to generate quality TV contents for the viewers, most of these schemes with its implicit projects are not dependent on each other and needs to be monitored exclusively. Monitoring, scheduling & rescheduling of these projects realize a substantial amount of effort, time & energy in absolute terms due to the complexities involved at every step of implementation right from its inception.

Modernization of project management is among the top priority area for IT implementation in any organization. Doordarshan is yet to adopt an IT based project monitoring system. Hence it is proposed to modernize DD's project monitoring system for ensuring timely completion and optimum utilization of resources by implementation the 'Enterprise Resource Planning' popularly known as ERP among Information Technologists.

The government of India has persuaded all its Ministries & departments to launch e-governance in its system for transparency & faster delivery of information to the citizens of this country. ERP is a tool that precedes mechanism for e-governance.

(b) <u>Augmentation of the existing computer infrastructure at the DD Centers by providing the latest IT logistics viz; computers and peripherals:-</u>

Under this scheme there is a focus for objectively infusing the use of IT in Doordarshan for its day-to-day activities. Though, in the previous years, there have been umpteen attempts to dedicate a humble percentage of the available funds towards this novel target, yet a level of complete or near complete achievement is yet to be realized. A major reason is the scarcity of funds in the department under Revenue Non-Plan which can ill afford the hardware and software meant for a complete IT based working because of their prices. Therefore it is proposed through this scheme to provide computers and other logistics to all the HPTs [High Power Transmitter] & DMCs [Doordarshan Maintenance Centre]. This will also ensure the availability of a uniform IT logistics at all these centres.

(c) <u>Augmentation of the existing IT logistics at DG: Doordarshan</u>

The scheme also proposes augmenting the existing IT logistics at DG: Doordarshan. The use of computers and other peripherals have increased many fold in the Doordarshan Directorate in the last few years. It has finally dawned upon the users as well as the beneficiaries that IT can unbelievably ease the storage & calls of data,

compute figures accurately, eliminate repetition and overall increase efficiency of working even in a small cycle of activities. Through this scheme, the existing IT logistics shall be upgraded. IT based multi-utility machines will be provided which will contribute to a meaningful use of IT at all levels of the organization's strata. Further new computers & peripherals shall also be provided to propel use of IT completely.

R&D and Training

Doordarshan is a technology driven organization. Broadcasting is the core activity of Doordarshan and like any other organization which is dependent on the extremely fast changing technology; Doordarshan is also required to keep abreast with the latest changes in the technology. This is not just to walk hand in hand with the global trends in broadcasting but also to meet the ever compulsive demand to change. The state of preparedness to do so can only be ensured by strengthening the Research & Development (R&D) wing, which acts on behalf of the organization to set the standards of latest technology to be introduced and adopted in DD, in a time bound manner, whether it relates to production, transmission or up-linking hard wares.

Due to the fast changes in technology, the broadcast equipments being manufactured mostly abroad frequently undergo up-gradation and it is mandatory to have an operational & maintenance training to be imparted to the staff using these equipments to derive the maximum possible utility. Doordarshan has training institutes for imparting training to its staff periodically in a calendar year. However there is an essential need to augment the equipments and other logistics of a training institute to ensure that the trainees receive adequate and meaningful training on the latest available broadcast equipments which will in turn benefit the organization.

In the 11th Plan, Doordarshan proposes to invest its plan capital for strengthening the only R&D wing situated in Delhi and the existing Staff Training Institutes [Technical] located at Delhi, Bhubaneswar & Lucknow.

The proposals have been prepared in this 11th Plan scheme by broadly categorizing into two components or sub-schemes as mentioned below:

a) Research & Development(R&D)
b) Training

The following paragraphs explaining the objectives, scopes and other desirable information shall focus on the above two broad titles only.

Research & Development(R&D)

(a) Study and preparation of TV transmission coverage maps based on actual terrain condition Study and preparation of TV transmission coverage maps based on actual terrain condition.

For optimal implementation of Digital TV broadcasting in the country, network and spectrum management is to be carried out in a scientific manner. For this purpose extensive and accurate propagation measurements are required to be carried out all over the country. In this regard R&D has to gear itself with state of the art equipment/system for propagation measurement and reception survey. The assessment of the propagation parameters such as minimum usable field strength, carrier to noise ratio, BER are necessary for the network planning of digital TV broadcasting service in the country.

The project has been formulated with a view to assess the following propagation and planning parameters. (i) Evaluation of reception quality under different environmental conditions. (ii) Assessment of Building Penetration Loss and shadow loss. (iii) Assessment of reception quality under high-speed mobile conditions (iv) Estimation of carrier to interference ratio (v) Field strength measurements to evaluate the coverage area for satisfactory reception and planning parameter required for digital TV planning & (vi) preparation of maps based on the actual terrain conditions.

(b) Providing testing and measuring facility for Digital Terrestrial TV transmission [DTT & DVB-H], HDTV & Satellite TV.

A high performance broadcast coverage system is proposed which will be integrated into a measurement vehicle, custom designed for taking all kinds of measurements needed for field strength survey for coverage and other propagation related studies for R&D purpose. This integrated system will be able to control the system components, collect, store and display the field strength data of the DVB-

T/DVB-H/CW signal from test receiver, Position and display the location coordinates on the digital map of the targeted area with the help of GPS navigator.

© **Strengthening of in-house prototype & production facility for R&D developed TV equipments/systems**

A large number of digital equipment and systems have already been introduced in the Doordarshan network for example Digital Terrestrial Transmission (DTT/DVB-H), studios, Earth Stations, Downlinks, DD Direct+ etc. Doordarshan has ambitious plans to introduce HDTV, IPTV and DVB-H in the future. There is a need to develop the standardized procedure for the measurement of digital equipment. For this purpose a digital test & measuring lab will be set up in the Research Department. Test and measuring facility are also, to be provided in Antenna Lab. for digital terrestrial TV antennas keeping in view the large scale introduction of Digital terrestrial transmission in near future.

The Production Centre of R&D is responsible for large scale fabrication and production of various equipment and systems developed by the Research Department. In the past the Centre has supplied large number of equipment for Doordarshan Kendras, HPT etc. Some of these equipments are (i) Transmitting & Receiving Antennas, (ii) Logo Generator (iii) Satellite based remote program switching system for unmanned LPTs (iv) VLPT Remote Monitoring Unit, etc. Apart from the production of equipment the Centre is also responsible for fabrication of Prototype Units of the equipment/systems before finalizing design for large scale production. In addition, the Centre is also responsible or repair and maintenance of various R&D equipments which are received from Doordarshan network from time to time. The equipment used in the assembly line, testing and measurements have become very old and obsolete. It is, therefore, proposed to replace such equipment with state of the art digital equipment.

(d) **Establishment of experimental IP computer network over DD satellite network and DTH platform for interconnectivity of DD archival centres located at the four Metro cities of India.**

Today Doordarshan has a digitalized TV network through Satellite uplinks at Delhi and Regional/State capitals and DTH DD Direct Plus uplinks at Todapur Delhi for

providing 30 Channels of DD satellite channels and 50 Channels of DTH on its DD Direct Plus .Now the technologies and DVB standards have grown up such that it is possible to use the existing DD TV network to establish a full duplex IP computer network using the technique of IP over TS (MPE profile - Multiprotocol Encapsulation) under DVB data broadcast standard. It is possible to establish a dedicated Doordarshan IP network connecting all the DDKs having Satellite Uplinks. Under this project it is proposed to establish an experimental IP network using the above technique for interconnecting the digital Video Archival Centres at four Metros (Delhi, Mumbai, Kolkata and Chennai).

Under this plan of execution, DD will utilize the existing hardware infrastructure and available spare bandwidth of the DD Satellite TV network where the unutilized bandwidth is presently being filled up by Null packets. Since a full duplex IP network is being established, DD can implement all possible computer applications like exchange of Post production Video files of MPEG2 and MPEG4 of SD and HD, interlinking of DD Archival etc. This IP network which will at present provide network connectivity among 4 DDKs at four Metros can be expanded to other DDKs at regional levels for interlinking their Archival centers easily in future.

Under this project it is planned to have tapeless workflow, multimedia platforms at all the major studio centres. Tapeless workflow will be achieved by using a SAN [Storage Area Network] system which is actually a mainframe server and can be accessed by separate users simultaneously for various functions such as online editing, archiving, content mixing, multimedia activities using the contents etc without using or exchange of contents on tapes/cassettes. Usage of tapes is limited to the outside news & productions only and the entire production in the studio is transferred into the SAN system tapelessly.

HDTV [High Definition Television] is a new technology using a digital platform. The report of the sub-group on Going Digital has mentioned in detail about this technology and the way it is envisaged to be introduced in this country. HDTV is under experimental stage in Doordarshan through a pilot project which was approved by the Planning Commission Under this project mentioned in this DPR, high definition production & post production facilities, terrestrial transmitters and uplink facilities shall be created for DD.

Through this project it is proposed to expand the TV services of DD by setting up new digital studio setup with production & post-production facilities at Udaipur in Rajasthan, Raiganj in North Bengal region of West Bengal, Rae-Bareily in Uttar Pradesh, Aurangabad in Bihar & Aurangabad in Maharashtra. The details and justification of the items proposed above have been mentioned below:

(a) Augmenting the Doordarshan studio network by providing a new digital studio setup facility at Raiganj in West Bengal.
(b) Augmenting the Doordarshan studio network by providing a new digital TV studio facility at Rae Bareily in Uttar Pradesh.
(c) Augmenting the Doordarshan studio network by providing a new digital TV studio facility at Aurangabad in Bihar.
(d) Augmenting the Doordarshan studio network by providing a new digital TV studio facility at Udaipur in Rajasthan.
(e) Augmenting the Doordarshan studio network by providing a new TV studio facility at Aurangabad in Maharashtra.

Training

(i) Providing digital studio production facility at 01 location comprising of camera chains with accessories, production switcher, audio console, CG, logo-generator, digital frame synchronizer, router, SPG, assorted microphones, studio lighting system, video server, monitoring wall and other peripherals etc. [including departmental works, installation & integration of materials and technical furniture, power supply, air-conditioning etc.] for conducting the training courses for programme & engineering personnel at Delhi.

(ii) Provision of ENG based field production facility at 3 locations for conducting of training courses for programme & engineering personnel at Delhi, Bhubaneswar & Lucknow.

(iii) Providing post production facility at 3 locations through NLEs, 3-D graphics, digital VCRs & other accessories etc. for conducting of training courses for programme & engineering personnel at Delhi, Bhubaneswar & Lucknow.

(iv) Setting up of digital video measurement & monitoring facility including test pattern generator etc. at 3 locations for conducting training courses for engineering personnel at Delhi, Bhubaneswar & Lucknow.

(v) Providing satellite broadcast equipments i/c measuring equipments for training purpose.

(vi) Providing equipments for upgrading the existing laboratory facilities at IIT Kanpur that is set-up for broadcasting training needs of Doordarshan.

(vii) 500 W VHF/UHF TV Transmitter in (1+1) auto mode [remote operation] along with input monitoring & associated equipments, satellite receiving equipments, miscellaneous equipments, power supply & air-conditioning, measuring equipments etc.

(viii) Study and preparation of TV transmission coverage maps based on actual terrain condition.

Modernization, Augmentation & Replacement of Satellite Broadcast Equipment

There is a scheme for "Modernization, Augmentation & Replacement of Satellite Broadcast Equipment". The scheme has been formulated for complete digitalization of satellite uplink in the DD network. The details of the present proposal item-wise are mentioned below:

Upgrading of Earth Stations

18 Nos. of existing earth stations will be upgraded. At present 18 state capital earth stations in 2+1 mode are running with current state of the art compression equipments. These equipments will complete its life, and also the existing compression algorithm will become older and inefficient. So the OEM(Original Equipment manufacturer) will stop supplying spares and service support due to obsolescence. Hence, under this scheme it is proposed to upgrade the earth stations by replacing the compression system, base band (from analogue to digital), PDA and RF equipments with new models with advanced features and software.

Replacement of Earth station Compression Equipments

Present earth stations running with current state of the art compression equipments will complete its life, and also the existing the compression algorithm will become older and inefficient. So the OEMs will stop giving spare and service support due to obsolescence. Hence, under this scheme it is proposed to upgrade the earth stations by replacing the compression system at 5 places.

Providing VSAT terminals

There is a need to install more VSAT terminals at many stations, in addition to the already 120 locations being undertaken across the country for collection of News feeds in shortest possible time. These additional terminals will work with the already proposed VSAT Hub with Up-gradation. These terminals will provide additional services for intranet and VoIP etc. These terminals will be provided at District headquarters for News Feeds. VSATs will be provided at 473 locations more in this project.

Upgrading of 10 regional centers of VSAT terminals

As the number of VSAT terminals increases in states there will be a requirement of additional hardware and software at DDKs located in state capitals. To meet this requirement under this scheme it is proposed to upgrade receiving, decoding, storage and routing infrastructure at 10 stations.

Expansion of VSAT hub at Delhi

As the number of VSAT terminals increases there will be a requirement of additional hardware and software at the VSAT Hub. To meet these requirements under this scheme, it is proposed to upgrade receiving, decoding, storage and routing infrastructure at Hub earth station at Todapur in Delhi.

Replacement of DSNG units

Seven DSNG units that need to be upgraded will be replaced with new DSNG vans (1+1 mode) with advanced features and software, after they have served their useful life and the compression algorithm becomes old & inefficient.

Proving New DSNG Terminals

At present DD is having DSNGs stationed at major DDKs in some of the state capitals. For expansion of news contribution links under this scheme it is proposed to provide one C-band DSNG Van (1+1 mode), with advanced compression and modulation equipments, each at remaining state capitals and other major stations for coverage of news and other programs. 11 DSNG terminals will be provided through this project.

Replacement of IRDs with DVB S-2 based IRDs

Based on the request of DOS(Department of Space) to improve bandwidth efficiency by using better compression and modulation in satellite communication, Doordarshan has already prepared a road map to achieve it in a phased manner. As a first step in 11th plan, DSNGs and contribution links are to be implemented using DVB-S2 standard and replacement of some of the IRDs with DVB-S2 technology. This will help in reduction in band width and saving operational cost. The remaining Existing IRDs will be required to be replaced by DVB-S2 technology as the New DSNGs, Earth stations and Upgradation of Earth stations will come up with DVB-S2.

Replacement of Uplink PDAs and accessories

Earth stations having Old PDAs at 8 locations will be required to be replaced with NEW PDA system as per new IR/GR guidelines.

Providing New Earth station

At present at least one earth station has been provided in each state i.e. at state capital and co-sited with DDK. Very often there are demands for more earth stations in every state where PGFs are functioning. Under this scheme it is proposed to keep a provision of 2 channel uplink facility where PGF are functioning. As such 20 new earth stations will be provided through this project.

Up-gradation of Carrier Monitoring Station at Todapur

The Carrier monitoring Earth station being implemented for monitoring of satellite services uplinked for Earth station will need to be upgraded for inclusion of monitoring facilities of carriers due to change in compression & modulation technologies for better efficiency and new services from new earth stations.

Remote Switching of VLPTs

In this project, facilities will be provided to the controlling stations of the VLPTs for switching on and off the remotely located VLPTs via satellite link. These VLPTs are unmanned and wherever more than one programme channel is to be telecast from the transmitter, a changeover is required and therefore remote switching is essential. Also in case of any breakdown, the standby unit of the transmitter can be switched on from remote using this facility.

Existing Organizational Structure

The engineering wings of AIR and Doordarshan are engaged in the following activities:

- Planning of broadcasting centres of AIR and Doordarshan
- Framing of schemes and getting approvals for plan projects for AIR and Doordarshan
- Exercising budgetary control of the Plan Schemes
- Procuring hardware and software for implementing plan projects
- Design of Transmitting Centres, Studio Complexes, Satellite uplinks and Terrestrial links for AIR and Doordarshan
- Design and construction of buildings for AIR and DD installations
- Implementation of plan projects of AIR and Doordarshan
- Opeartion and maintenance of AIR and Doordarshan broadcasting centres, DTH channels and Cable Head Ends
- Managing spectrum issues in respect of AIR and Doordarshan
- Training of AIR and Doordarshan engineers
- Carrying out R&D activities in the field of radio and TV broadcasting
- HRD for engineering wings of AIR and Doordarshan
- Computerization and running value added services such as news on phone, music on demand, etc
- Archiving of important AIR and DD programmes
- Revenue Earning by renting out the resources of AIR and Doordarshan to private radio and mobile telephone operators
- Installing, running and maintaining the FM Transmitters of IGNOU

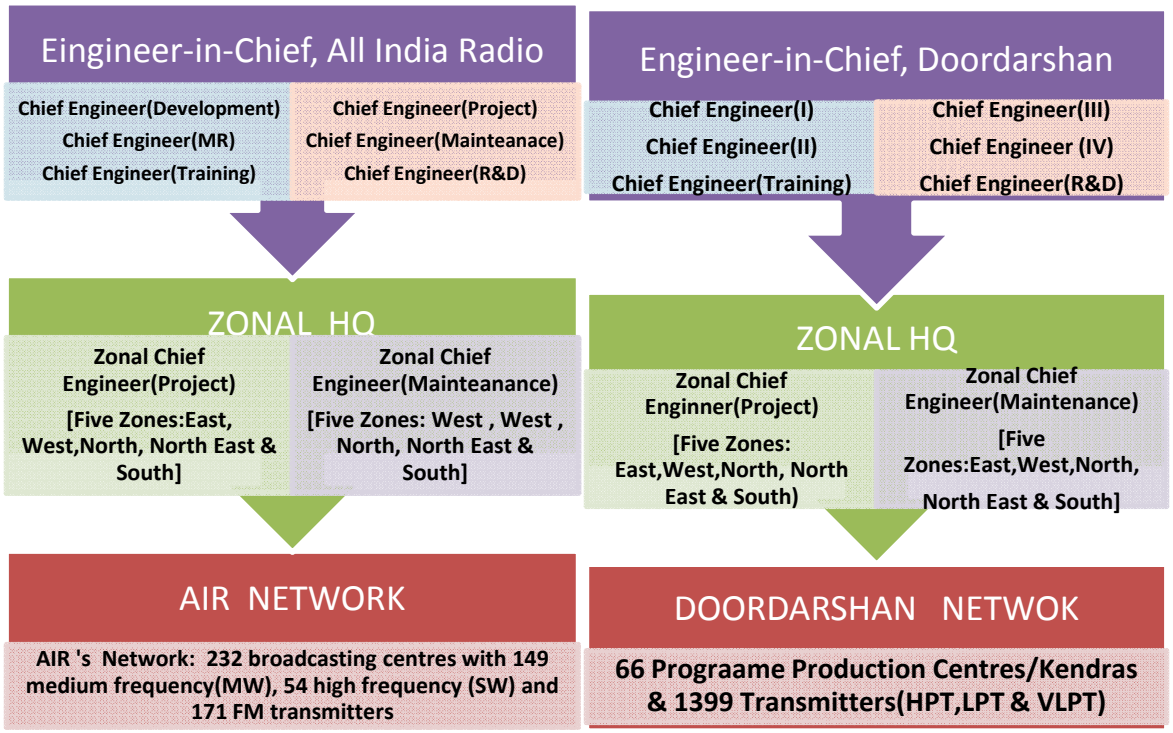
- Extending help to the Bureau of Indian Standards in the process of formulation and revision of various BIS codes related to broadcasting

Present Structure

Engineer-in-Chief, All India Radio and Engineer-in-Chief, Doordarshan are the overall heads of the engineering wings of All India Radio and Doordarshan, respectively. And they are Chief Technical Advisors to the Ministry of Information & Broadcasting and Prasar Bharati on matters relating to radio and TV broadcasting, respectively. Both the E-in-Cs are assisted by four Chief Engineers, in the respective Directorates of All India Radio and Doordarshan, in matters related to formulation and approval of plan schemes, design of transmitting systems, studios, satellite and terrestrial links, DTH channels, IT , material management for plan schemes, budgetary & expenditure control, monitoring & co-ordination, deployment of officers and staff in the network, operation and maintenance of broadcasting centres, procurement of spares for maintaining the transmissions, running of value added services, coverage of important events and games and other miscellaneous matters. The headquarters' team of E-in-Cs and the CEs deployed in the respective Directorates are further assisted by Zonal Chief Engineers located at Mumbai, Kolkata, Delhi, Chennai and Guwahati. The Zonal Chief Engineers are responsible for execution of projects and operation & maintenance of AIR and DD installations in their zones. At present there are three Zonal Chief Engineers deployed in Mumbai, the HQ of the West Zone, one for execution of AIR & DD projects, and one each for the maintenance of AIR and Doordarshan networks of the West Zone, respectively. Jurisdiction of the West Zone covers the states of Maharashtra, Goa, Gujarat, Madhya Pradesh, Chhatisgarh and Union Territory of Dadra and Nagar Haveli. There are four Zonal Chief Engineers deployed in Delhi, the Zonal HQ of North Zone: one for execution of AIR & DD projects in the North Zone, the other for execution of AIR & DD projects in the state of J&K, and two others for maintenance of AIR and Doordarshan networks in the North Zone, respectively. Jurisdiction of the North Zone covers the states of Delhi, Uttar Pradesh, Rajasthan, Uttaranchal, Punjab, Haryana , Himachal Pradesh and J&K. There are two Zonal Chief Engineers deployed in Kolkata, the Zonal HQ of the East Zone: one for execution of AIR & DD projects and the other for maintenance of AIR and DD network in the East Zone. Jurisdiction of the East Zone covers the states of West Bengal, Bihar, Jharkhand and

Orissa. There are two Zonal Chief Engineers deployed in Chennai, the Zonal HQ of the South Zone: one for execution of AIR & DD projects in the South Zone and the other for maintenance of AIR & Doordarshan network in the South Zone. Jurisdiction of the South Zone covers the States of Tamil Nadu, Andhra Pradesh, Karnataka, Kerala and Union Territories of Pondichery and Andaman Nicobar and Lakshadweep Islands. There is one Zonal Chief Engineer deployed in Guwahati, the Zonal HQ of the North East Zone, who is responsible for execution of projects and maintenance activities relating to AIR as well as Doordarshan network in the North East Zone, which comprises of eight states of Assam, Arunachal Pradesh, Tripura, Sikkim, Mizoram, Manipur, Nagaland and Meghalaya. There is a Staff Training Institute for technical personnel located at Delhi. The Institute imparts training to AIR and Doordarshan employees and it is headed by a Chief Engineer. There is a Research & Development Department for AIR as well as Doordarshan, located at Delhi. It is headed by a chief Engineer. There is a Regional Staff Training Institute at Bhubaneswar, headed by a Director. There are two more Technical Staff Training Institutes located at Malad and Shillong.

The existing engineering structure of AIR as well as Doordarshan are essentially three layered ones, the first layer comprises of E-in-C and his team of Chief Engineers based at the Directorate, the second layer consists of the Zonal Chief Engineers based at zonal HQs of Mumbai, Delhi, Kolkata, Guwahati and Chennai and the third layer consists of AIR/Doordarshan Kendra/Transmitters spread throughout the length and breadth of the country. AIR/Doordarshan Kendras/Transmitters are manned by Superintending Engineer/Station Engineer/Assistant Station Engineer/Assistant Engineer who run and maintain the Kendras/ Transmitters with the assistance and support of the sub-ordinate engineering staff. The existing three layered engineering structures for All India Radio and Doordarshan have been laid out side by side and shown below:



The Problems

1. The two Departments have been functioning independently over a period of time. A tremendous opportunity lies for jointly utilizing the land, building, technical facilities and human resources to the mutual advantage of both the organization. Hence it is proposed to re-structure the two organizations and utilize the common resources to save expenditure and achieve better efficiency/synergy. Both AIR and Doordarshan have land, building, manpower and other resources at their disposal. For example, AIR has considerable land and building resources at most of the broadcast and transmitting stations, while Doordarshan network, at many places, is functioning from rented buildings. It is proposed to utilize the land, building and other resources of AIR network for Doordarshan set up and vice-versa. There could be a common tower for transmitting FM and TV signals. There is a tremendous shortage of staff. It is also proposed to utilize the manpower resources collectively for both the organizations so that with the existing manpower, both the set ups can be managed efficiently. The future expansion and planning should be done jointly. This can happen only if certain functions are merged. While it may not be possible to amalgamate the working of the two departments at operational and supervisory levels, efforts towards an amalgamation of tasks at higher management levels can bring better synergy, save costs and increase the efficiency. The planning and

budgetary, monitoring & co-ordination, material management, engineering resource marketing, Training, R&D, IT & e-Goveranance and HRD functions need to be combined at management levels to achieve optimum utilization of engineering resources.

2. The primary objective of any broadcast organization is to run and maintain broadcasting centres so as to transmit signals of highest technical quality. Apart from an excellent content, a crisp and clear picture or audio is an essential requirement of a national public service broadcaster to keep the listeners/viewers satisfied with the audio/video quality. This requires a constant monitoring of the technical quality of the radiated programme as well as regular inspection of the transmitting stations, studios, satellite and terrestrial links, etc. However the size and complexities of the technical installations is too big to allow the monitoring and inspection of broadcasting centres to be undertaken by a few inspecting officers deployed in the five Zonal Chief Engineers' offices. With the present set-up of five Zonal offices, there can be a, theoretically, a team of only 7 Chief Engineer(Maintenance), 10 Director(Maintenance) and 20 Deputy Director(Maintenance), to take up the inspection of 1399 Doordarshan transmitters, 66 Doordarshan Programme Production Centres, 232 broadcasting centres of AIR with 149 medium frequency(MW), 54 high frequency (SW) and 171 FM transmitters. It is humanly impossible to monitor or inspect the technical installations with this inadequate set-up of senior officers of the maintenance wings of the five Zonal Offices. The working of the Zonal Chief Engineers' offices need to be decentralized. A decentralized structure shall provide better control and monitoring of the AIR/DD Kendras/Transmitting stations. It shall ensure speedier completion of maintenance works. This can be implemented only if the concept of Area Chief Engineers is introduced. The maintenance problems of a cluster of AIR/DD stations shall not always have to be referred to the five Zonal Offices situated at Delhi, Chennai, Mumbai, Kolkata and Guwahati, but they shall find solutions nearer if the Area Chief Engineers are assigned taking care of the maintenance needs of the All India Radio as well as Doordarshan stations. All Govt organizations, MNCs and PSUs have already adopted and implemented the concept of Area Offices in order to shorten the reaction time of their management cadres. For AIR and Doordarshan to become more effective and efficient organisations, the Area Chief Engineers need to play a greater role in the work of the organization. The Area Chief Engineers Zones should

be fully empowered and made responsible for all operational and maintenance aspects of broadcasting i.e. running and maintaining transmitters, studios, satellite & terrestrial links, O.B. coverage , etc. They should be made responsible for preparing annual maintenance budgets, planning of maintenance activities, procuring maintenance spares, supervising and monitoring maintenance works, including quality control and financial management.

3. Promotion prospects are a vital factor affecting the morale and efficiency of the service personnel and hence the effectiveness of the cadre in discharging the role assigned to it. There is a stagnation in all the IBES cadres , the details of which are given in the two charts shown below:

Details of Stagnation of JTS and STS cadre(as in April 2007)

Sl. No.	Batch of the direct recruit under IB(E)S (After IB(E)S group 'A' organized service came into existence in 1981)	Next promotion- Max. Period (From JTS to STS) (Minimum of Pay scale; From 8,000 to 10,000) (approx.)	Further next Promotion Period (From STS to NFJAG) (Minimum of Pay scale; From 10,000 to 12,000) (approx.)	Further next Promotion Period (approx.) (Standard period; 13 Years) (From JTS to JAG) (Minimum Pay scale ; From 8,000 to 14,300)
1	IES-IB(E)S-1985	2-3 years	6 years	19 years
2	IES-IB(E)S-1986	2-3 years	6 years	20 years
3	IES-IB(E)S-1987	2-3 years	6 years	19 years
4	IES-IB(E)S-1988 (Regular)	7 years	7 years	Yet to be given
5	IES-IB(E)S-1989	7&1/2 years	About 8-9 years	Yet to be given
6	IES-IB(E)S-1990	12 years	Yet to be given	Yet to be given

Details of stagnation of JAG & SAG cadre(upto 07.05. 2007):

Sl. No.	Batch of the direct recruit under IB(E)S Cadre- Junior most promoted	From JAG to SAG (Minimum of Pay scale; From 14,300 to 18,400) (approx.)	From SAG to HAG) (Minimum Pay scale; From 18,400 to 22,400) (approx.)
1	IES-IB(E)S-1971	Promoted	Yet to be promoted
2	IES-IB(E)S-1972	Yet to be promoted*	Yet to be promoted
3	IES-IB(E)S-1973	Yet to be promoted*	Yet to be promoted
4	IES-IB(E)S-1974	Yet to be promoted*	Yet to be promoted

4. The IB(E)S was formed in 1981. However, no cadre review has taken place in the last 28 years whereas in other departments/organizations, it has been done regularly for removing stagnation and better work efficiently as shown in table below:

LAST CADRE REVIEW OF CENTRAL TECHNICAL SERVICES (As per the DOPT):

Sl.No.	Name and Cadre Controlling Authority of the Service	Year of last cadre review
MINISTRY OF COMMERCE & INDUSTRY		
1.	Indian Inspection Service	1988
2.	Indian Supply Service	1988
MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY		
3.	Indian Telecommunication Service	1988
4.	P&T Building Works Service (Architectural, Electrical & Civil Wing)	1989
MINISTRY OF DEFENCE		
5.	Border Roads Engg. Service (E&M Cadre)	1999
6.	Indian Naval Armament Service	1987
7.	Indian Ordnance Factories Service	1990
8.	Indian Defence Service of Engineers.	2000
MINISTRY OF POWER		
9.	Central Power Engineering Service	1990
MINISTRY OF INFORMATION & BROADCASTING		
10.	Indian Broadcasting (Engg.) Service *	1981*
MINISTRY OF RAILWAYS		
11.	Indian Railway Service of Elec. Engg.	2003 (4^{th})
12.	Indian Railway Service of Engineers	2005 (4^{th})
13.	Indian Railway Service of Mechanical Engineers	2003 (4^{th})
14.	Indian Railway Service of Signal & Telecommunication Engineers	2004 (4^{th})
15.	Indian Railway Stores Service	2004 (4^{th})
MINISTRY OF ROAD TRANSPORT & HIGHWAYS		
16.	Central Engg. Service (Roads)	1990
MINISTRY OF URBAN DEVELOPMENT & POVERTY ALLEVIATION		
17.	Central Architects Service (CPWD)	1989

Sl.No.	Name and Cadre Controlling Authority of the Service	Year of last cadre review
18.	Central Elect. & Mech. Engineering Service (CPWD)	1995
19.	Central Engg. Service (CPWD)	1995
MINISTRY OF WATER RESOURCES		
20.	Central Water Engineering Service	1991

5. A corollary to the poor promotional prospects of engineers is that young engineers are no more attracted to engineering services and prefer to join other administrative or non technical services where career growths are better. It has been observed that during the last 12 years approx., only 177 direct recruits joined the department against the vacancies of about 300, in the JTS cadre. Out of these, 38 have left after serving 4-5 years in this department to join IRS/ITS, etc., due to poor career/promotion prospects in IB(E)S. If such disturbing trend is not contained by improving the promotional prospects in IB(E)S cadre, it will become practically impossible to sustain the technical quality and standards of broadcast services particularly at a time when the public broadcaster is facing stiff competition from other broadcasting organizations, nationally and globally.
6. It is often that the engineers in AIR and Doordarshan see their junior college mates working at positions much senior to theirs. It is also to be mentioned that with a boom in the IT sector it is difficult to attract & hold efficient engineers in the Govt. sector as prospects of prompt promotions, very high salaries and perks attracts them to the private sector. As such it is imperative that the Govt. should give much better incentives to engineers in the form of speedier promotion, proper salary(may not be at par with the private industry but at a higher rate than today) and other working facilities/amenities to attract good engineering professionals to join and stay in the Government jobs.
7. In AIR and Doordarshan the problem has been compounded: Since 2000, regular recruitments to the JTS cadre has been stopped. The resulting backlog needs to be filled in a planned manner as per a well thought-out recruitment plan rather than in an ad hoc manner. Stoppage of recruitment and ad-hoc appointments to the JTS level should be avoided as far as possible, as these will

create distortions in the cadre. In any case, it should be ensured that ad-hoc appointments do not persist for more than a year at the most. There is large scale discontinuity in the leadership pipeline on account of stoppage of regular recruitments by UPSC at the JTS level. The stoppage of recruitments over the last nine years would mean that the impact of this discontinuity would be felt acutely in next 5 -10 years. There would be a severe crunch of mid level officers.

8. The average age of the IBES officer is estimated to be about 45 years. The longer term staffing strategy would have to address this issue and progressively reduce the average age. The Career progression of IBES officers being very slow, the selected few who reach the top level positions of CE and E-in-C have generally very short tenures. The average age of the IBES officers suggests that in the next five to seven years, about 25% of the IBES officers would retire from service. This would severely deplete the experienced resources.

Need for Cadre Re-structuring

The IBES was constituted in 1981. According to the DoPT instructions, its first cadre review was due in 1984 with subsequent reviews every three (3) years. But not even a single cadre review has been done so far whereas the AIR and Doordarshan network has grown many fold. The first ever cadre review proposal, as approved and recommended by the Ministry of Information & Broadcasting, DoPT and Ministry of Finance was taken up by the Cadre Review Committee in its meeting held on 04.08.1997 under the chairmanship of the then Cabinet Secretary. The committee appreciated the need of the Cadre Review but observed that in view of notification of Prasar Bharati, the cadre review proposal should be looked into by Prasar Bharati. All the engineering officers under IB(E)S cadre & their services in AIR & Doordarshan are fully funded & controlled by the Ministry of I&B, Govt. of India. The cadre review proposal for IB(E)S cadre has been initiated earlier and also discussed among Ministry of I&B, DoPT, Cabinet Committee**,** etc., but it could not be completed. The matter has also been seen by the Hon'ble CAT and they have given following judgment in this matter already on 16.12.2004:

"Keeping in view the same, it is not disputed at either end that once a decision has been taken to finalize the cadre review with respect to Indian Broadcasting (Engineers) Service, a direction should be issued to implement the same within a

reasonable time. Keeping in view the totality of facts and circumstances, it is directed that a decision on the order dated 11.2.05, copy of which has been given to us and to which we have referred to above, should be taken by respondent no. 1 (Union of India) pertaining to the cadre review of IB(E)S within three months of the receipt of the certified copy of the present order which should be communicated to the applicants. O.A. is disposed of."

In spite of the above judgment, no decision on implementation of cadre review has been taken as yet. Implementation of the cadre review is pending for a long time. Cadre Review has already been implemented for Indian Information Service in the same ministry, twice during year 1989 & 2006, but not yet implemented for the IB(E)S cadre. In fact, cadre review has been implemented in most of the ministries/departments of the Govt of India, as part of the central services-administrative/structural reforms/restructuring, with the exclusion of I.B.(E).S.

Directions have been issued by the DOPT, Ministry of Personnel, Public Grievances and Pensions, Govt. of India vide OM vide ref. No.I-11019/6/2008-CRD, dated 5th September, 2008 w.r.t. Department of Expenditure (Ministry of Finance) letter vide ref. No.1/1/2008-IC, dated 29th August, 2008 wherein it has been communicated to all the cadre controlling authorities to formulate the proposal of cadre review and send it to DOPT through the concerned Ministry.

Directions have also been issued by the Department of Expenditure (Ministry of Finance), Govt. of India, vide their letter, F. No.5/16/2006-E.III.A, dated 21st December, 2006, for formulation of proposal for Cadre Review of all groups of services (including organized Group 'A' Services), upgraded pay scales, restructuring of Departments/Organizations, etc.

The employees including the IB(E)S cadre officers working in AIR/DD are Govt. servants/employees and they are on deemed deputation to Prasar Bharati. The promotions & career prospects of IB(E)S cadre officers are looked after by the Ministry of I&B, UPSC & DoPT as Ministry of I&B, Govt. of India is the cadre controlling authority for IB(E)S cadre officers in AIR and DD. There is a large scale of stagnation resulting in frustration and demoralization among all the group 'A' engineering officers of IB(E)S cadre. Due to poor promotional prospects, the

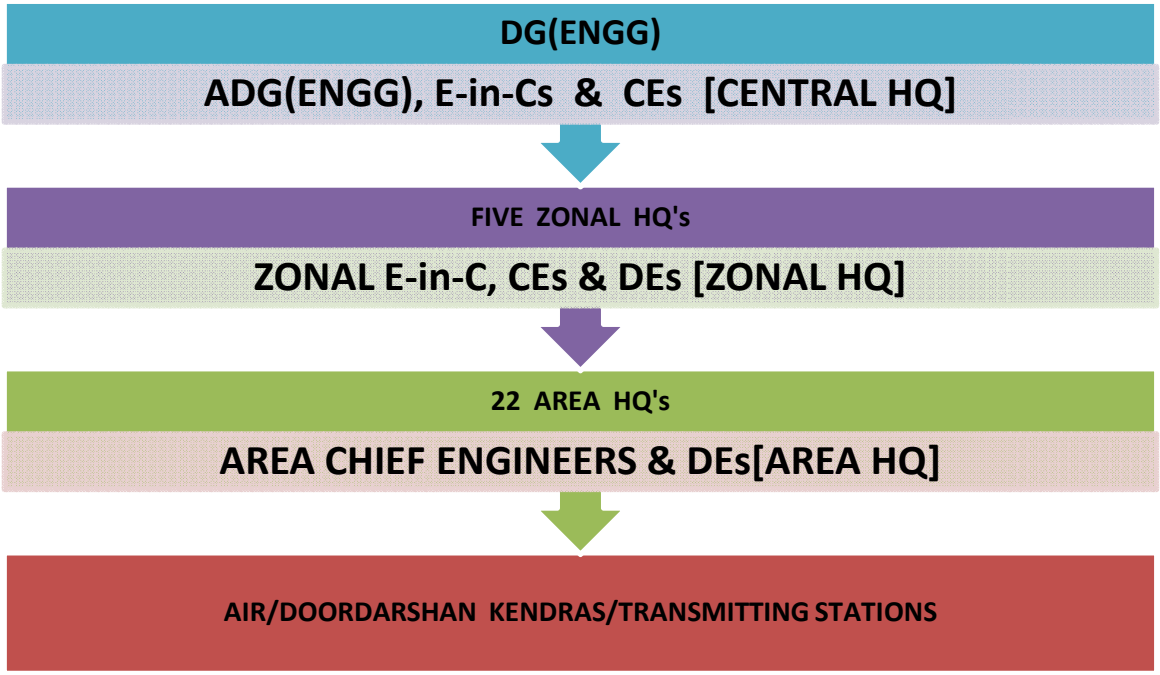
IB(E)S, having its feeder cadre recruited through All India Engineering Services Examination conducted by UPSC, has become very an unattractive service.

Recommendations of the Cadre Review Committee

(i) There will be a Director General (Engg.), AIR & Doordarshan, who will be the overall engineering head of the entire AIR and DD network. DG(Engg) shall be assisted by four Additional Director Generals. The four ADGs will be assisted by 17 Engineer-in-Chiefs. The 17 Engineers-in-Chief in turn shall be assisted by 84 Chief Engineers in the SAG grade . Apart from the central and zonal headquarters, Chief Engineers are proposed to be deployed at 22 area headquarters in an attempt to decentralize the working of the engineering divisions of AIR and Doordarshan. These Area Chief Engineers shall be responsible for inspection, monitoring and streamlining of the maintenance activities of a cluster of AIR and TV stations under their control and the problems of running and maintaining the complex broadcast facilities need not be always referred to the central and zonal levels for solutions. The Chief Engineers assisted by Directors, Dy. Directors and Assistant Engineers(Re-designated as Broadcast Executive by the Cadre Review Committee in Part II of the Report on Group –B,C & D engg staff), deputed at the Area headquarters will ensure broadcasting at par with the highest world standards. The area Chief Engineers shall make use of the middle level and junior level officers already deployed at the AIR/DD station located at their area HQ. The area Chief Engineers shall conduct regular inspections and shall have the authority to approve the urgent requirements for maintaining excellent broadcast standards. The Area Chief Engineers shall establish their offices at locations where AIR or Doordarshan installations already exist and there shall not be any impediment for setting up the Area Chief Engineers' offices. The Area Chief Engineers shall be assisted by Directors and shall evolve a strategy to constantly monitor and inspect the AIR/DD installations and take timely action for meeting the maintenance needs of the stations.

(ii) The three layered engineering structure shall be consequently converted to a four layered one: the first layer comprising of DG(Engineering), ADG(Engineering) and the headquarters team of E-in-C and CEs, the second layer comprising of the five Zonal E-in-C and his team of CEs and Directors based at the Zonal HQ , the third

layer comprising of 22 Area Chief Engineers and his team of Directors based at the Area HQ and the fourth layer consisting of AIR/Doordarshan Kendras/Transmitting Centres, thus decentralizing the Maintenance Structure for more efficient working:



Remedies recommended by the Cadre Review Committee:

It was noted that there is widespread frustration and despondence among the IBES officers due to the stagnation and lack of any cadre review of the Service since its inception. The cadre review committee recommends a revised strength of I.B.(E).S. for AIR & Doordarshan in accordance with the norms and guidelines circulated by the DOPT in order to alleviate the suffering of the IBES officers. Unless the IBES is is suitably re-organized and re-structured , there may not be smooth implementation of the grand paln for digitalization of AIR and Doordarshan, which requires a high morale, a fresh approach in tackling the problems of migration from analogue to digital domain and a time-bound programme to complete the digitalization as the Govt. Of India has planned to switch off the analogue transmission in 2017. In view of the above , the Committee proposes the following revised structure and strength of IBES in line with other technical organized Group “A” services:.

Cadre structure and the comparative structural ratio for different engineering services funded by the central Govt. (in % of the total strength) as on July, 2006):

Sl. No.	Services	HAG (Above AS level)	HAG (AS level)	**SAG**	JAG	STS	JTS	Total
1	IRS(S&TE)	0.54	1.19	12.97	37.84	38.81	8.65	100
2	IRSEE	0.66	2.54	15.55	39.25	30.98	11.03	100
3	IRSE	0.39	1.89	13.01	37.37	37.76	9.57	100
4	IRSME	1.28	2.93	16.41	40.60	28.87	9.90	100
5	IRSS	0.32	1.46	12.64	39.38	37.76	8.43	100
6	ITS	0.05	0.90	5.90	15.25	68.16	9.74	100
7	CES (CPWD)	0.35	0.81	4.65	18.26	66.63	9.30	100
8	CES (Roads)	0.48	0.97	7.25	28.99	42.03	20.29	100
9	IOFS	0.60	0.66	13.49	29.64	36.51	19.10	100
	Average of the services at Sl.No. 1 to 9	0.52	1.48	11.32	31,84	43.06	11.78	100
	As per the recommendation of the 5th CPC,		3	17	50(20 +30)	30		100
	IB(E)S-Existing	---	0.14	1.49	9.71	39.71	48.95	100
	IB(E)S-Proposed	0.21	1.52	8.84	29.48	44.96	14.99	100

Revised Strength and structure as recommended by the Cdare Review Committee

Sl. No.	Designation, pay scale and grade pay as per the 6th CPC (Amount in Rs)	Recommended Strength & (%) as per 5th CPC	Average of nine Nos. of Central Tech. /Engineering Services in % (Year 2006)	Existing Strength & (%)	Proposed Strength & (%)	Variation from existing (Nos.)
1	HAG {DG (Engg.)}* (80,000 Fixed)	44 (3%) for (Sl.No.1+2+3)	0.52%	Nil	1 (0.07%)	+1
2	HAG{Addl. DG(Engg.)}* (75,000- 80,000)			Nil	4 (0.27%)	+4
3	HAG (E-in-C) (37,400-67,000 with Grade pay; 12,000)		1.48% (2.00)	2 (0.14%)	17 (1.17%) (22) (1.51%)	+15 (+20)
4	SAG (CE) (37,400-67,000 with Grade pay; 10,000)	246 (17%)	11.32%	22 (1.51%)	84 (5.80%)	+62
5	JAG(Director) (37,400-67,000 with Grade pay; 8,700)	724(50%)	31.84%	143(9.871%)	376 (25.961%)	+233
6	STS (Selection Grade)/ NFJAG (DDE) (15,600-39,100 with Grade pay; 7,600)	Nil	Nil	221 (15.26%)	368 (25.41%)	+147
7	STS (DDE) (15,600-39,100 with Grade pay; 6,600)	434(30%) for Sl. No. 7+8	43.06%	350 (24.17%) 571 (39.71%)	381 (26.31%) 749 (44.96%)	+31 +178
8	JTS (ADE) (15,600-39,100 with Grade pay; 5,400)	--	11.78%	710 (49.00%)	217 (14.98%)	-493
	Total Strength {IB(E)S}	1448 (100%)	100 %	1448 (100 %)	1448 (100 %)	

Any organized service is sustained by the fresh, young, energetic and technical savvy JTS direct recruits, who are inducted in the Department in good number every year and who, after two years of service, are elevated to the STS level against 50% or more of the vacancies in the STS cadre. They are the torch bearers of the new technology and innovation and their role is supreme in the emerging competition from private operators. However their quota of promotion to

the STS level, has been proposed to be brought down from 50% to 33.3% in order to mitigate the suffering of the AEs who have been denied promotion for too long on account of their not possessing a degree in engineering in a joint proposal submitted by the Association of Radio & TV Engineering Employees, All India Radio & Doordarshan Technical Employees Association, All India Radio & Doordarshan Engineers Association and Akhil Bhartiya Akashvani Group "D" Karmachari Sangh. All the above four Associations have jointly agreed to the proposed re-structuring plan, as shown above in the table shown above.

There is a unique aspect of the entire cadre review exercise: The task of cadre Review and restructuring of Group "A", "B", "C" and "D" staff has been taken up in an integrated way with the proposals of Group "A', "B", "C" and "D" staff dovetailing in to each other. All the engineering cadres right from Helper to E-in-C have been restructured and integrated in a single scheme of restructuring with the full mandate of the above named four Associations.

Pay Parity with I.A.S.

The Committee recommends an expeditious implementation of the non-functional up-gradation for IBES officers to give them pay parity with regard to I.A.S, for which necessary orders have been issued by the DOPT vide Order no. AB 14017/64/2008-Estt.(RR) dated 24.04.2009. This exercise shall very substantially reduce the financial impact due to cadre review/restructuring. This will increase the efficiency and effectiveness of the entire organization. The Committee recommends the following amendments in the eligibility criteria for IBES officers to be considered for promotion/up-gradation.

For the purpose of minimum qualifying service for promotion/non-functional up-gradation, the eligibility criteria for promotion to senior administrative grade in various organized Group "A" services should be uniform as per Part I-Sec-I of the Ministry of Finance Resolution dated 29th August, 2008 published in the "Gazette of India: Extraordinary". Hence the minimum qualifying service under "Column 4" should be suitably amended so as to make it identical to that of other organized Group " A" services, viz., the Indian Forest Service, published vide the DOPT Order No. 14021/3/2008-AIS II dated 27th September 2008. The following amendments are recommended in this regard in respect of method of recruitment, field of promotion and minimum qualifying service in the lower grade for appointment of officers on

Promotion to duty posts (subject to vacancies) included in the various Posts/Grades of the Indian Broadcasting (Engineers) Service:

Sl. No.	Grade/ Name of Post	Method of recruitment	Field of selection and minimum qualifying service for promotion
1	2	3	4
1	Engineer-in-Chief	By promotion	Officers in SAG who have completed twenty one(*25*) years of regular Group A service calculated from 1st January of the year following the year in which the member was appointed / recruited to Group A Posts.,.
2	Senior Administrative Grade (SAG)	By promotion	Officers in JAG who have completed eighteen(*18)* years of regular Group A service, calculated from 1st January of the year following the year in which the member was appointed / recruited to Group A Posts.
3	Junior Administrative Grade (JAG)	By promotion/	Officers in STS on completion of thirteen (13) years of Group A service, calculated from 1st January of the year following the year in which the member was appointed / recruited to Group A Posts.
4	STS (Selection Grade)	By promotion/	Officers in STS with 5 years of regular service in Group A calculated from 1st January of the year following the year in which the member was appointed / recruited to Group A Posts.,

Sl. No.	Grade/ Name of Post	Method of recruitment	Field of selection and minimum qualifying service for promotion
1	2	3	4
5	Senior Time Scale	By promotion	Officers in JTS with 4 years of regular service in the Grade calculated from 1st January of the year following the year in which the member was appointed / recruited to Group A Posts.,.
6	Junior Time Scale	(i) 50% By promotion, (ii) 50% by direct recruitment in accordance with clause (a) of sub rule (2) of rule7	Assistant Engineers of the All India Radio / Doordarshan (excluding those in Civil Construction Wing) with 5 years regular service in the grade.

Broadening of vision

In the context of need for developing all-rounded personality of the individual particularly through gaining experience by working in different working environment, it is very essential that IBES officers get sufficient exposure and working skills which will broaden their vision. Such an exposure is as necessary as training or skill enhancement measures under human resource development techniques. One of basic deficiency contributing to the negative attitude and approach of the employees and also resulting in unwillingness of employees to modernise their work atmosphere is lack of vision and lack of exposure to modern techniques and working environment in other autonomous and Govt. funded organizations and Departments of Govt. of India. The Committee strongly recommends to provide a window of opportunity to

IBES officers to go on deputation for two to three years and acquire additional skills/experience.

Training of IBES officers

New recruits must be given at least nine months orientation training programme at a professional institute. The Committee recommends a well prepared regular periodical in-service and off campus training and developmental programme for IBES officers for at least ten days in a year to each individual. The organization should enter in to a MOU with IITs and IIMs and sponsor at least 10-15 IBES officers per year in these reputed institute for M.Tech/MBA programmes.

The Organization should also upgrade its own training faculty in view of the digitalization of delivery platforms. The guest faculty should be given befitting remuneration at par with faculties of other renowned training institutions, in order to attract the very best.

Proposed Restructuring of Engineering Wing of AIR & Doordarshan

DG(Engineering), AIR & Doordarshan, shall be the overall engineering head of AIR & Doordarshan network , including the Civil Construction Wing of AIR & Doordarshan. He shall be responsible for formulating policy for organization, planning of new projects and their implementation, broadcast expansion, modernization & augmentation of broadcast facilities, operation and maintenance, R&D and training, human resource management, engineering resource marketing, material-management, safety procedures, IT and e-Governance and webcasting & IP streaming. He shall be technical advisor to the Ministry of Information & Broadcasting. He shall also be responsible for induction of new and emerging technologies in AIR and DD network, so as to give the AIR & DD network an edge in running and maintaining broadcast services of world standard.

DG(Engineering), AIR & Doordarshan, shall be assisted by four ADGs, viz.,

i) **ADG(Engg)(Planning & Development), AIR & Doordarshan**
ii) **ADG(Engg)(IT & Human Resource Management), AIR & Doordarshan**
iii) **ADG(Engg)(Project & Maintenance), AIR**
iv) **ADG(Engg)(Project & maintenance), Doordrashan**

i) ADG(Engg)(Planning & Development), AIR&DD, shall be responsible for planning as well as monitoring of progress of project implementation. He shall be responsible for financial and material management. He shall be head of engineering resource marketing.

ADG(Engg)(Planning & Development), AIR & DD, shall be assisted by:

1) **E-in-C(Planning, Co-ordination & Spectrum Management), AIR&DD**
2) **E-in-C(Financial & Material Management), AIR&DD**
3) **E-in-C(Resource Marketing)**
4)

1) E-in-C(Planning, Co-ordination & Spectrum Management), AIR & DD:

He shall be responsible for formulation of plan schemes of AIR & Doordarshan and monitoring of the progress of implementations of AIR and DD projects. He shall be responsible for co-ordination with various wings of AIR, DD, CCW and other agencies for speedy implementation of projects. He shall handle the matters relating to Standing Committees, Consultative Committees of Ministry of I&B. He shall deal with spectrum management for AIR and Doordarshan. He shall also liaison with various national and international bodies for issues related with broadcasting. He shall handle Parliament Questions and VIP Queries. He shall liaison with WPC for matters relating to spectrum management. He shall be assisted by two Chief Engineers, viz.:

(i) Chief Engineer(Planning & Co-ordination), DD
(ii) Chief Engineer(Planning & Co-ordination), AIR
(iii) Chief Engineer(Spectrum Management), AIR&DD

Chief Engineer(Planning & Co-ordination), DD, shall handle the following matters:

1. Matters related to formulations of Annual / Five Year Plan/ Grand Plan of Doordarshan as well as augmentation of existing T.V. coverage and strengthening of the quality of TV Signals in sensitive Border Areas.
2. Monitoring of progress of all DD plan projects
3. Liaison with Planning Commission, Ministry of I&B/ Prasar Bharati Sectt. related to Plan Projects of DD
4. Matters relating to CAG, Standing Committees, Consultative Committees of Ministry of I&B, SIMCON, etc in respect of DD projects
5. Handling of Parliament Questions/VIP references/references from State Govt, State Assemblies, public etc in respect of Doordarshan infrastructure in India.
6. Sharing of technical infrastructure and other engineering resources with AIR
7. Disaster Management in respect of Doordarshan
8. Monitoring of cable TV network
9. To act as appellate authority in respect of RTI Queries pertaining to Planning & Co-ordination Wing of Doordarshan

Chief Engineer(Planning & Co-ordination), Doordarshan, shall be assisted by two Directors, viz.,

(i) Director(Planning), DD

(ii) Director(Monitoring & Co-ordination), DD

(i) Director(Planning), DD, shall be responsible for the following matters:

1. Matter related to formulations of Annual Plan/ Five Year Plan/ Grand Plan for digitalization of DD.
2. Interaction with Ministry of I&B and incorporation of necessary provisions in the approved schemes of Plan-projects of DD, as per the Directives of Cabinet Committees / Ministry of I&B/ PM schemes etc.
3. Planning for augmentation of existing DD coverage and to strengthen the quality of DD signals in sensitive Border Areas.
4. Handling of Parliament Questions/VIP references and all other references from State Govt, State Assemblies, public etc in respect of Doordarshan and preparation of replies in a time-bound manner.

5. Work related to Parliamentary Committee, Consultative Committee, Estimate Committee, SIMCON etc in respect of Doordarshan.
6. Work related to creation of O&M posts for new projects and creation/ continuation of installation posts in respect of Doordarshan.
7. Works related to broadcast reception survey and preparation of coverage maps in respect of Doordarshan Transmitters.
8. Disaster Management in respect of Doordarshan
9. RTI Matters related to Planning Wing of Doordarshan.

Director(Planning), DD shall be assisted, in carrying out the assignments defined at Sl. No. 1 to 9, by two Dy. Directors - one for the East Zone, North East Zone and North Zone and the other for the South Zone and West Zone.

Director(Monitoring & Co-ordination), DD, shall be responsible for the following matters:

1. Monitoring of progress of implementation of Doordrashan plan projects
2. Collection and compilation of progress reports on monthly basis and preparation of quarterly and annual progress reports of DD projects
3. Co-ordination with Zonal E-in-C(Projects), AIR & DD in respect of DD projects
4. Identification of bottlenecks in DD projects and remedial action for removing the bottlenecks
5. Progress review meeting with Zonal E-in-C(Project & Maintenance), CCW and officers of Design , Estimate & Budget and Material Management wings of Doordarshan
6. Matters related to acquisition of sites/buildings for DD projects and processing of lease/transfer deeds
7. Matters related to completion of projects and their commissioning and inauguration of DD projects
8. Matters relating to Standing Committees, Consultative Committees of Ministry of I&B in respect of DD
9. Handling of CAG para regarding plan projects of DD

10. Liaison with Ministry of I&B/ Prasar Bharati Sectt. related to Plan Projects of DD
11. Handling of correspondence received from the Public/State Govts./VIPs/MPs etc. in relation to development of DD infrastructure in India.
12. Monitoring of cable TV network
13. Allocation of DD Transmitters to DMC/ formation of new DMC
14. Sharing of technical infrastructure and other resources with AIR
15. Matters relating to declaration of Head of Office
16. Preparation of briefs for Minister and Senior Officers. Matters related to Management Committee & references from PB Sectt. in respect of DD projects
17. RTI queries pertaining to M&C Wing of Doordarshan

Director(Monitoring & Co-ordination), Doordarshan, shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 16, by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South Zone and West Zone.

Chief Engineer(Planning & Co-ordination), AIR, shall handle the following matters:

1. Matters related to formulations of Annual / Five Year Plan/ Grand Plan of AIR as well as augmentation of existing radio coverage and strengthening of the quality of radio signals in sensitive Border Areas.
2. Monitoring of progress of all AIR plan projects
3. Liaison with Planning Commission, Ministry of I&B/ Prasar Bharati Sectt. related to Plan Projects of AIR
4. Matters relating to CAG, Standing Committees, Consultative Committees of Ministry of I&B, SIMCON, etc in respect of AIR projects
5. Handling of Parliament Questions/VIP references/references from State Govt, State Assemblies, public etc in respect of AIR infrastructure in India.
6. Sharing of technical infrastructure and other engineering resources with AIR
7. Disaster Management in respect of AIR

8. To act as appellate authority in respect of RTI Queries pertaining to Planning & Co-ordination Wing of AIR

Chief Engineer(Planning & Co-ordination), AIR , shall be assisted by two Directors, viz.,

(iii) Director(Planning), AIR

(iv) Director(Monitoring & Co-ordination), AIR

Director(Planning), AIR, shall be responsible for:

1. Matters related to formulations of Grand Plan / Five Year Plan/Digitalization Plan of AIR.
2. Interaction with Ministry of I&B and incorporation of necessary provisions in the approved schemes of Plan-projects of AIR, as per the Directives of Cabinet Committees / Ministry of I&B/ PM schemes etc.
3. Planning for augmentation of existing radio coverage and strengthening of the quality of radio signals in sensitive Border Areas.
4. Handling of Parliament Questions/VIP references and all other references from State Govt, State Assemblies, public etc in respect of AIR and preparation of replies in a time-bound manner.
5. Work related to Parliamentary Committee, Consultative Committee, Estimate Committee, SIMCON etc in respect of AIR .
6. Work related to creation of O&M posts for new projects and creation/ continuation of installation posts in respect of AIR.
7. Works related to broadcast reception survey in respect of AIR.
8. Updating of coverage data/maps of AIR Transmitters.
9. Disaster Management in respect of AIR
10. RTI Matters pertaining to to Planning Wing of AIR

Director(Planning), AIR shall be assisted, in carrying out the assignments at Sl. No. 1 to 10, by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South Zone and West Zone.

Director(Monitoring & Co-ordination), AIR, shall be responsible for the following matters:-

1. Monitoring of progress of AIR plan projects
2. Collection and compilation of progress reports on monthly basis and preparation of quarterly and annual progress reports of AIR projects
3. Co-ordination with Zonal E-in-C(Projects), AIR & DD in respect of AIR projects
4. Identification of bottlenecks in AIR projects and remedial action for removing the bottlenecks.
5. Progress review meeting with Zonal E-in-C(Projects), CCW and officers of Design , Estimate & Budget and Material Management wings of the All India Radio.
6. Matters related to acquisition of sites/buildings for AIR projects and processing of lease/transfer deeds.
7. Matters related to completion of projects and their commissioning and inauguration of AIR projects.
8. Sharing of technical infrastructure and other resources with Doordarshan
9. Matters related to declaration of Head of Office.
10. Matters relating to Standing Committees, Consultative Committees of Ministry of I&B in respect of AIR.
11. Handling of CAG para regarding plan projects of AIR.
12. Liaison with Ministry of I&B/ Prasar Bharati Secretariat related to Plan Projects of AIR.
13. Handling of correspondence received from the Public/State Govts./VIPs/MPs etc. in relation to development of AIR infrastructure in India.

14. Briefing notes for Minister and Senior Officers. Matters related to Management Committee & references from PB Sectt. In respect of AIR projects.
15. RTI queries pertaining to M&C Wing of AIR

Director(Monitoring & Co-ordination), AIR , shall be assisted, in carrying out the assignments at Sl. No. 1 to 15 , by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South Zone and West Zone.

Chief Engineer(Spectrum Management), AIR and Doordarshan, shall be responsible for the following matters:

1) Spectrum Management and spectrum allocation for AIR & DD.
2) Matters related to national and international organizations viz. BIS/WPC/ITU/ ABU/ AIBD/DVB/DRM, etc.
3) Matters related to national and international conferences, seminars, exhibition, technical workshops
4) Matters related to Standing Advisory Committee of Frequency Allocation (SACFA) including SACFA applications of other agencies
5) Matters related to R&D.
6) To act as appellate authority in respect of RTI queries in respect of spectrum management of AIR & DD

Chief Engineer(Spectrum Management), AIR & DD shall be assisted by Director(Spectrum Management), Doordarshan and Director(Spectrum Management), AIR.

Director(Spectrum Management), DD shall be responsible for the following matters:

1. Frequency Allocation of DD Transmitters;

2. Frequency Allocation of Studio to Transmitter Links & OB Links of DD
3. Liaison with Ministry of Communications & IT, WPC, etc for seeking regulatory clearances in respect of DD.
4. Scheduling of special programmes via satellite in respect of DD
5. Matters related to participation in International Organizations viz. ITU/ ABU/ AIBD/DVB, etc.
6. Matters related to SACFA including scrutiny of SACFA applications of other agencies.
7. Liaison with Prasar Bharati Sectt. related to technical matters of DD.
8. Work related to International Frequency Conferences.
9. Liaison with R&D Department.
10. Matters related to participation in national and international Conferences, seminars, technical workshops, etc.
11. Liaison with to Bureau of India Standards(BIS) related to Electronic and Telecommunications Committees.
12. Liaison with other divisions of the Engineering Wing related to technical matters.
13. RTI queries pertaining to spectrum management of DD

Director(Spectrum Management), DD shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 13, by two Dy. Directors- one for the frequency allocation works and the other for maintaining liaison with national /international bodies & other technical matters.

Director(Spectrum Management), AIR shall be responsible for the following matters:-

1. Spectrum Management and allocation of spectrum for MW/SW/FM Broadcast Transmitters of AIR.
2. Spectrum Management and spectrum allocation for Studio to Transmitter VHF/UHF Links of AIR
3. Liaison with International Organizations viz. ITU/ ABU/ AIBD/DRM, etc.
4. Matters related to the International Frequency Conferences

5. Scheduling of HF Services of AIR and remedial measures to improve reception by reviewing reception reports from target areas ;
6. Matters related to Standing Advisory Committee of Frequency Allocation (SACFA) including scrutiny of SACFA applications of other agencies.
7. RN Schedules and Satellite related matters of AIR
8. Matters related to R&D.
9. Matters related to national Conferences & international conferences, seminars, workshops, etc pertaining to radio topics
10. Matters related to Bureau of India Standards(BIS) pertaining to AIR topics
11. Liaison with Ministry of Communications & IT related to regulatory clearances.
12. Scheduling of special programmes on RN and SW;
13. Liaison with Prasar Bharati Sectt. related to Technical Matters.
14. Liaison with other divisions of the Engineering Wing related to technical matters.
15. RTI queries pertaining to spectrum management of AIR

Director(Spectrum Management), AIR shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 15, by two Dy. Directors- one for the frequency allocation works and the other for maintaining liaison with national /international bodies & other technical matters.

2) E-in-C(Financial & Material Management), AIR & DD

He shall be responsible for estimation of All India Radio & Doordarshan schemes and getting approvals of the SFC/EFC. He shall be responsible for budgetary allocation for the implementation of AIR & DD plan projects. He shall handle consultative committees and “Demand for Grants” of the Ministry of I&B. He shall be responsible for material management and procurement of equipments for implementation of plan projects of AIR and Doordarshan and procurement of maintenance spares for AIR and DD stations. He shall be responsible for implementing e-procurement. He shall be assisted by:

1. **Chief Engineer(Financial & Material Management), Doordrshan**
2. **Chief Engineer(Financial & Material Management) , All India Radio**

Chief Engineer (Financial & Material Management), DD, shall be responsible for:

1. Preparation of Detailed Project Report on plan schemes of DD
2. Matters related to Estimates and approval for capital plan projects plan /schemes of DD
3. Incorporation of necessary provisions in the approved schemes of Plan-projects of DD, as per the Directives of Cabinet Committees / Ministry of I&B/ PM schemes etc.
4. Matters related to EFC/ SFC of Plan schemes of DD.
5. Matters related to budget/expenditure on plan projects of DD
6. Matters related to funding of the acquisition of new sites & security fencing of DD
7. Work related to Parliamentary Committees, such as Standing Committee, Estimate Committee, SIMCON etc. in respect of Doordarshan
8. Procurement activities of DD projects as well as maintenance spares needed for transmitters, studios and telecom installations of DD
9. Enforcement of Govt Guidelines on procurement and e-procurement
10. To deal with Parliament Questions and court cases in respect of procurement activities of financial & material management of DD
11. To act as appellate authority for RTI matters in connection with financial & material management of DD

Chief Engineer(Financial & Material Management), Doordarshan, shall be assisted by three Directors, viz.,

1) **Director(Estimate & Budget), DD**
2) **Director(Purchase- Capital), DD**
3) **Director(Purchase-Spares), DD**

(1) Director(Estimate & Budget), Doordarshan, shall be responsible for the following matters:

1. Estimates for all plan projects of Doordarshan
2. Estimates for all Modernization and Renewal Projects of Doordarshan
3. Works related to approval of SFC/EFC in respect of Doordarshan plan schemes
4. Works related to issue of administrative approval and expenditure sanctions in respect of approved schemes of Doordarshan
5. Scrutiny & approval of Preliminary Estimates/ Revised Preliminary Estimates of Civil & Electrical works submitted by the C.C.W. in respect of Doordarshan projects
6. Scrutiny of DTEs/ Deviation Statements and monitoring of financial progress of all the DD Schemes.
7. Scrutiny & approval of Power Supply Estimates, Tariff Agreements etc. of Doordarshan
8. Estimates in respect of Security Works of Doordarshan.
9. Preparation of SBG, RE and FE for various plan schemes and finalization of proposal for release of funds under various plan schemes and phasing of expenditure in respect of DD schemes
10. Monitoring of expenditure under various plan schemes of DD
11. Preparation of Financial Progress Reports in respect of DD projects
12. Works connected with holding of periodic progress review meetings held in Directorate, Prasar Bharati, Planning Commission and Ministry of I&B in respect of DD schemes
13. Works connected with Budget Meetings held in the Directorate for finalization of SBG, RE and FE in respect of DD schemes.
14. Matters relating to formation of new offices, Audit objections, Administrative and Audit inspection reports, half yearly financial stock taking statements, work-charged establishment of DD
15. Interpretation of rules relating to CPWA&D Code. Public Accounts Committee and Estimate committee's reports relating to Capital Grant of DD

16. Procurement of Vehicles under Plan for new stations and Zonal Chief Engineers in respect of Doordarshan.
17. Procurement of Office Furniture, Typewriters under Plan for new Stations of Doordarshan
18. Control of capital Non-Plan budget in respect of Doordarshan.
19. Creation of posts under Plan Schemes of Doordarshan
20. Delegation of powers to Zonal Chief Engineers.
21. Write Off of losses of stores at DD installations.
22. RTI queries pertaining to the Estimate & Budget Wing of Doordarshan

Director(Estimate & Budget), DD shall be assisted, in carrying out the assignments at Sl. No. 1 to 22, by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South Zone and West Zone.

Director(Purchase- Capital), DD, shall be responsible for the following matters:-

1. Planning for procurement activities of capital item
2. Implementation of e-procurement as per Govt guidelines
3. Initiating release of NITs in newspapers, ITJ, website of Doordarshan
4. Monitoring of submission of bids
5. Extension of tender opening dates, wherever required
6. Opening of bids
7. Initiating action for technical examination of bids
8. Opening of price bids after technical examination of bids
9. Commercial evaluation of bids
10. Formulation of purchase proposal, getting approval of competent authority and placement of purchase order
11. Post contract monitoring of contracts
12. Taking up warranty, guarantee issues with the concerned firms
13. RTI matters and court cases in connection with capital purchases of Doordarshan

Director(Purchase-Capital), DD, shall be assisted by two Dy. Directors- one for planning of purchases, release of NITs, opening of bids, court cases, audit queries, RTI matters, etc and the other for commercial evaluation, formulation of purchase proposals, getting approval of the competent authority, placement of orders, post contract monitoring, etc

Director (Purchase-Spares), DD, shall be responsible for the following matters:-

1) Planning for procurement activities of maintenance spares. Implementation of e-procurement as per Govt guidelines
2) Initiating release of NITs in newspapers, ITJ, website of Doordarshan.
3) Monitoring of submission of bids.
4) Extension of tender opening dates, wherever required.
5) Opening of bids.
6) Initiating action for technical examination of bids.
7) Opening of price bids after technical examination of bids.
8) Commercial evaluation of bids.
9) Formulation of purchase proposal, getting approval of competent authority and placement of purchase order.
10) Post contract monitoring of contracts.
11) Taking up warranty, guarantee issues with the concerned firms.
12) RTI matters and court cases in connection with purchase of maintenance spares of Doordarshan

Director(Procurement–Spares), Doordarshan, shall be assisted by two Dy. Directors- one for planning of spares purchases, release of NITs, opening of bids, court cases, audit queries, RTI matters, etc and the other for commercial evaluation, formulation of purchase proposals, getting approval of the competent authority, placement of orders, post contract monitoring, etc in respect of procurement of spares

Chief Engineer (Financial & Material Management), AIR, shall be responsible for:

1. Preparation of Detailed Project Report on plan schemes of AIR
2. Matters related to Estimates and approval for capital plan projects plan /schemes of AIR
3. Incorporation of necessary provisions in the approved schemes of Plan-projects of AIR, as per the Directives of Cabinet Committees / Ministry of I&B/ PM schemes etc.
4. Matters related to EFC/ SFC of Plan schemes of AIR .
5. Matters related to budget/expenditure on plan projects of AIR
6. Matters related to funding of the acquisition of new sites & security fencing of AIR
7. Work related to Parliamentary Committees, such as Standing Committee, Estimate Committee, SIMCON etc. in respect of AIR
8. Procurement activities of DD projects as well as maintenance spares needed for transmitters, studios and telecom installations of AIR
9. Enforcement of Govt Guidelines on procurement and e-procurement
10. To deal with Parliament Questions and court cases in respect of procurement activities of financial & material management of AIR
11. To act as appellate authority for RTI matters in connection with financial & material management of AIR

Chief Engineer(Financial & Material Management), AIR, shall be assisted by three Directors, viz.,

1. **Director(Estimate & Budget), AIR**
2. **Director(Purchase- Capital), AIR**
3. **Director(Purchase- Spares), AIR**

Director(Estimate & Budget), AIR, shall be responsible for the following matters:

1. Estimates for all plan projects of AIR
2. Estimates for all Modernization and Renewal Projects of AIR

3. Works related to approval of SFC/EFC in respect of AIR plan schemes
4. Works related to issue of administrative approval and expenditure sanctions in respect of approved schemes of AIR
5. Scrutiny & approval of Preliminary Estimates/ Revised Preliminary Estimates of Civil & Electrical works submitted by the C.C.W in respect of AIR projects.
6. Scrutiny of DTEs/ Deviation Statements and monitoring of financial progress of all the AIR Schemes.
7. Scrutiny & approval of Power Supply Estimates, Tariff Agreements etc. of AIR
8. Estimates in respect of Security Works of AIR
9. Preparation of SBG, RE and FE for various plan schemes and finalization of proposal for release of funds under various plan schemes and phasing of expenditure in respect of AIR
10. Monitoring of expenditure under various plan schemes of AIR
11. Preparation of Financial Progress Reports of AIR projects
12. Works connected with holding of periodic progress review meetings held in Directorate, Prasar Bharati, Planning Commission and Ministry of I&B in respect of AIR schemes
13. Works connected with Budget Meetings held in the Directorate for finalization of SBG, RE and FE in respect of AIR schemes.
14. Matters relating to formation of new offices, Audit objections, Administrative and Audit inspection reports, half yearly financial stock taking statements, work-charged establishment of AIR
15. Interpretation of rules relating to CPWA&D Code. Public Accounts Committee and Estimate committee's reports relating to Capital Grant of AIR
16. Procurement of Vehicles under Plan for new stations and Zonal Chief Engineers.
17. Procurement of Office Furniture, Typewriters under Plan for new Stations of AIR.
18. Control of capital Non-Plan budget.
19. Creation of posts under Plan Schemes.
20. Delegation of powers to Zonal Chief Engineers.

21. Write Off of losses of stores at installations.
22. Various House Keeping jobs connected with the working of the Planning and Development unit of DG,AIR.
23. All work relating to payment and recoveries in P&D Unit-Preparation of Budget Estimates and Revised Estimates for P&D Unit and its attached cells - Audit objections/Reports of Monthly statement of Expenditure - Reconciliation of Accounts with the AGCR
24. Routine staff matters relating to Ministerial and Class IV staff.
25. Continuance/Conversion of temporary posts in the P&D Unit and its attached cells including 4 Zonal Chief Engineers' offices.
26. All staff and administrative matters relating to Drawing Cadre and Sr. Carpenters and Work Charge staff of Zonal (CE's) Offices.
27. RTI matters in respect of the Estimate & Estimate Wing of AIR and P&D Establishment of DD, AIR

Director(Estimate & Budget), AIR shall be assisted, in carrying out the assignments at Sl. No. 1 to 27, by three Dy. Directors-(a) Dy Director for the East Zone, North East Zone and North Zone (b) Dy. Director for the South Zone and West Zone and (c) Dy. Director/DDO(A) for handling the matters listed at Sl. No. 23 to 27, related to book-keeping functions of the Planning & Development Unit of DG, AIR.

Director(Procurement- Capital), AIR, shall be responsible for the following matters:-

1) Planning for procurement activities of capital item of AIR
2) Implementation of e-procurement as per Govt guidelines
3) Initiating release of NITs in newspapers, ITJ, website of AIR
4) Monitoring of submission of bids
5) Extension of tender opening dates, wherever required
6) Opening of bids
7) Initiating action for technical examination of bids
8) Opening of price bids after technical examination of bids
9) Commercial evaluation of bids

10) Formulation of purchase proposal, getting approval of competent authority and placement of purchase order
11) Post contract monitoring of contracts
12) Taking up warranty, guarantee issues with the concerned firms
13) To deal with RTI matters and court cases in connection with capital purchases of AIR

Director(Purchase- Capital), AIR, shall be assisted by two Dy. Directors- one for planning of purchases, release of NITs, opening of bids, court cases, audit querries, RTI matters, etc and the other for commercial evaluation, formulation of purchase proposals, getting approval of the competent authority, placement of orders, post contract monitoring, etc

Director (Purchase- Spares), AIR, shall be responsible for the following matters:-

1) Planning for procurement activities of maintenance spares for AIR installations.
2) Implementation of e-procurement as per Govt guidelines
3) Initiating release of NITs in newspapers, ITJ, website of Doordarshan.
4) Monitoring of submission of bids.
5) Extension of tender opening dates, wherever required.
6) Opening of bids.
7) Initiating action for technical examination of bids.
8) Opening of price bids after technical examination of bids.
9) Commercial evaluation of bids.
10) Formulation of purchase proposal, getting approval of competent authority and placement of purchase order.
11) Post contract monitoring of contracts.
12) Taking up warranty, guarantee issues with the concerned firms.
13) To deal with RTI matters and court cases in connection with maintenance spares purchases of Doordarshan

Director(Purchase–Spares), AIR, shall be assisted by two Dy. Directors- one for planning of AIR spares purchases, release of NITs, opening of bids, court cases, audit queries, RTI matters, etc and the other for commercial evaluation, formulation of purchase proposals, getting approval of the competent authority, placement of orders, post contract monitoring, etc in respect of procurement of spares for AIR installations

(c) E-in-C(Resource Management), AIR&DD

He shall be responsible for earning revenue by marketing of AIR and DD technical infrastructure and resources such as building, mast, manpower, etc to private operators. He shall also provide consultancy services to private broadcasters and install and run radio and TV installations of the private operators for earning revenue for the organization.

E-in-C(Resource management), AIR&DD shall be assisted by two Chief Engineers, viz.:

1. **Chief Engineer(Resource Management), AIR**
2. **Chief Engineer(Resource Management), DD**

Chief Engineer(Resource Management), AIR , shall be responsible for the following matters:

1. To generate revenue by sharing hardware/software infrastructure of AIR with other broadcasters / telecom service providers, etc
2. To provide world class consultancy services, undertake turnkey jobs in the specialized field of sound broadcasting and related areas, to undertake installation, operation and maintenance of sound broadcast facilities including civil and electrical works
3. To facilitate growth of Indian sound broadcasting sector by optimum utilization of AIR broadcasting facilities and resources

4. To harness inner strength of AIR to identify, develop and consolidate its resource base
5. To initiate appropriate measures & develop business plans to undertake projects and activities in sound broadcasting sector
6. Formulation of system design and specifications of radio broadcast equipments for private broadcasters, IGNOU, etc
7. To act as appellate authority in respect of RTI queries pertaining to Resource Management team of AIR

Chief Engineer(Resource Management), AIR, shall be assisted by two Directors, viz.

1) **Director(Infrastructure Marketing), AIR**
2) **Director(Consultancy Services), AIR**

Director(Infrastructure Marketing), AIR, shall be responsible for the following matters:

1. Sharing/renting AIR infrastructure such as land, building, tower, antenna and cable, etc on license fee/rental basis to various Government, autonomous bodies and private organizations such as IGNOU for optimum use of resources
2. To organize operation and maintenance of sound broadcast installations of broadcast transmitters of autonomous bodies and private organizations such as IGNOU
3. To rent out AIR studios for programme production/transmission facilities
4. To operate value added service through existing AIR FM transmitters, e.g., DARC based data broadcast on FM transmitters for providing services like information on traffic, weather, stock exchange, advertisements, train/flight schedules, etc on sub-carrier of 10 KW VHF FM transmitter on revenue sharing basis between Prasar Bharati and established companies/ service providers/ broadcasters
5. Supervision of financial performance, balance sheet and profit & loss account of AIR Resources

6. RTI queries pertaining to AIR infrastructure marketing

Director(Infrastructure Marketing), AIR, shall be assisted by two Dy. Directors.

Director(Consultancy Services), AIR, shall be responsible for the following matters:

1. To provide solutions to various Government, autonomous bodies and private organizations , for setting up of radio infrastructure on turn-key basis
2. Project Report for FM station/ Internet Protocol Radio
3. Liaison for Regulatory Clearances
4. Play out Automation and Newsroom Design
5. Channel Creative Design and Brand Packaging plan
6. Workflow Design
7. Technical Support
8. Procurement activities for private operators
9. Training of Technical Teams
10. RTI queries in respect of AIR consultancy services

Director(Consultancy Services), Radio, shall be assisted by two Dy. Directors.

Chief Engineer(Resource Management), Doordarshan, shall be responsible for the following matters:

1. To generate revenue by sharing hardware/software infrastructure of Doordarshan with other broadcasters / telecom service providers, etc
2. To provide world class consultancy services, undertake turnkey jobs in the specialized field of sound broadcasting and related areas, to undertake installation, operation and maintenance of TV broadcast facilities including civil and electrical works
3. To facilitate growth of Indian TV broadcasting sector by optimum utilization of DD broadcasting facilities and resources

4. To harness inner strength of Doordarshan to identify, develop and consolidate its resource base
5. To initiate appropriate measures & develop business plans to undertake projects and activities in TV broadcasting sector
6. Formulation of system design and specifications of TV broadcast equipments for private broadcasters, IGNOU, etc
7. To act as appellate authority in respect of RTI queries pertaining to Resource Management team of Doordarshan

Chief Engineer(Resource Management), Doordarshan, shall be assisted by two Directors, viz.

1. **Director(Infrastructure Marketing), Doordarshan**
2. **Director(Consultancy Services), Doordarshan**

Director(Infrastructure Marketing),Doordarshan, shall be responsible for the following matters:

1. Sharing/renting Doordarshan infrastructure such as land, building, tower, antenna and cable, etc on license fee/rental basis to various Government, autonomous bodies and private organizations such for optimum use of resources
2. To organize operation and maintenance of TV broadcast installations of broadcast transmitters of autonomous bodies and private organizations
3. To rent out DD studios for programme production/transmission facilities
4. To operate value added service through existing DD transmitters, e.g., data scrolling on LPT/HPT of Doordarshan
5. Supervision of financial performance, balance sheet and profit & loss account of DD Resources
6. RTI queries pertaining to Doordarshan infrastructure marketing

Director (Infrastructure Marketing), Doordarshan, shall be assisted by two Dy. Directors.

Director(Consultancy Services), Doordarshan, shall be responsible for the following matters:

1. To provide solutions to various Government, autonomous bodies and private organizations on turnkey basis for setting up of TV infrastructure
2. Project Report for TV / Internet Protocol Television (IPTV) / Cable TV/DTH
3. Liaison for regulatory clearances
4. Play out Automation and Newsroom Design
5. Channel Creative Design and Brand Packaging plan
6. Workflow Design
7. Technical Support
8. News Gathering
9. Procurement activities for private operators
10. Training of Technical Teams
11. RTI queries pertaining to Consultancy Services of Doordarshan

Director(Consultancy Services), Doordarshan, shall be assisted by two Dy. Directors.

(ii) ADG(Engg)(IT, R&D & Human Resource Management), AIR & Doordarshan

He shall be responsible for training & development of engineering manpower. He shall head the R&D activities . He shall be responsible for e-Governance and IT.

ADG(Engg)(IT, R&D & Human Resource Management), AIR &DD, shall be assisted by three E-in-Cs, viz:

1. **E-in-C(Human Resource Management), AIR & DD**
2. **E-in-C(R&D), AIR & DD**
3. **E-in-C(IT & e-Governance), AIR & DD**

(1) E-in-C(Human Resource Management), AIR &DD

Advanced technology is in use in AIR and Doordarshan and the cost involved in procuring broadcast equipments is enormous. Unless there is a proper strategy to train and develop the skills of engineers, the costly and sophisticated machineries shall lie grossly under-utilized resulting in sinking of money.

E-in-C(Human Resource Management), AIR & Doordarshan, shall be responsible for training and development of engineering manpower and their deployment in AIR and Doordarshan network. He shall synergize the requirements of AIR and Doordarshan for optimum utilization of scarce human resources. He shall be responsible for maintaining and updating the database of technical skill and experience & expertise of AIR & DD engineering officers. He shall be continuously monitoring the knowledge level, skill and expertise of AIR & DD engineering officers as well as their stay at various stations of AIR & DD and their personal choice of postings. He shall maintain computerised system of HRM planning and deployment. He shall be responsible for up-gradation of technical skills and training of AIR & DD engineering officers and staff. He shall also be responsible for imparting training in the field of IT and management. He shall also be responsible for conducting training courses for foreign trainees.

E-in-C(Human Resource Management), AIR & DD, shall be responsible for conducting examination for fresh recruitment for Broadcast Engineer and Departmental Competitive Examination for promotion in the sub-ordinate engineering cadres.

Engineer-in-Chief (Human Resource management), AIR & DD, shall be assisted by five Chief Engineers, viz.

1. **Chief Engineer(Engineering Personnel Management)**
2. **Chief Engineer(Training & Development) –I**
3. **Chief Engineer(Training & Development)--II**
4. **Chief Engineer(Training & Development)-III**
5. **Chief Engineer, Regional Staff Training Institute, Bhubaneswar**

Chief Engineer(Engineering Personnel Management), AIR &DD, shall be responsible for the following matters:

1. Deployment/planned movement of engineering officers of AIR & DD to meet operational and /or administrative requirement of the organization
2. Management of database of Group "B" and IBES officers of AIR& DD so that their knowledge, skill, expertise gained through their previous assignments/training courses attended by them and data regarding their stay at various stations are duly considered while planning their deployment/movement
3. Development of skills of engineering officers of AIR & DD by recommending them for specialized training courses
4. Grievance handling mechanism in respect of deployment/transfer orders
5. To act as appellate authority in respect of RTI queries pertaining to engineering personnel management of AIR & Doordarshan

Chief Engineer(Engineering Personnel Management), AIR & DD, shall be assisted by two Directors, viz

1. **Director(Engineering Personnel Management), AIR**
2. **Director(Engineering Personnel Management), Doordarshan**

Director(Engineering Personnel Management), AIR, shall be responsible for the following matters:

1. Deployment/planned movement of AEs and IBES officers in the AIR network
2. Maintenance of incumbency of engineering officers at AIR stations
3. Maintenance of personnel data records of AIR engineering officers of AIR
4. Maintenance of training records of engineering officers of AIR
5. Recommendation for suitable training courses for development of technical, managerial and IT skills of engineering officers of AIR
6. Maintenance of choice of stations submitted by engineering officers of AIR
7. Recruitment/Promotional matters related to AEs and IBES officers of the entire AIR & DD network
8. Matters related to deployment of personnel from AIR to DD and vice-versa

9. Grievance handling mechanism in respect of transfer/deployment matters related to engineering officers of AIR
10. RTI queries pertaining to engineering personnel management of AIR

Director(Engineering Personnel Management), AIR shall be assisted by two Dy. Directors

Director(Engineering Personnel Management), Doordarshan, shall be responsible for the following matters:

1. Deployment/planned movement of AEs and IBES officers in DD network
2. Maintenance of incumbency of engineering officers at DD stations/offices
3. Maintenance of personnel data records of DD engineering officers
4. Maintenance of training records of engineering officers of Doordarshan
5. Recommendation for suitable training courses for development of technical, managerial and IT skills of engineering officers of Doordarshan
6. Maintenance of choice of stations submitted by engineering officers of DD
7. Promotional matters related to AEs and IBES officers of DD
8. Matters related to deployment of personnel from AIR to DD and vice-versa
9. Grievance handling mechanism in respect of transfer/deployment matters related to engineering officers of Doordarshan
10. RTI queries pertaining to engineering personnel management of Doordarshan

Director(Engineering Personnel Management),Doordarshan, shall be assisted by two Dy. Directors.

Chief Engineer(Training & Development)-I shall be responsible for the following matters:

1. Moulding and induction of new recruits joining AIR installations
2. Up-gradation of the skills of AIR personnel in tune with emerging technologies

3. Publication of radio training related material
4. Assistance in career growth of AIR personnel
5. Preparation & Updating of AIR Technical Manuals
6. Preparation of Safety Manuals related to AIR installations
7. Publication of quarterly newsletter regarding training activities related to radio
8. Conducting Departmental Competitive Examination
9. Conducting direct recruitment examination
10. Conducting courses for foreign trainees in collaboration with IABM, etc
11. To act as appellate authority in respect of RTI queries relating to his wing

Chief Engineer(Training & Development)-I shall be assisted by two Directors:

1. **Director-I**
2. **Director-II**

Director-I shall be responsible for the following matters:

1. Conducting course on medium wave/short wave AM-DRM transmitter
2. Conducting course on FM Transmitter
3. Conducting course on AM & FM Transmitter measurements
4. Conducting course on Am & FM transmitter installation practices
5. Conducting courses on modern trends in sound broadcasting
6. Conducting courses on inspection of electrical installations of AIR/DD stations
7. Conducting courses on switchgear maintenance of AIR/DD installations
8. Conducting departmental competitive examination & direct recruitment examination
9. Updating of Technical Manual & Safety Manual for AIR/DD
10. Organizing training courses for foreign trainees in collaboration with IABM, etc
11. Publication of newsletters and other materials related to training of AIR/DD personnel
12. RTI queries relating to his domain of work

Director-I shall be assisted by two Dy Directors

Director-II shall be responsible for the following matters:

1. Conducting courses on digital audio transmission
2. Conducting courses on radio studio measurements
3. Conducting courses on air-conditioning system of AIR/DD installations
4. Conducting courses on hard disc based studio automation systems of AIR
5. Conducting courses on engineering trends in recording and editing techniques used in sound broadcasting
6. Conducting courses on digital consoles & alignment of digital consoles in AIR
7. Courses on Diesel Generators installed in AIR/DD stations
8. RTI queries relating to his domain of work

Director-II shall be assisted by a two Dy. Directors

Chief Engineer(training & Development)-II shall be responsible for the following matters:

1. Moulding and induction of new recruits joining DD installations
2. Upgradation of the skills of DD personnel in tune with emerging technologies
3. Publication of TV training related material
4. Assistance in career growth of DD personnel
5. Preparation & Updating of DD Technical Manuals
6. Preparation of Safety Manuals related to DD installations
7. Publication of quarterly newsletter regarding training activities related to TV
8. To act as appellate authority in respect of RTI queries pertaining to his wing

Chief Engineer(Training & Development)-II shall be assisted by two Directors, viz.

1. **Director-I**
2. **Director-II**

Director-I shall be responsible for the following matters:

1. Conducting courses on digital TV transmissions and standards

2. Conducting courses on High Power TV Transmitters
3. Conducting courses on low power TV Transmitters
4. Conducting courses on very low power TV transmitters
5. Conducting courses on measurement techniques employed for TV transmitters
6. RTI queries in respect of his domain of work

Director-I shall be assisted by two Dy. Directors.

Director-II shall be responsible for the following matters:

1. Conducting courses on non-linear editing and 3-D graphics used in DD network
2. Conducting courses on Computerization and digitalization in TV broadcasting
3. Conducting courses on multimedia broadcasting in DD
4. Conducting courses on digital video recording and archiving in DD
5. Conducting courses on TV studio lighting and cameras
6. Conducting courses on TV production switchers
7. Conducting courses on TV studio measurements
8. Conducting courses on video compression techniques
9. Conducting courses on TV studio measurements
10. Conducting courses on emerging post production techniques in TV broadcasting
11. RTI queries pertaining to his domain of work

Director-II shall be assisted by two Dy. Directors

Chief Engineer(Training & Development)-III shall be responsible for the following matters:

1. Training courses on satellite earth stations of AIR & DD stations

2. Training courses on DSNG/DTH used in AIR/DD
3. Training courses on digital microwave links used in AIR/DD
4. IT Training courses for AIR/DD staff
5. Training courses related to computer hardware/server used in AIR/DD
6. Conducting courses related to networking and server administration in AIR/DD
7. Training courses on station management for AIR/DD officers
8. Management training courses for senior officers of AIR/DD, in collaboration with premier management institutes
9. Energy management courses for AIR/DD officers
10. To act as appellate authority in respect of RTI queries pertaining to his wing

Chief Engineer(Training & Development)-III shall be assisted by two Directors, viz

1. **Director-I**
2. **Director-II**

Director-I shall be responsible for the following matters:

1. Conducting courses on satellite communications related to AIR & DD installations
2. Conducting courses on digital connectivity used in AIR &DD stations
3. Conducting courses on AIR & DD Satellite Earth Station measurements
4. Conducting courses on AIR & DD digital microwave link measurements
5. Conducting courses on mobile DSNG/DTH used in AIR/DD
6. Conducting courses on INMARSAT terminals used in AIR/DD
7. RTI queries pertaining to his domain of work

Director-I shall be assisted by two Dy. Directors.

Director-II shall be responsible for the following matters:

1. Conducting courses on computer hardware maintenance
2. Conducting courses on computer networking and server administration
3. Conducting training on microprocessors
4. Conducting courses on computer awareness for beginners
5. Conducting computer courses for administrative and accounts wing staff
6. Conducting courses on administrative training
7. Conducting courses on RTI
8. Conducting courses for Security Officers
9. Conducting courses on excellence in public service delivery
10. Conducting courses on grievance redressal system
11. Conducting courses on motivation and improving work-culture in AIR/DD staff
12. Conducting courses on leadership skills and communication
13. Conducting courses on resource management including spectrum
14. Conducting courses on material management for AIR/DD
15. Conducting management courses for senior officers of AIR/DD
16. RTI queries pertaining to his domain of work

Director-II shall be assisted by two Dy. Directors.

Chief Engineer, Regional Staff Training Institute(Technical), Bhubaneswar, shall be responsible for the following matters:

1) Moulding of new recruits joining AIR &DD installations
2) Upgradation of the skills of AIR &DD personnel in tune with emerging technologies
3) Publication of radio & TV training related material
4) Assistance in career growth of AIR &DD personnel
5) Conducting IT related courses
6) Conducting courses related to computer hardware/server

7) Conducting courses related to networking and server administration
8) Conducting courses in station management
9) Conducting management courses for senior officers in collaboration with premier management institutes
10) Conducting energy management courses
11) To act as appellate authority in respect of Regional Staff Training Institute (Technical), Bhubaneswar

Chief Engineer, RSTI(T), Bhubaneswar shall be assisted by two Directors, viz.:

1) **Director-I**
2) **Director-II**

Director-I shall be responsible for the following items:

1) Conducting courses on AIR transmitter
2) Conducting courses on AIR studios
3) Conducting courses on telecom links, satellite as well as terrestrial
4) Conducting courses on computer hardware/server/networking/administration of server
5) Conducting courses on radio measurement techniques
6) Conducting courses on Switchgear/Diesel Generator/Air-conditioning plants/safety aspects of electrical and technical installations
7) Conducting management courses for junior and mid-level officers
8) RTI queries pertaining to his domain of work

Director-I shall be assisted by two Dy. Directors

Director-II shall be responsible for the following items:

1) Conducting courses on DD transmitter
2) Conducting courses on DD studios
3) Conducting courses on digital video recording and archiving in DD

4) Conducting courses on TV studio lighting and cameras
5) Conducting courses on TV production switchers
6) Conducting courses on TV studio measurements
7) Conducting courses on video compression techniques
8) Conducting courses on TV studio measurements
9) Conducting courses on emerging post production techniques in TV broadcasting
10) Conducting courses on TV measurement techniques
11) RTI queries in respect of his domain of work

Director-I shall be assisted by two Dy. Directors

Apart from the RSTI(T), Bhubaneswar, there are two more Regional Staff Training Institutes(Technical) at Malad (Mumbai) and Shillong, though smaller in size and facilities. Each one of them shall be headed by a Director and their area of responsibilities shall be as follows:

1. Conducting courses on AIR/TV transmitter
2. Conducting courses on AIR/DD studios
3. Conducting courses on telecom links, satellite as well as terrestrial
4. Conducting courses on computer hardware/server/networking/administration of server
5. Conducting courses on measurement techniques
6. Conducting courses on Switchgear/Diesel Generator/Air-conditioning plants/safety aspects of electrical and technical installations
7. Conducting management courses for junior and mid-level officers
8. RTI queries in respect of the respective Regional Staff Training Institute(Technical)

Each of the Directors deployed at RSTI(T), Malad and Shillong shall be assisted by two Dy. Directors.

(b) E-in-C(Research & Development), AIR&DD

He shall be responsible for handling R&D activities in the field of radio and TV broadcasting. He shall help in induction of new technology, such as HDTV, DRM,DVB-H,DTT , stdio and newsroom automation, etc and shall be responsible for carrying out measurements on digital radio and TV transmissions. He shall be responsible for developing remote monitoring and control system for AIR and DD transmitters. He shall be responsible for undertaking propagation measurements, preparation of coverage maps, developing archival storage systems, He shall also be responsible for undertaking development of satellite base IP networking etc.

E-in-C(R&D), AIR & DD shall be assisted by three Chief Engineers, viz.

1. **Chief Engineer(R&D), AIR**
2. **Chief Engineer(R&D), DD**
3. **Chief Engineer(R&D), IT**

Chief Engineer(R&D), AIR shall be responsible for the following matters:

1. To participate and offer expert advice on behalf of AIR in the national and international Study Group, Committees and Conferences.
2. Preparation of Documents for ITU, ABU, etc., technical papers for publication in Scientific/ technical Journals and preparation of Research Department Reports related to AIR.
3. Undertaking studies for the introduction of latest technology in the field of Sound broadcasting.
4. Propagation Measurements & reception Survey System for Digital Radio Transmission
5. Development of High Power FM Transmitting Antenna/ state of art and cost effective medium wave antenna
6. Development of Advanced Monitoring and Control (Telemetry) System for Broadcast Transmitters.
7. Pilot project for setting up of a Low Power DRM Transmitter in 26 MHz SW Band
8. Modernization of Acoustic Laboratory

9. Up-gradation of Technical Monitoring Facilities at Monitoring Station, Todapur, New Delhi
10. Up-gradation of R&D Support Facilities
11. Strengthening of Prototype and Production Centre in Research Department.
12. To act as appellate authority in respect of RTI queries pertaining to R&D activities relating to radio

Chief Engineer(R&D), AIR shall be assisted by

1. **Director(Digital Radio Measurements)**
2. **Director(Remote Control/ Telemetry)**
3. **Director(Acoustics)**
4. **Director(Radio Propagation)**
5. **Director(Prototype Production)**

Director(Digital Radio Measurements) shall be responsible for:

1. Development of measurement-system design and measurement techniques to study system performance of DRM transmitters of AIR, taking in to consideration different reception conditions and environments, antenna selection and both internal and external noise measurements
2. Development of measurement system design and measurement techniques to measure the digital audio parameters of digital consoles and other digital audio equipments being used in digitalized AIR studios
3. RTI queries relating to his domain of work

Director(Digital Radio Measurements) shall be assisted by two Dy. Directors.

Director(Remote Control/Telemetry) shall be responsible for:

1. Development of reliable remote control and telemetry system for AIR FM transmitters
2. Development of remote real time monitoring of transmitter parameters
3. Up-gradation of monitoring facilities at Todapur

4. RTI queries relating to his domain of work

Director(Remote Conrol/Telemetry) shall be assisted by two Dy. Directors

Director(Acoustics) shall be responsible for :

1. Development of system design for measurement of (a) reverberation time, (b) the shape of the reverberation-time-versus-frequency curve, and (c) reduction of the standing sound waves in the studio.
2. Development of system design for acoustics treatment of digitalized AIR studios
3. RTI queries in respect of his domain of work

Director(Acoustics) shall be assisted by two Dy. Directors.

Director(Radio Propagation) shall be responsible for :

1. Collection and analysis of data on Ionospheric parameters and publish them
2. Preparation of frequency schedules for AIR, SW services.
3. Propagation Measurements & reception Survey System for DRM Transmitters: the assessment of the propagation parameters such as minimum usable field strength, carrier to noise ratio, BER, necessary for the network planning of digital radio broadcasting service in the country.
4. Assessment of the following propagation and planning parameters. (i) Evaluation of reception quality under different environmental conditions. (ii) Assessment of Building Penetration Loss and shadow loss. (iii) Assessment of reception quality under high-speed mobile conditions (iv) Estimation of carrier to interference ratio (v) Field strength measurements to evaluate the coverage area for satisfactory reception and planning parameter required for DRM transmission & (vi) preparation of maps based on the actual terrain conditions.
5. RTI queries in respect of his domain of work

Director(Radion Propagation) shall be assisted by two Dy. Directors

Director(Prototype Production) shall be responsible for the following matters:

1. Development and fabrication of Prototype models of R&D equipment for limited use and field trials in the network of AIR & Doordarshan, such as (i) Transmitting & Receiving Antennas, (ii) Logo Generator (iii) Satellite based remote program switching system for unmanned LPTs (iv) VLPT Remote Monitoring Unit, etc.
2. Repair and servicing of various equipments used in Doordrashan network from time to time.
3. Replacement of old and obsolete equipment used in the assembly line, testing and measurements by new state of the art digital equipment.
4. Procurement activities
5. RTI queries in respect of his domain of work

Director(Prototype Production) shall be assisted by two Dy Directors.

Chief Engineer(R&D), Doordarshan, shall be responsible for the following matters:

1. To participate and offer expert advice on behalf of Doordarshan in the national and international Study Group, Committees and Conferences.
2. Preparation of Documents for ITU, ABU, etc., technical papers for publication in Scientific/ technical Journals and preparation of Research Department Reports related to Doordarshan .
3. Undertaking studies for the introduction of latest technology in the field of TV broadcasting.
4. Propagation Measurements & reception Survey System for Digital TV Transmitters and preparation of TV transmission coverage maps based on actual terrain condition

5. Providing Testing and measuring facility for Digital Terrestrial TV transmission [DTT & DVB-H], HDTV & Satellite TV
6. Strengthening of in-house prototype & production facility for R&D developed TV equipments/system
7. Establishment of experimental IP computer networking of those Kendras who have satellite Earth Stations as well as interconnectivity of DD archival centres located at the four metro cities of India
8. To act as appellate authority in respect of RTI queries relating to Doordarshan R&D activities

Chief Engineer(R&D), DD, shall be assisted by :

1. **Director(TV Propagation Studies)**
2. **Director(Digital TV measurements)**

Director(TV Propagation Studies) shall be responsible for the following matters:

1. Propagation Measurements & reception Survey System for Digital TV Transmitters: the assessment of the propagation parameters such as minimum usable field strength, carrier to noise ratio, BER are necessary for the network planning of digital TV broadcasting service in the country.
2. Assessment of the following propagation and planning parameters. (i) Evaluation of reception quality under different environmental conditions. (ii) Assessment of Building Penetration Loss and shadow loss. (iii) Assessment of reception quality under high-speed mobile conditions (iv) Estimation of carrier to interference ratio (v) Field strength measurements to evaluate the coverage area for satisfactory reception and planning parameter required for digital TV planning & (vi) preparation of maps based on the actual terrain conditions.
3. Providing and Integrating a measurement vehicle, custom designed for taking all kinds of measurements needed for field strength survey for coverage and other propagation related studies for R&D purpose. This integrated system will be able to control the system components, collect, store and display the field strength data of the DVB-T/DVB-H/CW signal from

test receiver, position and display the location coordinates on the digital map of the targeted area with the help of GPS navigator . For optimal implementation of Digital TV broadcasting in the country, network and spectrum management is to be carried out in a scientific manner. For this purpose extensive and accurate propagation measurements are required to be carried out all over the country.

4. RTI queries in respect of his domain of work

Director(TV Propagation Studies) shall be assisted by two Dy. Directors.

Director(Digital TV measurements) shall be responsible for the following matters:

1. Providing Testing and measuring facility for Digital Terrestrial TV transmission
2. Providing Testing and measuring facility for DVB-H transmission
3. Providing Testing and measuring facility for HDTV transmission
4. Providing Testing and measuring facility for satellite uplinlks and downlinks
5. RTI queries in respect of his domain of work

Director(Digital TV measurements) shall be assisted by two Dy Directors.

Chief Engineer (R&D), IT, shall be responsible for the following matters:

1. Development of studio automation software
2. Development of news room automation software
3. Development of archiving techniques
4. Development of experimental IP network connecting all the DDKs having satellite uplinks and providing interconnectivity of DD archival centres located at the four Metro cities of India.
5. Development of tapeless workflow, multimedia platforms at all the major studio centres of Doordarshan
6. To act as appellate authority in respect nof RTI queries relating to R&D activities in the field of I.T.

Chief Engineer(R&D), IT shall be assisted by three Directors:

1. **Director(Networking)**
2. **Director(Archival Research)**
3. **Director(Tapeless Workflow)**

Director(Networking) shall be responsible for the following matters:

1. Providing equipments, devices and software for experimental IP networking through satellite
2. Evaluation of test results
3. Providing system design for IP networking
4. RTI queries pertaining to his domain of work

Director(Networking) shall be assisted by two Dy Directors.

Director(Archival Research) shall be responsible for the following matters:

1. Development of Archive Management Information System, Digital Asset Management System & Media Asset Management System
2. Development of system design for digitalisation, Storage, and transferring of digitized audio archival content into Audio DVD/CDs as well as .WAV CDs.
3. Development of formulations of Metadata in the standardized format in the local as well as central server. Security provisions like Digital Rights Management (DRM).
4. Matters related to safe storage of Old Tapes and Records.
5. RTI queries pertaining to his domain of work

Director(Archival Research) shall be assisted by two Dy. Directors

Director(Tapeless Workflow) shall be responsible for the following matters:

1. Study of tapeless workflow, multimedia platforms at all the major studio centres.
2. Experimental operation of SAN [Storage Area Network] system consisting of a mainframe server to be accessed by separate users simultaneously for various functions such as online editing, archiving, content mixing, multimedia activities using the contents etc without using or exchange of contents on tapes/cassettes. Usage of tapes is limited to the outside news & productions only and the entire production in the studio is transferred into the SAN system tapelessly.
3. RTI queries pertaining to his domain of work

Director(Tapeless Workflow) shall be assisted by two Dy Directors.

(c) E-in-C(IT & e-GOVERNANCE), AIR&Doordarshan

He shall be responsible for e-Governance and running of IT services in AIR as well as Doordarshan. He shall handle IP based streaming of audio and video programmes. He shall introduce ERP for project monitoring and shall maintain value added services like music on demand, news on phone or other IP base interactive programmes. He shall be responsible for automation of office working and computerization of records.

E-in-C(IT & e-Governance), AIR & Doordarshan, shall be assisted by two Chief Engineers, viz.

1. **Chief Engineer(IT & e-Governance), AIR**
2. **Chief Engineer(IT & e-Governance), Doordarshan**

Chief Engineer(IT & e-Governance), AIR, shall be responsible for the following matters:

1. Development of IT facilities for AIR offices/ broadcast centres.

2. Development of Utility Software for specific broadcast requirement and office management in AIR .
3. e-Governance implementation issues in AIR.
4. Matter related to centralized data centre at AIR HQ.
5. Works related to Internet Broadcast /Podcast Plan project in AIR.
6. Matters related to Installation and Management of ERP system at the AIR Directorate.
7. Planning of Data & Multimedia Broadcasting in terrestrial transmissions of AIR
8. Matter related to Music on Demand Services of AIR.
9. Matters related to News-on-phone services of AIR
10. To act as appellate authority in respect of RTI queries pertaining to IT & e-Governance in AIR

Chief Engineer(IT & e-Governance), AIR shall be assisted by two Directors, viz.

1. **Director(IT & e-Governance), AIR**
2. **Director(Webcasting & Value-added Services), AIR**

Director(IT & e-Governance), AIR, shall be responsible for the following matters:

1. Planning and implementation of hardware and software for computerization of AIR stations.
2. Matters related to Installation and Management of ERP system of AIR
3. Monitoring and up keeping of networking equipments of Server Room of AIRNET, switch room and power supply system including generator supply back up.
4. Networking and Data Management of existing AIR stations.
5. Development of utility software for computerized working of AIR stations
6. Works related to development of Prasar Bharati website
7. Revamping of AIR website and its maintenance
8. System Administration of Servers/ LAN and WAN set up of AIR:HQ
9. AIRNET updating /maintenance and updating
10. RTI queries regarding to his domain of work

Director(IT & e-Governance), AIR, shall be assisted by two Dy. Directors-one for IT hardware and software and the other for tackling e-Governance issues.

Director(Webcasting & VAS), AIR, shall be responsible for the following matters:

1. Works related to Internet Broadcast /Podcast Plan project in AIR.Planning & implementation of streaming of 20 channels on internet.
2. Planning of Data & Multimedia Broadcasting in terrestrial transmissions of AIR
3. Implementation and maintenance of value added services like dynamic label, Interactive Text Transmission, Broadcast website, Multimedia Object Transfer (MOT), Slide show, Paging, Emergency warning, traffic and travel information using Transport Protocol Expert Group (TPEG) transmission, Differential Global Positioning System(DGPS) transmission, using digital broadcasting systems. Enhancement of revenue through value added services of AIR
4. Matter related to Music on Demand Services of AIR.
5. Matters related to News-on-phone services of AIR
6. RTI queries pertaining to his domain of work

Director(Webcasting & VAS), AIR, shall be assisted by two Dy. Directors-one for webcasting and the other for VAS.

Chief Engineer(IT & e-Governance), Doordarshan, shall be responsible for the following matters:

1. Development of IT facilities for DD offices/ broadcast centres.
2. Development of Utility Software for specific broadcast requirement and office management in Doordarshan.
3. e-Governance implementation issues in Doordarshan.

4. Matter related to centralized data centre at DD HQ.
5. Works related to Internet Broadcast /Podcast Plan project in Doordarshan.
6. Matters related to Installation and Management of ERP system at the DD Directorate.
7. Planning and implementation of Data Broadcasting & Multimedia broadcasting in terrestrial TV transmissions
8. To act as appellate authority in respect of RTI queries relating to IT and e-Governance in Doordarshan

Chief Engineer(IT & e-Governance), Doordarshan, shall be assisted by two Directors, viz.

1. **Director(IT & e-Governance), DD**
2. **Director(Webcasting & Value-added Services), DD**

Director(IT & e-Governance), DD, shall be responsible for the following matters:

1. Matters related to Installation and Management of ERP system of Doordarshan
2. Planning and implementation of hardware and software for computerization of Doordarshan stations.
3. Planning and implementation of DDNET
4. Monitoring and up keeping of networking equipments of Server Room of DDNET, switch room and power supply system including generator supply back up.
5. Networking and Data Management of existing DD stations.
6. Development of utility software for computerized working of DD stations
7. System Administration of Servers/ LAN and WAN set up of DD:HQ
8. DDNET updating /maintenance and updating
9. RTI queries pertaining to his domain of work

Director(IT & e-Governance), DD, shall be assisted by two Dy. Directors-one for IT hardware and software and the other for tackling e-Governance issues.

Director(Webcasting & VAS), DD, shall be responsible for the following matters:

1. Works related to Internet Streaming of DD programmes
2. Planning of Data & Multimedia Broadcasting in digital terrestrial transmissions of Doordarshan
3. Implementation and maintenance of value added services like data broadcasting, T-commerce, encryption system, SMS over digital TV transmitters
4. RTI queries pertaining to his domain of work

Director(Webcasting & VAS) shall be assisted by two Dy. Directors.

(iii)ADG(Engg)(Project & Maintenance), All India Radio

He shall be responsible for implementation of plan schemes as well as operation and maintenance of all domestic and external services of All India Radio. He shall be responsible for optimum technical performance of transmitters, satellite and terrestrial links, studios, OB coverage, etc of AIR and shall ensure their trouble free operation and maintenance. He shall be assisted by :

1. **E-in-C(Transmitter Project & Maintenance), AIR**
2. **E-in-C(Studio Project & Maintenance), AIR**
3. **E-in-C(Telecom Project & Maintenance), AIR**

E-in-C(Transmitter Project & Maintenance), AIR , shall be responsible for system design for all domestic and external radio services of the country using latest digital technology - DRM-MW, DRM- SW and DRM+ FM transmitters and decision in

respect of the type of transmitters, their powers, locations etc. He shall also be responsible for system design for all the External Services of All India Radio using DRM-MW (High Power) Transmitters, DRM-SW transmitters and DRM+ FM Transmitters. He shall be responsible for induction of latest techniques and framing of specifications for Transmitters. He shall be responsible for trouble-free operation and maintenance of broadcast transmitters setups. He shall manage emergencies in case of catastrophe, by arranging equipment and manpower for restoration of transmissions in the affected area.

E-in-C(Transmitter Project & Maintenance), AIR, shall be assisted by two Chief Engineers:

1. **Chief Engineer(AM Transmitter Project & Maintenance), AIR**
2. **Chief Engineer(FM Transmitter Project & Maintenance), AIR**

Chief Engineer(AM Transmitter Project & Maintenance), AIR, shall be responsible for the following matters:

1. System design for AM transmitter projects to be implemented in the AIR network.
2. Detailed project report, design notes and installation drawings for the execution of various AM transmitter projects in AIR network.
3. Evolving type designs, laying down standards and specifications for the various systems, equipments and materials required for AM transmitter projects.
4. Technical Evaluation of AM Transmitters to be procured for AIR network
5. Co-ordination with Zonal E-in-C(Project & Maintenance), AIR & DD regarding design related matters and periodic inspection of AM Transmitter projects under execution
6. Analysis of working of various AM transmitters in AIR network
7. Technical analysis of breakdowns in AM Transmitters

8. Projection of requirement of necessary spares, valves, etc for maintenance of AM transmissions
9. Monitoring , study and analysis of maintenance problems of AM transmitters
10. Evaluation of critical spares to be procured for AIR AM Transmitters
11. To act as appellate authority in respect of RTI queries related to AM Transmitter Wing of AIR

Chief Engineer(AM Transmitter Project & Maintenance), AIR shall be assisted by two Directors, viz.,

1. **Director (AM Transmitter Project), AIR**
2. **Director(AM Transmitter Maintenance), AIR**

Director(AM Transmitter Project), AIR, shall be responsible for the following matters:

1. Preparation of project notes for AM transmitter projects of AIR
2. Planning and System Design of MW/SW Transmitter Projects.
3. Preparation of Project Notes of AM Transmitters
4. Preparation of Detailed Drawings on Civil Works in co-ordination with CCW, Transmitter Equipments, Mast and Feeder, Power Supply, Air Conditioning, Diesel Generator, etc. for MW/SW Transmitters.
5. Study of latest techniques and framing of Specifications for MW/SW Transmitting systems, Mast and Feeder, Diesel Generator system, Air Conditioning, Programme Input and Receiving Equipments etc.
6. Technical evaluation of technical offers of MW/SW transmitters
7. Inspection of MW/SW Projects under Installation and their Joint Inspection on Completion.
8. Co-ordination with CCW, Zonal Offices, Installation Officers and Stations for various MW/SW Transmitters.
9. Staff Quarters, Community Centre, Security Work etc. in respect of MW/SW projects

10. Matters related to Regional Workshops, Security Work for MW/SW Transmitter Centres.
11. Matters related to administration of Drawing Section of P&D Unit in respect of MW/SW projects.
12. To handle RTI queries in respect of MW/SW Transmitter Design Section of AIR

Director(AM Transmitter Project), AIR, shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 11, by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South and West Zone.

Director(AM Transmitter Maintenance), **AIR**, shall be responsible for the following matters:

1. Study of feedback received from the Zonal HQs about the working of MW/SW transmitters
2. Analysis of breakdown of MW/SW transmitters in the AIR network
3. Evolution of policy for eliminating interruption of services in MW/SW Transmitters
4. Feedback to AM Transmitter Design Section for improvement of system design for better performance and interruption-less service of MW/SW Transmitter
5. Computation of requirements for procurement of maintenance spares such as, valves, I/Cs, Transistors, Controller cards, PA modules and other critical spares for MW/SW Transmitters
6. Evaluation of critical spares to be procured for MW/SW Transmitters
7. RTI queries pertaining to his domain of work

Director(AM Transmitter Maintenance) shall be assisted by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for West Zone & South Zone

Chief Engineer(FM Transmitter Project & Maintenance), AIR, shall be responsible for the following matters:

1. System design for FM transmitter projects to be implemented in the AIR network.
2. Detailed project report, design notes and installation drawings for the execution of various FM transmitter projects in AIR network.
3. Evolving type designs, laying down standards and specifications for the various systems, equipments and materials required for FM transmitter projects.
4. Technical Evaluation of FM Transmitters to be procured for AIR network
5. Co-ordination with Zonal E-in-C(Project & Maintenance), AIR & DD regarding design related matters and periodic inspection of FM Transmitter projects under execution
6. Analysis of working of various FM transmitters in AIR network
7. Technical analysis of breakdowns in FM Transmitters
8. Projection of requirement of necessary spares, MOSFETS, ICS, etc for maintenance of FM transmissions
9. Monitoring , study and analysis of maintenance problems of FM transmitters
10. Evaluation of critical spares to be procured for AIR FM Transmitters
11. To act as appellate authority in respect of RTI queries related to FM Transmitter Wing of AIR

Chief Engineer(FM Transmitter Project & Maintenance), AIR shall be assisted by two Directors, viz,

1. **Director(FM Transmitter Project), AIR**
2. **Director(FM Transmitter Maintenance), AIR**

Director(FM Transmitter Project), AIR, shall be responsible for the following matters:

1. Preparation of project notes for FM Transmitter projects
2. Planning and System Design of FM Transmitter Projects.
3. Preparation of Project Notes
4. Design and Preparation of Detailed Drawings on Civil Works, Transmitter Equipments, Mast and Feeder, Power Supply, Air Conditioning, Diesel Generator, Programme Input Rack, etc. for FM Transmitters.
5. Study of latest techniques and framing of Specifications for FM Transmitting systems, Mast and Feeder, Air Conditioning, Programme Input and Receiving Equipments etc.
6. Technical evaluation of technical offers of FM transmitters
7. Inspection of FM Projects under Installation and their Joint Inspection on Completion.
8. Liaison with CCW, Zonal Offices, Installation Officers and Stations for various FM Transmitters.
9. Staff Quarters, Community Centre, Security Work etc. in respect of FM projects
10. Matters related to Regional Workshops, Security Work for FM Transmitter Centers.
11. Matters related to Drawing Section of P&D Unit in respect of FM projects.
12. To handle RTI queries in respect of FM Transmitter Project Section of AIR

Director(FM Transmitter Project) shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 12, by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South and West Zone.

Director(FM Transmitter Maintenance), **AIR,** shall be responsible for the following matters:

1. Study of feedback received from the Zonal HQs about the working of FM transmitters
2. Analysis of breakdown of FM Transmitters in the AIR network
3. Evolution of policy for eliminating interruption of services in FM Transmitters
4. Feedback to Transmitter Design Section for improvement of system design for better performance and interruptionless service of FM Transmitter
5. Computation of requirements for procurement of maintenance spares such as, I/Cs, Transistors, Controller cards, PA modules and other critical spares for FM Transmitters
6. Evaluation of critical spares to be procured for FM Transmitters
7. RTI queries pertaining to FM Transmitter operation and maintenance

Director(FM Transmitter Maintenance) shall be assisted by two Dy. Directors- one for the East Zone, North East Zone and North Zone and the other for West Zone

E-in-C(Studio Project & Maintenance), AIR, shall be responsible for executing studio plan projects and staff quarters**.** He shall be responsible for digitalization, automation and networking of studios. He shall be responsible for trouble free operation and maintenance of AIR studios & O.B. coverage.

E-in-C(Studio Project & Maintenance), AIR, shall be assisted by three Chief Engineers:

1. **Chief Engineer(Studio Project & Maintenance)**
2. **Chief Engineer(Modernization & Augmentation)**

Chief Engineer(Studio Project & Maintenance), AIR, shall be responsible for the following matters:

1) System design for studio projects to be implemented in the AIR network. Induction of new technology for studio & O.B. equipment. Implementation of digitalization and networking of AIR stations.
2) Matters related to additional office accommodation, staff quarters, augmentation of power supply for new stations as well as at existing stations for all the studio centers.
3) Detailed project report, design notes and installation drawings for the execution of various studio projects in AIR network.
4) Evolving type designs, laying down standards and specifications for the various systems, equipments and materials required for studio projects.
5) Technical Evaluation of studio equipments to be procured for AIR network
6) Co-ordination with Zonal E-in-C(Project & Maintenance), AIR & DD regarding design related matters and periodic inspection of studio projects under execution
7) Study and analysis of working of studios in AIR network
8) Evolution of policy for optimum utilization of studios
9) Projection of requirements of critical spares for maintaining the studios
10) Matters connected with O.B. Coverage
11) Budget allocation for AIR stations
12) Staff matters of AIR stations
13) Vehicles and buildings of AIR stations
14) Court cases in respect of land, building and other technical infrastructure of AIR stations/offices
15) Parliament questions related to maintenance activities of the AIR stations.
16) To act as appellate authority in respect of RTI queries related to Studio Project & Maintenance Wing of AIR

Chief Engineer(Studio Project & Maintenance), AIR , shall be assisted by two Directors, viz

I. **Director(Studio Project), AIR**
II. **Director(Studio Maintenance), AIR**
III. **Director(HQ), AIR**

Director(Studio Project), AIR, shall be responsible for the following matters:

1. Preparation of preliminary project notes for studios/ office accommodation/ staff quarters
2. Preparation of technical drawing and equipment drawing pertaining to studio projects
3. Pre[parathion of layout & plan drawings in co-ordination with the CCW (Architect)
4. System Design of studios including acoustics, hard disc based automation system for Recording/Playback/Editing/Dubbing, news room automation system, networking, routing and signaling, microphones, headphones, monitoring amplifiers, power supply arrangement, HT/LT switchgears, AVRs, Illumination fittings, DG sets, Air-conditioning Plants, etc.
5. Introduction of new technology in the studio and framing of specifications of studio equipments
6. System Design in respect of OB equipment, cables, microphones, Headphones etc/ up-gradation and augmentation of O.B. facilities
7. Scrutiny and comments on the civil estimates, DTEs etc. received from Estimate Section.
8. Technical evaluation of the studio equipments to be procured for AIR network
9. Periodic inspection of studio projects under implementation and handling design related matters in respect of studio projects/office accommodation/staff quarters
10. To handle RTI queries in respect of the Studio Design Section of AIR

Director(Studio Project) shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 10, by two Dy. Directors-one for the East Zone, North Esat Zone and North Zone and the other for the West Zone and South Zone.

Director(Studio Maintenance) , AIR, shall be responsible for the following matters:

1) Compilation and Analysis of working of broadcast equipments studios in AIR network
2) Analysis of utilization of studios
3) Analysis of auxiliary systems such as A/C plants, power supply, etc
4) Compilation of requirement for procurement of spares
5) Matters related to Akashvani Annual Awards
6) RTI queries in respect of his domain of work

Director(Studio Maintenance) shall be assisted by two Dy. Directors – one for the East,North East & North Zone and the other for the West & South Zone

Chief Engineer(Modernization & Augmentation) , AIR, shall be responsible for the following matters:

1) Implementation of modernization & augmentation plans in respect of studios
2) Automation in studios
3) Automation in newsroom
4) Networking of studios
5) Digitalization of archives
6) Induction of new digital technologies for automation of studios
7) System design and evaluation of studio equipments
8) To act as appellate authority in respect of modernization and augmentation issues pertaining to AIR studios

Chief Engineer(Modernization & Augmentation), AIR, shall be assisted by two Directors:

1) **Director(Modernization & Augmentation)**

2) **Director(Studio Equipment Maintenance)**

Director(Modernization & Augmentation), AIR, shall be responsible for the following matters:

1) Project note for implementation of modernization and augmentation schemes pertaining to AIR studios
2) Keeping up-to-data records of the requirements of studio equipment for entire network, its SFC and purchase status.
3) Implementation of Modernization Schemes in respect of studios
4) Framing of specifications for hardware and software for hard disc based Studio Automation system/News Room Automation System
5) Framing of specifications of equipments such as digital recording/editing/dubbing/switching /playback consoles, hand-held recorders, field recorders, routers, networking equipment, servers with storage systems, microphones, O.B. equipments etc.
6) Technical Evaluation of studio equipments to be procured for AIR network
7) To evolve strategy for maintenance and servicing of new equipments installed for modernization and augmentation
8) To handle RTI queries in respect of Modernization and augmentation schemes of AIR studios

Director(Modernization & Augmentation) shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 8, by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the West Zone and South Zone.

Director(Studio Equipment Maintenance), AIR, shall be responsible for the following matters:

1. To evolve strategy for maintenance of hardware and software for studio automation and newsroom automation system
2. To implement cost effective system for maintenance of servers, work stations, routers, etc
3. To implement cost effective system for studio automation software

4. To evaluate software for recording/playback/editing/dubbing and recommend a uniform system to entire AIR network
5. To develop in-house software for recording/playback/editing/dubbing and recommend a uniform system to entire AIR network
6. To handle RTI queries in respect of maintenance of hardware & software for studio automation.

Director(Hardware & Software Maintenance), AIR, shall be assisted, in carrying out the assignments listed at Sl. No. I to VI , by two Dy. Directors- one for the East Zone, North East Zone and North Zone and the other for the West Zone and South Zone.

Director(HQ), AIR, shall be responsible for the following matters:

1. Working of AIR station, administrative matters of AIR stations;
2. Review of Electricity Rules, Co-ordination with Central Electricity Authority.
3. Meetings and conferences pertaining to Engineering Wing.
4. Monitoring of Budget Estimates of AIR Units under Engineering Heads (Rents Rates and Taxes, Buildings and lands, power supply, Machinery Equipment Tools and Plants, Minor works).
5. Matters related to replacement of vehicles in AIR network.
6. Matters related to Staff Quarters and Office accomodation
7. Matters related to hiring of office accommodation, leasing, fixation of rent, rates and taxes.
8. Matters relating to obtaining foreign exchange authorization for purchase of foreign journals and publications, necessary coordination with the Ministry/Prasar Bharati Board
9. Annual Administrative Reports from stations and follow up action
10. Replacement/maintenance of vehicles of AIR stations – cases relating to accident of vehicles and follow up action. Hiring of taxis at station disposal of old vehicles follow up with the Ministry/ Prasar Bharati Board.

11. Budget Estimate – budget allocation of RE, BE and FE in respect of AIR stations for METP, minor works, vehicles replacement, Power supply, telephone, RRT - both under Plan and Non-Plan
12. Matters relating to land and building at AIR stations including Akashvani Bhawan, Delhi
13. Accord approval in respect of Head of Account – rent rates and taxes
14. Hiring and continued hiring of office accommodation for AIR Stations/offices and follow up action. Allotment of office accommodation to various officers and staff for Akashvani Bhawan. He is also member of office Accommodation Allotment committee in respect of Akashvani Bhawan
15. Minor works, security Works of all AIR stations (including Akashvani Bhawan) and coordination with CCW
16. Administrative duties relating to E-I and E-II Branches of the Directorate
17. Correspondence regarding AIR Telephone Directory and Printing of Telephone Directory
18. Attending of office council meeting and Administrative meetings etc. and follow-up
19. Arrangement of engineering conferences/seminars and meeting relating to Engineering HQ
20. To assist the Chief Engineer(HQ) in coordinating the work of the Engineering wing relating to operation and maintenance
21. Monitoring of Technical Inspection of stations by Zonal Chief Engineers and follow up action
22. Matters relating to exchange telephone in respect of all AIR stations, provision of STD facilities, EPABX, FAX, TELEX etc. Matters relating to EPABX and extension telephone in Akashvani Bhawan
23. Court cases in respect of land, building and other technical infrastructure of AIR stations/offices
24. SIU , Audit objections
25. Allocation of PRG funds to stations
26. Parliament questions related to maintenance activities of the AIR stations

27. RTI queries in respect of his domain of work

Director(HQ) shall be assisted by two Dy. Directors- one for the East, North East and North Zone and the other for the West & South Zone.

E-in-C(Telecom Project & Maintenance), AIR, shall be responsible for implementation of telecom projects regarding installation of digital links between Studio and Transmitter, Satellite links and networking of AIR stations. He shall be responsible for trouble-free operation and maintenance of all terrestrial and satellite links. He shall co-ordinate with Department of Space, ISRO, etc.

E-in-C(Telecom Project & Maintenance), AIR shall be assisted by two Chief Engineers:

1. **Chief Engineer(Satellite Project & Maintenance), AIR**
2. **Chief Engineer(Terrestrial -Project & Maintenance), AIR**

Chief Engineer(Satellite -Project & Maintenance) shall be responsible for the following matters:

1. System design and specifications of Captive Earth Stations and RN Receive terminals .
2. Planning and implementation of Radio Networking through satellite network
3. System Design and Specifications for DTH Radio Services.
4. Digitalization of C Band RN Terminals.
5. Co-ordination with WPC, DoS authorities.
6. Technical Evaluation of Telecom Satellite equipments to be procured for AIR network
7. Co-ordination with Zonal E-in-C(Project& Maintenance), AIR & DD regarding design related matters and periodic inspection of Telecom Satellite projects under execution
8. To act as appellate authority in respect of RTI queries related to Telecom Satellite Wing of AIR

Chief Engineer(Satellite -Project & Maintenance), AIR, shall be assisted by two Directors, viz,

1. **Director(Satellite - Project), AIR**
2. **Director(Satellite - Maintenance), AIR**

Director(Satellite - Project), AIR, shall be responsible for the following matters:

1. Preparation of project note for satellite related projects
2. System Design for all Satellite telecom facilities in AIR network.
3. System design for C Band RN Receive Equipment for new Projects.
4. Sky wave Radio, DTH Radio Services projects of AIR.
5. Planning for Digitalization of Radio Networking through satellite
6. Framing of specifications for all equipments to be used in Captive Earth Station, DTH, RN receive terminals and INMARSAT links
7. Technical evaluation of satellite uplinls/downlinks and associated equipments to be used for AIR network
8. Matters related to TAG, ICC and liaison with DoS, WPC, etc
9. Periodic inspection of terrestrial links projects under execution and handling of matters related to design section in execution of such projects
10. NOCC Tests of Captive Earth Station
11. To handle RTI queries in respect of satellite link projects of AIR

Director(Satellite - Project), AIR, shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 11, by two Dy. Directors-one for the East Zone, North Esat Zone and North Zone and the other for the West Zone and South Zone.

Director(Satellite - Maintenance), AIR, shall be responsible for the following matters:

1) Compilation of feedback reports regarding working of CES, INMARSAT terminals, RN receive terminals, DSNG, etc

2) Action for optimum performance of captive Earth Stations, R.N. Receive Terminals, INMARSAT terminals, DSNG, etc
3) Action for indenting critical spares for maintenance of satellite uplinks and downlinks
4) Liaison with DoS and other agencies
5) To handle RTI queries in respect of satellite link maintenance of AIR

Director(Satellite Maintenance), AIR, shall be assisted by two Dy Directors-one for the East, North East and North Zone and the other for the West & South Zone.

Chief Engineer(Terrestrial Project & Maintenance) shall be responsible for the following matters:

1. System design and specifications of terrestrial studio-transmitter links
2. Planning and implementation of Networking through terrestrial network
3. Development of Telecom facilities like Microwave Links, ISDN lines, Digital lines, Optical Fiber links.
4. Co-ordination with WPC, DoT authorities.
5. Technical Evaluation of Telecom Terrestrial equipments to be procured for AIR network
6. Co-ordination with Zonal E-in-C(Project), AIR & DD regarding design related matters and periodic inspection of Terrestrial Telecom projects under execution
7. To act as appellate authority in respect of RTI queries related to Terrestrial Telecom Wing of AIR

Chief Engineer(Terrestrial - Project & Maintenance), AIR, shall be assisted by two Directors, viz.,

1) **Director(Terrestrial - Project), AIR**
2) **Director(Terrestrial - Maintenance), AIR**

Director(Terrestrial - Project) shall be responsible for the following matters:

1) Preparation of project note for telecom projects
2) System Design for Microwave links (STL), ISDN, Digital leased lines, etc.
3) Formulations of Specifications for Equipment, Detailed Drawings , Project Notes etc. in respect of terrestrial links of AIR
4) Maintenance and Co-ordination of other telecom facilities in AIR network.
5) Coordination with DoT/BSNL/ MTNL and other Telecom operators.
6) Planning for Digitalization of Microwave links.
7) Technical evaluation of terrestrial link equipments to be procured for use in AIR network
8) Periodic inspection of terrestrial links projects under execution and handling of matters related to design section in execution of such projects
9) To handle RTI queries in respect of Terrestrial links of AIR

Director(Terrestrial -Project), AIR, shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 9, by two Dy. Directors-one for the East Zone, North Esat Zone and North Zone and the other for the West Zone and South Zone.

Director(Terrestrial - Maintenance), AIR, shall be responsible for the following matters:

1) Compilation of feedback reports regarding working of microwave, VHF, ISDN, Digital line link between studio and transmitter
2) Action for optimum performance of links
3) Action for indenting critical spares for maintenance of links
4) Liaison with BSNL, MTNL and other agencies
5) To handle RTI queries in respect of terrestrial link maintenance

Director(Terrestrial - Maintenance), AIR, shall be assisted by two Dy Directors-one for the East, North East and North Zone and the other for the West & South Zone.

(iv)ADG(Engg)(Project & Maintenance), Doordarshan

He shall be responsible for implementation of plan schemes as well as operation and maintenance of all domestic and external services of Doordarshan . He shall be responsible for optimum technical performance of transmitters, satellite and terrestrial links, studios, OB coverage, etc of Doordarshan and shall ensure their trouble free operation and maintenance. He shall be assisted by :

1) **E-in-C(Transmitter Project & Maintenance), Doordarshan**
2) **E-in-C(Studio Project & Maintenance), Doordarshan**
3) **E-in-C(Telecom Project & Maintenance), Doordarshan**

E-in-C(Transmitter Project & Maintenance), Doordarshan, shall be responsible for implementing plan projects of DD transmitters. He shall be responsible for induction of latest digital technologies in Doordarshan transmitters, such as, digital terrestrial transmitters, HDTV and tapeless work flows, etc. He shall be responsible for trouble-free operation and maintenance of DD transmitters setups. He shall manage emergencies in case of catastrophe, by arranging equipment and manpower for restoration of transmissions in the affected area.

E-in-C(Transmitter Project & Maintenance), Doordarshan , shall be assisted by two Chief Engineers:

1. **Chief Engineer(HPT -Project & Maintenance)**
2. **Chief Engineer(LPT/VLPT- Project & Maintenance)**

Chief Engineer(HPT-Project & Maintenance), Doordarshan, DD shall be responsible for the following matters:-

1. System design for digital terrestrial HPT projects to be implemented in the DD network.

2. Detailed project report, design notes and installation drawings for the execution of various HPT projects in DD network.
3. Evolving type designs, laying down standards and specifications for the various systems, equipments and materials required for HPT projects.
4. Technical Evaluation of digital terrestrial high power transmitters to be procured for DD network
5. Pre-dispatch inspection of high power DD transmitters
6. Co-ordination with Zonal E-in-C(Project), AIR & DD regarding design related matters and periodic inspection of HPT projects under execution
7. Joint inspection of completed HPT projects of Doordarshan
8. Analysis of working of various transmitters in DD network
9. Technical analysis of breakdowns of DD Transmitters
10. Projection of requirement of necessary spares, valves, etc for maintenance of DD transmissions
11. Monitoring , study and analysis of maintenance problems of DD transmitters
12. Evaluation of critical spares to be procured for DD network
13. System design of disaster management system
14. To act as appellate authority in respect of RTI queries regarding HPT – project & maintenance

Chief Engineer(HPT-Project & Maintenance), Doordarshan, shall be assisted by two Directors, viz.

(1) Director (HPT-Project), Doordarshan

(2) Director(HPT-Maintenance), Doordarshan

Director(HPT- Project), Doordrashan, shall be responsible for the following matters:-

1. Planning and System Design of Transmitter HPT Projects
2. Preparation of project notes of DD High Power Transmitters giving details of site, building, equipment, power supply, A/C plants, tower & antenna, etc
3. Augmentation of tower heights

4. Shifting of Transmitters
5. Preparation of Project Notes, working out Layout Plans, Civil, Power Supply and Air Conditioning requirements etc in respect of DD High Power Transmitter projects.
6. Design and Preparation of Detailed Drawings on Civil Works, Transmitter Equipments, Mast, Feeder & Antenna, Power Supply, Air Conditioning etc. for DD High Power Transmitters.
7. Study of latest Techniques and framing of Specifications for DD High Power Transmitting systems, Tower & Feeder, Air Conditioning, Programme Input and Receiving Equipments etc.
8. Inspection of DD High Power Transmitter Projects under Installation and their Joint Inspection on Completion.
9. Liaison with CCW, Zonal Offices, Installation Officers and Stations for various DD High Power Transmitter projects.
10. Staff Quarters, Community Centre, Security Work etc. in respect of DD High Power Transmitter projects
11. Matters related to Regional Workshops, Security Work for DD High Power Transmitter Centres.
12. Matters related to Drawing Section of the DD Directorate in respect of DD High Power Transmitter projects.
13. Matters related to disaster management system
14. To handle RTI queries in respect of HPT projects of Doordarshan

Director(HPT-Project), Doordarshan, shall be assisted by two Dy. Directors- one for the East Zone, North East Zone and North Zone and the other for the South and West Zone.

Director(HPT- Maintenance) , Doordarshan, shall be responsible for the following matters:

1. Study of feedback received from the Zonal HQs about the working of HPT of DD network
2. Analysis of breakdown of HPTs of DD network

3. Evolution of policy for eliminating interruption of services in HPTs of DD
4. Feedback to Transmitter Design Section for improvement of system design for better performance and interruptionless service of HPTs of DD
5. Computation of requirements for procurement of maintenance spares such as, valves, I/Cs, Transistors, Controller cards, PA modules and other critical spares for HPTs of DD
6. Evaluation of critical spares to be procured for HPTs of DD
7. To handle RTI queries in respect of DD high power transmitter maintenance.

Director(HPT- Maintenance), Doordarshan, shall be assisted by two Dy. Directors- one for the East Zone, North East Zone and North Zone and the other for West Zone & South Zone.

Chief Engineer(LPT/VLPT- Ptoject & Maintenance), Doordarshan, shall be responsible for the following matters:-

1) System design for LPT/VLPT projects to be implemented in the DD network.
2) Installation of DTH sets in lieu of VLPTs closed down in Doordarshan network
3) Detailed project report, design notes and installation drawings for the execution of various LPT/VLPT projects in DD network.
4) Evolving type designs, laying down standards and specifications for the various systems, equipments and materials required for LPT/VLPT projects.
5) Technical Evaluation of LPT/VLPT to be procured for DD network
6) Pre-dispatch inspection of LPT/VLPT meant for DD
7) Co-ordination with Zonal E-in-C(Project), AIR & DD regarding design related matters and periodic inspection of LPT/VLPT/r/DTH projects under execution
8) Joint inspection of completed LPT/VLPT/DTH projects of Doordarshan
9) System design of disaster management system
10) To act as appellate authority in respect of RTI queries regarding LPT/VLPT/DTH project.

Chief Engineer(LPT/VLPT- Project & Maintenance), Doordarshan, shall be assisted by two Directors, viz.

(1) Director(LPT/VLPT-Project & Maintenance), Doordarshan

(2) Director(LPT/VLPT-Maintenance), Doordarshan

Director(LPT/VLPT- Ptoject), Doordrashan, shall be responsible for the following matters:-

1) Planning and System Design of Transmitter Projects: LPTs, VLPTs/Xprs
2) Preparation of project notes of LPT/VLPT projects of Doordarshan giving details of site, building, equipment, power supply, A/C plants, tower & antenna, etc
3) Augmentation of tower heights
4) Shifting of Transmitters
5) Matters related to installation of DTH sets in lieu of VLPTs closed down in Doordarshan network
6) Preparation of Project Notes, working out Layout Plans, Civil, Power Supply and Air Conditioning requirements etc in respect of DD LPT/VLPT projects.
7) Design and Preparation of Detailed Drawings on Civil Works, Transmitter Equipments, Mast, Feeder & Antenna, Power Supply, Air Conditioning etc. for DD LPT/VLPT projects
8) Study of latest Techniques and framing of Specifications for DD LPT/VLPT Transmitting systems, Tower & Feeder, Air Conditioning, Programme Input and Receiving Equipments etc.
9) Inspection of DD LPT/VLPT Projects under Installation and their Joint Inspection on Completion.
10) Liaison with CCW, Zonal Offices, Installation Officers and Stations for various DD LPT/VLPT projects.
11) Staff Quarters, Community Centre, Security Work etc. in respect of DD LPT/VLPT projects
12) Matters related to Regional Workshops, Security Work for DD LPT/VLPT Transmitter Centres.

13) Matters related to Drawing Section of the DD Directorate in respect of DD LPT/VLPT projects.
14) Matters related to disaster management system
15) To handle RTI queries in respect of DD LPT/VLPT projects

Director(LPT/VLPT- Project), Doordarshan, shall be assisted by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the South and West Zone.

Director(LPT/VLPT - Maintenance), Doordarshan, shall be responsible for the following matters:

1. Study of feedback received from the Zonal HQs about the working of VLPT/LPT/DTH/XPSRs of DD
2. Analysis of breakdown of LPT/VLPT/DTH/XPSRs in the DD network
3. Evolution of policy for eliminating interruption of services in LPT/VLPT/DTH/XPSRs of DD
4. Feedback to Transmitter Design Section for improvement of system design for better performance and interruption-ess service of DD LPT/VLPT
5. Computation of requirements for procurement of maintenance spares such as, I/Cs, Transistors, Controller cards, PA modules and other critical spares for LPT/VLPT of DD
6. Evaluation of critical spares to be procured for LPT/VLPT of DD
7. To handle RTI queries in respect of LPT/VLPT maintenance

Director(LPT/VLPT Maintenance) shall be assisted by two Dy. Directors- one for the East Zone, North East Zone and North Zone and the other for West Zone & South Zone.

E-in-C(Studio Project & Maintenance), Doordarshan, shall be responsible for implementation of studio projects and staff quarters. He shall be responsible for

trouble free operation and maintenance of DD studios. He shall be responsible for induction of new technologies such as HDTV, tapeless work flow, etc. and digitalization of DD studios. E-in-C(Studio Project & Maintenance), Doordarshan shall be assisted by three Chief Engineers:

1. **Chief Engineer(Studio-Project & Maintenance), Doordarshan**
2. **Chief Engineer(Modernization & Augmentation), Doordarshan**

Chief Engineer(Studio Project & Maintenance), Doordarshan, shall be responsible for the following matters:

1. Introduction of HDTV & other new technologies
2. Full digitalization of partially digitalized studios & existing analogue studios
3. Digitalization of Archiving facilities in Doordarshan network
4. Automation of news production & Transmission related facilities in Doordarshan network
5. Setting up of new digital studios for expansion of DD services
6. Study and analysis of working of studios in DD network
7. Evolution of policy for optimum utilization of DD studios
8. Projection of requirements of critical spares for maintaining the DD studios
9. Matters connected with national and international O.B. Coverage of DD
10. Budget allocation for DD stations
11. Staff matters of DD stations
12. Veehicles and buildings of DD stations
13. Court cases in respect of land, building and other technical infrastructure of DD stations/offices
14. Parliament questions related to maintenance activities of the DD stations.
15. To act as appellate authority in respect of RTI queries relating to studio – project and maintenance of Doordarshan

Chief Engineer(Studio-Project & Maintenance), Doordarshan , shall be assisted by two Directors, viz.

1. **Director(Studio Project), Doordarshan**
2. **Director(Studio Maintenance), Doordarshan**

3. Director(HQ), Doordarshan

Director(Studio Project), Doordarshan, shall be responsible for the following matters:-

1. Preparation of preliminary project report for studio/office accommodation/staff quarters schemes
2. Preparation of technical & equipment drawings of studio projects
3. Preparation of video-audio schematic drawings
4. Examination of lay out & plan drawings with CCW(Architect)
5. Equipment System Design of DD studios including power supply arrangement, HT/LT switchgears, AVRs, Illumination fittings, DG sets, Air-conditioning Plants etc.
6. Implementation of HDTV
7. Digitalization of analogue studios as well as conversion of partially digitalized studios to fully digitalized ones
8. Digitalization of archiving facilities
9. Digitalization of automation of news production and transmission related facilities in Doordarshan network
10. Drawings and records pertaining to studios, office accommodation and staff quarters
11. Scrutiny and comments on the civil estimates, DTEs etc. received from Estimate Section.
12. Framing of specifications for DD studio equipments
13. Technical evaluation of the studio equipments to be procured for DD network
14. Inspection of studio projects under execution and completed studio projects
15. To handle RTI queries in respect of studio projects of Doordarshan

Director(Studio Project), Doordarshan, shall be assisted by two Dy. Directors- one for the East Zone, North Esat Zone and North Zone and the other for the West Zone and South Zone.

Director(Studio Maintenance), Doordarshan, shall be responsible for the following matters:

1. Scrutiny and examination of monthly reports, studio utilization, post production, analysis of working of DD Kendras
2. Analysis of auxiliary systems such as A/C plants, power supply, etc of DD studios
3. Maintenance support and spares planning and disbursement of microwave STL, S-VHS, video monitors, audio equipments, A/C plants, EFP vans and UPS of DD network
4. Co-ordination with the HQ wing for obsolete, missing and surplus equipment
5. Data relating to replacement of equipments
6. Organizing maintenance review meetings and follow-up actions
7. Co-ordination with Zonal maintenance HQ for maintenance related issues
8. Parliament questions on maintenance aspects of DD Kendras
9. Matters related to Doordarshan Annual Awards
10. To handle RTI queries in respect of studio maintenance of Doordarshan

Director Engineering(HQ), Doordarshan, shall be responsible for the following matters:

1) Planning and co-ordination of national and international coverage and their feeds
2) Booking of satellite and their billing in co-ordination with VSNL
3) Cases related to on-account advance payment for OB coverage and deployment of DSNG
4) Deployment of DSNG and their co-ordination
5) Cases related to hiring of MW circuits of DoT, DSNG and Earth Station and their billing
6) Matters related to CPN and DD News
7) Budget allocation for engineering activities of DD stations
8) Issues related to assets of stations and proforma accounts
9) Cases relating to staff and staff welfare
10) Cases related to staff associations, Departmental Council meetings, etc
11) Cases relating to condemnation, purchase & hiring of vehicles

12) Cases related to telephones, mobile connections in respect of DD stations
13) Cases relating to hiring of buildings and payment of rentals
14) Cases relating to service tax and municipal taxes of DD buildings
15) Court cases in respect of land, building and other technical infrastructure of DD stations/offices
16) Cases relating to minor works(civil & electrical maintenance of buildings) related to DD stations as well as that of the building of the DG, DD
17) SIU , Audit objections
18) Allocation of PRG funds to DD stations
19) Parliament questions related to maintenance activities of the DD stations
20) RTI queries relating to his domain of work

Director(HQ), Doordarshan, shall be assisted by two Dy. Directors- one for the East, North East and North Zone and the other for the West & South Zone.

Chief Engineer(Modernization & Augmentation), Doordarshan, shall be responsible for the following matters:

1. Modernization & Augmentation of studios in DD network
2. Augmentation of recording and post production facilities in DD network
3. Augmentation of field production facilities in DD network
4. Strengthening of audio facilities, monitoring & measuring facilities, studio & ENG lighting facilities etc. in DD network
5. Augmentation of Power Supply system equipments
6. Replacement of essential service equipments such as air-conditioning plants, diesel generators, lighting system, acoustic treatment, etc
7. Providing state of art equipments at the studio centres in DD network for modernizing existing production and post production facilities
8. Project note for implementation of modernization and augmentation schemes pertaining to DD studios
9. Framing of specifications for hardware and software for modernization & augmentation schemes
10. Technical Evaluation of studio equipments to be procured for modernization & augmentation schemes
11. To evolve strategy for maintenance and servicing of equipments installed for modernization and augmentation

12. To act as appellate authority in respect of RTI queries related to modernization and augmentation of facilities in DD network

Chief Engineer(Modernization & Augmentation), Doordarshan, shall be assisted by two Directors, viz.

1. **Director(Modernization & Augmentation-Projects), Doordarshan**
2. **Director(Studio Equipment Maintenance), Doordarshan**

Director(Modernization & Augmentation), Doordarshan, shall be responsible for the following matters:-

1. Modernization & Augmentation of studios by providing digital cameras, digital production switchers, character generators, frame synchronizers, video servers, logo generators, robotic camera setup etc. at existing 66 studio locations
6. Augmentation of recording and post production facilities by providing digital VCRs, Edit suites etc. at existing 66 studio locations
7. Augmentation of field production facilities in the existing OB/EFP/ENG vans at 25 locations out of the existing 66 studio centre locations by providing digital camcorders etc.
8. Strengthening of audio facilities, monitoring & measuring facilities, studio & ENG lighting facilities etc. at existing 66 locations
9. Augmentation of power supply system equipment etc. at existing 25 locations
10. Replacement of essential services equipment including air-conditioning plant,lighting system, diesel generators, power supply equipments, acoustic treatments, technical furniture etc. existing 66 locations
11. Providing latest state of the art equipments at the studio centers for modernizing the already existing production and post production facilities at existing 66 locations
12. To handle RTI queries in respect of modernization and augmentation of DD network.

Director(Modernization & Augmentation), Doordarshan, shall be assisted by two Dy. Directors-one for the East Zone, North Esat Zone and North Zone and the other for the West Zone and South Zone.

Director(Studio Equipment Maintenance), DD, shall be responsible for the following matters:

1) To evolve strategy for maintenance and servicing of the latest state of the art equipments at the studio centres for modernizing the existing production and post production facilities
2) To evolve strategy for maintenance of equipments installed in modernization & augmentation schemes, such as, digital cameras, digital production switchers, character generators, frame synchronizers, video servers, logo generators, robotic camera setup etc
3) To evolve strategy for maintenance and servicing of digital VCRs, Edit suites, digital camcorders, etc.
4) To evolve cost effective system for studio automation software/news automation software
5) To handle RTI queries in respect of maintenance of hardware & software for studio automation.

Director(Studio Equipment Maintenance), Doordarshan, shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 5 , by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the West Zone and South Zone.

E-in-C(Telecom- Project & Maintenance), Doordarshan

He shall be responsible for implementation of satellite based projects. He shall be responsible for trouble free operation of satellite based Systems being used in Doordarshan.

E-in-C(Telecom-Project & Maintenance), Doordarshan , shall be assisted by two Chief Engineers:

1. **Chief Engineer(Satellite - Project & Maintenance), Doordarshan**
2. **Chief Engineer(Terrestrial -Project & Maintenance), Doordarshan**

Chief Engineer(Satellite - Project & Maintenance), Doordarshan , shall be responsible for the following matters:

1) All matters related to installation and maintenance of new Earth Stations/ up-gradation of existing Earth Stations.
2) All matters related to installation and expansion of VSAT systems and their maintenance
3) All matters related to provision of new DSNG units/ replacement of existing DSNG units and their maintenance
4) Replacement of IRDs with DVB-S2 based IRDs and replacement of PDAs and accessories in DD network
5) System Design and Specifications for DTH Services and upgradation of carrier monitoring equipment at Todapur
6) Remote switching facilities for VLPTS in DD network
7) Liaison with WPC, DoS, etc
8) Technical Evaluation of satellite link equipments to be procured for DD network
9) Co-ordination with Zonal E-in-C(Project), AIR & DD regarding design related matters and periodic inspection of satellite link projects under execution
10) Projection of requirement of critical spares in respect of maintenance of satellite based services
11) To act as appellate authority in respect of RTI queries related to satellite links –project and maintenance

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Chief Engineer(Satellite-Project & Maintenance), Doordarshan, shall be assisted by two Directors:

1. **Director(Satellite - Project), Doordarshan**
2. **Director(Satellite -Maintenance), Doordarshan**

Director(Satellite -Project), Doordarshan, shall be responsible for the following matters:

1) Preparation of project notes for satellite projects
2) System design and framing of specifications,
3) Issue of drawings in connection with all satellite projects, e.g., replacement of Earth station Compression Equipments,
4) Providing VSAT terminals,
5) Upgrading of regional centres of VSAT terminals,
6) Expansion of VSAT hub at Delhi,
7) Replacement of DSNG units, proving New DSNG Terminals ,
8) Replacement of IRDs with DVB S-2 based IRDs,
9) Replacement of Uplink PDAs and accessories,
10) Providing New Earth station,
11) Up-gradation of Carrier monitoring Station at Todapur,
12) Remote Switching facilities at VLPTs,
13) Optical fibre and microwave links, etc
14) Framing of specifications for Earth Station, DSNG, Mobile DSNG, VSAT, DTH equipments
15) Technical evaluation of equipments to be procured for satellite projects of DD
16) Monthly report & other periodic reports in respect of transponder utilization by DD
17) Feasibility study and implementation of EPG for DTH service and MMDS
18) Liaison with PSUs and otherb suppliers in respect of supply of C Band equipments
19) Matters related to TAG/ICC and liaison with DoS, WPC, etc
20) Co-ordination with the R&D Department for development of telemetry system for LPT , Changeover system for VLPTs, etc
21) Liaison with public sector units and other agencies for supply of C and KU Banf equipments
22) Issues related to SETUP boxes and CAS
23) Projects related to taking DD signals to foreign countries
24) To handle RTI matters related to satellite link projects of Doordarshan

Director(Satellite -Project), Doordarshan, shall be assisted by two Dy. Directors-one for the East Zone, North East Zone and North Zone and the other for the West Zone and South Zone.

Director(Satellite - Maintenance) , Doordarshan, shall be responsible for the following matters:

1) Compilation of feedback reports regarding working of Earth Stations and Microwave links/ optical fibre links
2) Study and analysis of periodic feedbacks on Earth Stations
3) Action for optimum performance of satellite links
4) Antenna Optimization
5) Liaison with foreign satellite operators
6) Issues related to interference with other satellites
7) Liaison with Dot, DoS, etc
8) Maintenance related issues of DSNG and mobile DSNG
9) Issues related to payment to foreign satellite operator
10) Cable TV monitoring & Report generation and issues related to amendment in Cable TV Act
11) Operation and maintenance of DTH service
12) Action for indenting critical spares for maintenance of satellite links
13) To handle TRI queries in respect of satellite link maintenance of Doordarshan.

Director(Satellite Maintenance), Doordarshan, shall be assisted by two Dy Directors-one for the East and North East and the other for the North Zone.

Chief Engineer(Terrestrial Project & Maintenance) shall be responsible for the following matters:

1) Development of Telecom facilities like Microwave Links, ISDN lines, Digital lines, Optical Fiber links, etc.
2) System design and specifications of terrestrial links
3) Co-ordination with WPC, DoT authorities.

4) Technical Evaluation of terrestrial link equipments to be procured for DD network
5) Co-ordination with Zonal E-in-C(Project), AIR & DD regarding design related matters and periodic inspection of Terrestrial Telecom projects under execution
6) To act as appellate authority in respect of RTI queries related to Terrestrial Telecom Wing of AIR

Chief Engineer(Terrestrial - Project & Maintenance), Doordarshan, shall be assisted by two Directors, viz.,

1) **Director(Terrestrial - Project), Doordarshan**
2) **Director(Terrestrial - Maintenance), Doordarshan**

Director(Terrestrial - Project), Doordarshan, shall be responsible for the following matters:

1) Preparation of project note for terrestrial link m projects
2) System Design for Microwave links (STL), ISDN, Digital leased lines, etc.
3) Formulations of Specifications for Equipment, Detailed Drawings , Project Notes etc. in respect of terrestrial links of AIR
4) Maintenance and Co-ordination of other telecom facilities in AIR network.
5) Coordination with DoT/BSNL/ MTNL and other Telecom operators.
6) Digitalization of Microwave links.
7) Technical evaluation of terrestrial link equipments to be procured for use in DD network
8) Periodic inspection of terrestrial link projects under execution and handling of matters related to design section in execution of such projects
9) To handle RTI queries in respect of Terrestrial link projects of DD

Director(Terrestrial -Project), DD, shall be assisted, in carrying out the assignments listed at Sl. No. 1 to 9, by two Dy. Directors-one for the East

Zone, North East Zone and North Zone and the other for the West Zone and South Zone.

Director(Terrestrial -Maintenance), Doordarshan, shall be responsible for the following matters:

1) Compilation of feedback reports regarding working of microwave, VHF, ISDN, Digital line link between studio and transmitter
2) Action for optimum performance of links
3) Action for indenting critical spares for maintenance of links
4) Liaison with BSNL, MTNL and other agencies
5) To handle RTI queries in respect of terrestrial link maintenance

Director(Terrestrial - Maintenance), Doordarshan, shall be assisted by two Dy Directors-one for the East, North East and North Zone and the other for the West & South Zone.

Zonal E-in-C(Project & Maintenance), AIR & Doordarshan

There shall be five Zonal E-in-Cs responsible for execution of AIR and DD projects and operation & maintenance of AIR and DD stations, headquartered at Kolkata, Chennai, Mumbai , Guwahati and Delhi respectively. They shall plan the execution of projects, exercise budgetary control, oversee procurement actions, inspect departmental works, monitor financial and physical progress of the projects in their respective zones till they are commissioned and inaugurated. They shall ensure optimum technical performance and maintenance of broadcast transmitters setups and Studio Centres, broadcast quality of OB Vans, telecom , satellite and networking setup of AIR & DD stations in their respective zones. They shall manage emergencies in case of catastrophe, by arranging equipment and manpower for restoration of transmissions.

The Zonal E-in-C(Project & Maintenance), AIR & DD, shall be assisted by five Chief Engineers:

1) **Chief Engineer(Resource Management), AIR & Doordarshan**
2) **Chief Engineer(Project & Maintenance), AIR**
3) **Chief Engineer(Project & Maintenance), Doordarshan**

Chief Engineer(Resource management), AIR & Doordarshan, shall be responsible for the management of financial, budgetary, engineering manpower resources as mentioned below:

1) To act as the Head of the Administrative and Accounts Wing of the Zonal HQ
2) Budgetary control over projects plan/schemes of AIR & DD
3) Monitoring of the progress of the AIR & DD projects in the Zone
4) Co-ordination with the Central HQ, Govt and private agencies for execution of AIR & DD projects,
5) Implementation of e-Governance and IT related projects of AIR and Doordarshan in the Zone.
6) Cadre Control of sub-ordinate engineering staff of the zone
7) Procurement activities of goods and services in respect of transmitters, studios and satellite installations to be executed in the Zone for AIR and Doordarshan
8) Earning of revenue by marketing of land, building, mast and other technical infrastructure to private operators
9) To act as appellate authority for RTI matters in connection with activities related to resource management, material management, HRD of sub-ordinate staff, etc

Chief Engineer(Resource Management), AIR & DD, shall be assisted by the following Directors:

1) **Director(Engineering Personnel management), AIR& DD**
2) **Director(Budget & Co-ordination), AIR & DD**

3) **Director(Material Management), AIR & DD**
4) **Director(IT & e-Governance), AIR & DD**
5) **Director(Resource Marketing), AIR & DD**

Director(Engineering Personnel Management), AIR & DD, shall be responsible for the following matters:

1. Maintenance of category-wise incumbency of engineering sub-ordinate staff of the AIR & DD stations of the Zone
2. Maintenance of category-wise seniority list of sub-ordinate engineering staff of the Zone
3. Maintenance of choice of stations submitted by sub-ordinate engineering staff of the AIR & DD stations Zone
4. Issue of transfer lists in respect of so-ordinate engineering staff of the AIR & DD stations of the Zone
5. Examination for Recruitment of Engineering Assistants in the Zone
6. D.P.C. for promotion of sub-ordinate engineering staff of the Zone
7. Holding of Departmental Examination for promotion of subordinate engineering cadres of the Zone
8. Grievance handling mechanism in respect of transfer matters related to sub-ordinate engineering staff
9. RTI queries pertaining to engineering personnel management of subordinate engineering cadres of the Zone

Director(Human Resource Management), AIR & DD, shall be assisted by two Dy. Directors- one for handling the staff matters of AIR stations and the other for DD stations

Director(Co-ordination & Budget), AIR & Doordarshan, shall be responsible for the following matters:

1. Co-ordination with the Central HQ for budget provisions and other related works in respect of AIR & DD projects in the Zone

2. Collection and compilation of progress reports on monthly basis and preparation of quarterly and annual progress reports of AIR & DD projects in the Zone
3. Identification of bottlenecks in AIR & DD projects in the Zone and remedial action for removing the bottlenecks
4. Progress review meeting with CCW and officers of Installation, Material Management, Accounts and Administration Wing officers of the Zonal Project HQ in respect of AIR & DD projects in the Zone
5. Matters related to acquisition of sites/buildings for Air & DD projects and processing of lease/transfer deeds
6. Matters related to completion of projects and their commissioning and inauguration of AIR & DD projects
7. Matters relating to Standing Committees, Consultative Committees of Ministry of I&B in respect of AIR & DD projects of the Zone
8. Handling of Audit paras regarding plan projects of AIR & DD of the Zone
9. Handling of correspondence received from the Public/State Govts./VIPs/MPs etc. in relation to development of AIR & DD infrastructure in the Zone.
10. Preparation of briefs for Senior Officers in respect of AIR & DD projects of the Zone.
11. Staff Council matters
12. Court cases pertaining to AIR & DD stations
13. RTI queries pertaining to his domain of work

Director(Budget & Co-ordination), AIR & DD, shall be assisted by two Dy. Directors-one for AIR and the other for Doordarshan.

Director(Material Management), AIR & Doordarshan, shall be responsible for the following matters:

1. Planning for procurement activities of all goods & services for execution of AIR & DD projects in the Zone

2. Storage of procured materials and transportation of installation materials to Air & DD installation sites
3. Initiating release of NITs in newspapers, ITJ, website of AIR
4. Monitoring of submission of bids
5. Extension of tender opening dates, wherever required
6. Opening of bids
7. Initiating action for technical examination of bids
8. Opening of price bids after technical examination of bids
9. Commercial evaluation of bids
10. Formulation of purchase proposal, getting approval of competent authority and placement of purchase order
11. Post contract monitoring of contracts
12. Taking up warranty, guarantee issues with the concerned firms
13. To deal with RTI matters and court cases in connection with purchases of AIR & Doordarshan projects

Director(Material Management) , AIR & Doordarshan, shall be assisted by two Dy. Directors- one for material management for AIR projects and the other for material management for DD projects.

Director(IT & e-Governance), Air & Doordarshan, AIR, shall be responsible for the following matters:

1. Implementation of ERP system for monitoring of AIR & DD projects at the Zonal HQ
2. Implementation of e-Governance in AIR & DD stations of the Zone
3. Development of IT facilities for AIR & DD offices/ broadcast centers in the Zone
4. Development of Utility Software for AIR & DD offices/ broadcast centers in the Zone
5. Matter related to centralized database management in respect of AIR & DD projects at Zonal HQ.
6. Works related to AIR/ DD Internet Broadcast /Podcast in the Zone.

7. Monitoring and up keeping of networking equipments of server room, switch room and power supply system including generator supply back up in the Zonal HQ.
8. Networking of existing AIR/DD stations in the Zone and works related to VPN infrastructure plan project.
9. News-on-phone, Music-on-Demand Service, etc at AIR stations of the Zone.
10. RTI queries pertaining to his domain of work

Director(IT & e-Governance), Air & DD, shall be assisted by two Dy. Directors- one for AIR stations and the other for DD stations.

Director(Resource Marketing), AIR & DD, shall be responsible for the following matters:

1. Sharing/renting AIR & Doordarshan infrastructure such as land, building, tower, antenna and cable, etc of the Zone on license fee/rental basis to various Government, autonomous bodies and private organizations for optimum use of resources
2. To provide solutions to various Government, autonomous bodies and private organizations on turnkey basis for setting up of sound/ TV broadcast facilities in the Zone
3. To organize operation and maintenance of AIR/TV broadcast installations of autonomous bodies and private organizations in the Zone
4. To rent out AIR & DD studios for programme production/transmission facilities
5. To operate value added service through existing AIR & DD transmitters, e.g., data scrolling on LPT/HPT of Doordarshan, etc

Director (Resource Marketing), Air & DD, shall be assisted by two Dy. Directors- one for AIR resources and the other for DD resources.

Chief Engineer(Project & Maintenance), AIR, shall be responsible for the following matters:-

1. Planning and execution of installation works in connection with AIR projects of the Zone.
2. Trouble free operation and maintenance of AIR stations in the Zone
3. Technical issues related to implementation of AIR projects
4. Technical issues related to operation & maintenance of AIR stations
5. Inspection of AIR installations under execution
6. Maintenance inspection of AIR stations
7. Diversion of equipment from one station to another station in the Zone
8. Budget allocation under PRG
9. Disaster management in the Zone
10. To act as appellate authority in respect of RTI queries pertaining to zonal project and maintenance activities

Chief Engineer(Project & Maintenance), AIR , shall be assisted by the following Directors:

1. **Director(Transmitter Installation), AIR**
2. **Director(Studio Installation), AIR**
3. **Director(Telecom Installation), AIR**
4. **Director(Transmitter maintenance), AIR**
5. **Director(Studio Maintenance), AIR**
6. **Director(Telecom Maintenance), AIR**

Director(Transmitter Installation), AIR, shall be responsible for the following matters:

1. Planning of MW/SW/FM transmitter projects
2. Tackling all technical issues regarding the MW/SW/FM installation works
3. Issue of Drawings, technical documents, etc for execution of MW/SW/FM projects
4. Deputing installation staff to MW/SW/FM installation site

5. Framing of specifications of items to be procured by the Zonal Project HQ, for execution of MW/SW/FM projects
6. Liaison with the CCW, Govt and private agencies for execution of MW/SW/FM projects
7. Execution of MW/SW/FM Transmitter works
8. Inspection of MW/SW/FM installation projects under progress
9. Testing and commissioning of MW/SW/FM projects
10. RTI queries pertaining to his domain of work

Director (Transmitter Installation), AIR, shall be assisted by two Dy. Directors- one to supervise the installation works at various MW/SW installation sites and the other for FM installation sites.

Director(Studio Installation), AIR , shall be responsible for the following matters:

1. Planning & execution of Studio projects, office accomodation and staff quarters
2. Tackling all technical issues regarding the Studio installation works
3. Issue of Drawings, technical documents, etc for execution of Studio projects
4. Deputing installation staff to Studio installation sites
5. Framing of specifications of items to be procured by the Zonal Project HQ, for execution of Studio projects
6. Liaison with the CCW, Govt and private agencies for execution of Studio projects
7. Execution of works relating to Studio installation
8. Inspection of studios projects under progress
9. Testing and commissioning of Studios
10. RTI queries pertaining to his domain of work

Director (Studio Installation), AIR shall be assisted by two Dy. Directors who shall supervise the installation works at various Studio sites in the Zone.

Director(Telecom Installation), AIR, shall be responsible for the following matters:

1) Planning & execution of telecom projects

2) Planning & execution of all telecom projects, such as installation of Captive Earth Stations, RN Receive Terminals, Digital lines, Microwave links, DSNG, INMARSAT terminals, etc
3) Tackling all technical issues regarding the Telecom installation works
4) Issue of Drawings, technical documents, etc for execution of Telecom projects
5) Deputing installation staff to Telecom installation sites
6) Framing of specifications of items to be procured by the Zonal Project HQ, for execution of Telecom projects
7) Liaison with the CCW, Govt and private agencies for execution of Telecom projects
8) Execution of works relating to Telecom installation
9) Inspection of studios projects under progress
10) Testing and commissioning of Telecom projects
11) RTI queries pertaining to his domain of work

Director (Telecom Installation), AIR, shall be assisted by two Dy. Directors who shall supervise the installation works at various Telecom sites in the Zone

Director(Transmitter Maintenance), AIR, shall be responsible for the following matters:

1. Study of feedback received from the AIR stations about the working of MW/SW/FM transmitters, A/C Plants & Diesel Generators installed in Transmitter, etc
2. Analysis of breakdown of transmissions in the AIR network
3. Evolution of policy for eliminating interruption of services in AIR Transmitters
4. Computation of requirements for procurement of maintenance spares such and transmitting tubes
5. Maintenance inspection of AIR Transmitters of the Zone
6. Field Strength measurements of AIR Transmitters of the Zone
7. Approval for procurement of critical spares for AIR Transmitters of the Zone
8. Approval of civil & electrical works for AIR Transmitters of the Zone

9. Maintenance support in case of prolonged breakdown of the AIR Transmitters of the Zone
10. RTI queries pertaining to his domain of work

Director(Transmitter maintenance), AIR, shall be supported by two Dy. Directors- one for the MW/SW Transmitter operation & maintenance, the other for FM transmitter operation & maintenance.

Director(Studio Maintenance), AIR, shall be responsible for the following matters:

1. Study of feedback received from the AIR stations about the working of studios, A/C Plants & Diesel Generators installed in the studios, etc
2. Analysis of breakdown of studio transmissions in the AIR network
3. Evolution of policy for eliminating interruption of services in AIR studios
4. Hardware & software maintenance support for studio and news room automation system, etc
5. Planning and support for important O.B. coverage
6. Issues connected with civil/electrical maintenance of staff quarters and office accommodation of AIR stations` in the Zone
7. Maintenance inspection of AIR studios
8. Approval for procurement of critical spares for AIR studios
9. Approval of civil & electrical works for AIR studios
10. Maintenance support in case of prolonged breakdown of the AIR studios
11. RTI queries pertaining to his domain of work

Director(Studio Maintenance), AIR, shall be supported by two Dy. Directors- for supervising the studio maintenance related works in the Zone.

Director(Telecom Link maintenance),AIR, shall be responsible for the following matters:

1. Study of feedback received from the AIR stations about the working of Captive Earth Stations, microwave & FM studio-transmitter links, ISDN lines, codecs, INMARSAT terminals, DSNG & mobile DSNG, RN receive terminals, etc
2. Analysis of breakdown of telecom facilities in the AIR network
3. Evolution of policy for eliminating interruption of services in AIR telecom links
4. Computation of requirements for procurement of maintenance spares for telecom links.
5. Planning and support for important O.B. coverage by DSNG, mobile DSNG, INMARSAT terminals, etc
6. Maintenance inspection of Telecom links
7. Procurement of critical spares for AIR telecom links.
8. Maintenance support in case of prolonged breakdown of the AIR telecom links
9. RTI queries pertaining to his domain of work

Director(Telecom Link Maintenance), AIR, shall be supported by two Dy. Directors- one for supervising the operation and maintenance of the terrestrial links and the other for satellite links.

Chief Engineer(Project & Maintenance), Doordarshan, shall be responsible for the following matters:-

1. Planning and execution of installation works in connection with DD projects of the Zone.
2. Trouble free operation and maintenance of DD stations in the Zone
3. Technical issues related to implementation of DD projects
4. Technical issues related to operation & maintenance of DD stations
5. Inspection of DD installations under execution
6. Maintenance inspection of DD stations
7. Diversion of equipment from one station to another station in the Zone
8. Budget allocation under PRG
9. Disaster management in the Zone

10. To act as appellate authority in respect of RTI queries pertaining to project and maintenance activities of the Zone

Chief Engineer(Project & Maintenance), Doordarshan , shall be assisted by the following Directors:

1. **Director(Transmitter Installation), Doordarshan**
2. **Director(Studio Installation), Doordarshan**
3. **Director(Telecom Installation), Doordarshan**
4. **Director(Transmitter maintenance), Doordarshan**
5. **Director(Studio Maintenance), Doordarshan**
6. **Director(Telecom Link Maintenance), Doordarshan**

Director(Transmitter Installation), Doordarshan, shall be responsible for the following matters:-

1. Planning & execution of DD transmitter projects
2. Tackling all technical issues regarding the DD Transmitter installation works
3. Issue of Drawings, technical documents, etc for execution of DD Transmitter projects
4. Deputing installation staff to DD Transmitter installation site
5. Framing of specifications of items to be procured by the Zonal Project HQ, for execution of DD Transmitter projects
6. Liaison with the CCW, Govt and private agencies for execution of DD Transmitter projects
7. Inspection of DD Transmitter installation projects under progress
8. Testing and commissioning of DD Transmitter projects
9. RTI queries pertaining to his domain of work

Director(Transmitter Installation), Doordarshan, shall be assisted by two Dy. Directors who shall supervise the installation works at various DD Transmitter installation sites-one for HPT installation and the other for LPT installations

Director(Studio Installation), Doordarshan, shall be responsible for the following matters:-

1. Planning & execution of Doordarshan Studio projects, office accommodation and staff quarters
2. Tackling all technical issues regarding the Studio installation workshop Doordarshan
3. Issue of Drawings, technical documents, etc for execution of DD Studio projects
4. Deputing installation staff to DD Studio installation sites
5. Framing of specifications of items to be procured by the Zonal Project HQ, for execution of DD Studio projects
6. Liaison with the CCW, Govt and private agencies for execution of DD Studio projects of Doordarshan
7. Execution of works relating to Studio installations of Doordarshan
8. Inspection of studios projects of Doordarshan under progress
9. Testing and commissioning of DD Studios projects
10. RTI queries pertaining to his domain of work

Director(Studio Installation), Doordarshan, shall be assisted by two Dy. Directors who shall supervise the installation works at various Studio sites in the Zone and the total work-load shall be divided between the two Dy. Directors.

Director(Satellite-Installation), Doordarshan, shall be responsible for the following matters:

1. Planning & execution of all satellite related installations, such as installation of Earth Stations, replacement of Earth station Compression Equipments, VSAT terminals, DSNG units, DVB S-2 based IRDs, replacement of Uplink PDAs and accessories, upgradation of Carrier Monitoring Station at Todapur, remote switching facilities of VLPTs, etc
2. Tackling all technical issues regarding the satellite related installation works

3. Issue of Drawings, technical documents, etc for execution of Satellite related projects
4. Deputing installation staff to satellite related installation sites
5. Framing of specifications of items to be procured by the Zonal Project HQ, for execution of Satellite related projects
6. Liaison with the CCW, Govt and private agencies for execution of Satellite related projects
7. Execution of works relating to Satellite links
8. Inspection of satellite related projects under progress
9. Testing and commissioning of Satellite related projects
10. RTI queries pertaining to his domain of work

Director(Satellite-Installation), Doordarshan, shall be assisted by two Dy. Directors and the total work-load shall be divided between the two Dy. Directors.

Director(Transmitter Maintenance), Doordarshan , shall be responsible for the following matters:

1) Study of feedback received from the DD stations about the working of HPT/DMC/LPT/VLPT of DD , A/C Plants & Diesel Generators installed in Transmitters, etc
2) Analysis of breakdown of transmitters in the DD network of the Zone
3) Evolution of policy for eliminating interruption of services in DD Transmitters
4) Computation of requirements for procurement of maintenance spares, solid state PA modules, etc for DD transmitters
5) Maintenance inspection of DD transmitting stations
6) Field Strength measurements of DD transmitting stations
7) Approval for procurement of critical spares for DD transmitting stations
8) Approval of civil & electrical works for DD transmitters
9) Maintenance support in case of prolonged breakdown of the DD transmitters
10) RTI queries pertaining to his domain of work

Director(Transmitter Maintenance), Doordarshan, shall be supported by two Dy. Directors- one for the HPT - operation & maintenance, the second for the operation & maintenance of LPT/VLPT, etc.

Director(Studio Maintenance), Doordarshan, shall be responsible for the following matters:

1) Study of feedback received from the DD stations about the working of studios, A/C Plants & Diesel Generators installed in studios, etc
2) Analysis of breakdown of studio transmissions in the DD network of the Zone
3) Evolution of policy for eliminating interruption of services in DD studios
4) Computation of requirements for procurement of maintenance spares for studios
5) Planning and support for important O.B. coverage
6) Maintenance inspection of DD studios
7) Field Strength measurements of DD studios
8) Approval for procurement of critical spares for DD studios
9) Approval of civil & electrical works for DD studios
10) Maintenance support in case of prolonged breakdown of the DD studios
11) RTI queries pertaining to his domain of work

Director(Studio Maintenance), Doordarshan, shall be supported by two Dy. Directors- sharing the work-load related to operation & maintenance of studios of the entire zone.

Director(Satellite - Maintenance), Doordarshan, shall be responsible for the following matters:

1) Study of feedback received from the DD stations about the working of Earth Stations, microwave & optical fibre links, DSNG & mobile DSNG, RN receive terminals, etc

2) Analysis of breakdown of satellite links being used in the DD network of the Zone
3) Evolution of policy for eliminating interruption of services in DD satellite links
4) Computation of requirements for procurement of maintenance spares for satellite links
5) Planning and support for important O.B. coverage
6) Maintenance inspection of DD satellite links
7) Field Strength measurements of DD satellite links
8) Approval for procurement of critical spares for DD satellite links
9) Maintenance support in case of prolonged breakdown of the DD satellite links
10) RTI queries pertaining to his domain of work

Director(Satellite- Maintenance), Doordarshan, shall be supported by two Dy. Directors- equally sharing the entire work-load related to operation and maintenance of satellite links of the zone.

Area Chief Engineers

There shall be twenty two Area Chief Engineers, spread in the five Zones as shown in the map of India. Their headquarters shall be located as under:

North Zone: Delhi, Jalandhar, Shimla, Lucnow, Srinagar, Jaipur, Dehradun

South Zone : Chennai, Hyderabad, Thiruwanathapuram, Bangalore

East Zone: Kolkata, Patna, Ranchi, Bhubaneswar,

West Zone: Mumbai, Bhopal, Raipur, Ahmedabad, Panaji,

North East Zone: Guwahati & Itanagar

AREA CHIEF ENGINEERS

1. Srinagar
2. Jalandhar
3. Shimla
4. Dehradun
5. Lucknow
6. Delhi
7. Jaipur
8. Ahmedabad
9. Bhopal
10. Raipur
11. Patna
12. Ranchi
13. Kolkata
14. Guwahati
15. Itanagar
16. Mumbai
17. Panaji
18. Bhubaneswar
19. Hyderabad
20. Chennai
21. Trivandrum
22. Bangalore

Area Chief Engineers shall be in-charge of all operational & maintenance related matters of AIR & DD stations of the designated areas at twenty two locations. The Area Chief Engineers shall effectively monitor and inspect the AIR and Doordarshan stations for ensuring optimum performance of transmitters, studios, satellite and terrestrial links, OB coverage, etc in their zones. They shall formulate maintenance strategies to minimize the breakdowns and tackle the emergencies.

The Area Chief Engineers shall be assisted by two Directors:

1. **Area Director(AIR)**
2. **Area Director(Doordarshan)**

Area Director(AIR) shall be responsible for the following matters:

1. Study of feedback received from the AIR stations about the working of MW/SW/FM transmitters, studios, Captive Earth Stations, microwave & FM

studio-transmitter links, ISDN lines, codecs, INMARSAT terminals, DSNG & mobile DSNG, RN receive terminals, A/C Plants, Diesel Generators, etc

2. Analysis of breakdown of transmissions in the AIR network
3. Evolution of strategy for eliminating interruption of services in AIR Transmitters
4. Computation of requirements for procurement of maintenance spares such and transmitting tubes for AIR stations
5. Planning and support for important radio O.B. coverage
6. Maintenance inspection of AIR stations
7. Field Strength measurements of AIR stations
8. Approval for procurement of critical spares for AIR stations
9. Approval of civil & electrical works for AIR stations
10. Maintenance support in case of prolonged breakdown of the AIR stations
11. Staff Council matters
12. Court cases pertaining to AIR stations

Area Director(AIR) shall be supported two Dy. Directors and four Broadcast Executives at each Area HQ.

Area Director(Doordarshan) shall be responsible for the following matters:

1. Study of feedback received from the DD stations about the working of HPT/DMC/LPT/VLPT of DD, studios, Earth Stations, microwave & optical fibre links, DSNG & mobile DSNG, RN receive terminals, A/C Plants, Diesel Generators, etc
2. Analysis of breakdown of transmissions in the DD network of the Area
3. Evolution of strategy for eliminating interruption of services in DD Transmitters
4. Computation of requirements for procurement of maintenance spares and transmitting tubes for DD stations
5. Planning and support for important TV O.B. coverage
6. Maintenance inspection of DD stations
7. Field Strength measurements of DD stations

8. Approval for procurement of critical spares for DD stations
9. Approval of civil & electrical works for DD stations
10. Maintenance support in case of prolonged breakdown of the DD stations
11. Staff Council matters
12. Court cases pertaining to DD stations

Area Director(Doordarshan) shall be supported by two Dy. Directors and four Broadcast Executives at the Area HQ.

Super Power Transmitters & Big Transmitter Complexes

Transmitters with emissions of 1000 Kilowatt and above and big transmitter complexes having a number of medium/Shortwave High Power Transmitters ranging from 100 Kilowatt to 500 Kilowatt, are very big installations. The Super Power/ High Power Transmitter Complexes' operation and maintenance is a very complex. The Transmitters have to be properly aligned for correct frequency and power as per international regulations. The parameters relating to noise, frequency response and distortion have to be constantly monitored and kept within permissible limits for good reception. The engineering head of such installations must have sufficient knowledge, expertise, experience and authority to operate and maintain such installations.

The Transmitters get 11 KV or 33 KV supply from the Electricity Board and sub-station equipments like H.T. O.C.B., L.T. Board, etc are installed and maintained at these transmitting centres. In addition to the Power supply equipments, big capacity A.C. Plants and Diesel Generators are installed and maintained at the transmitting station.

The Super Power Transmitter may have a complex system of multiple masts of approximately 100 meter to 180 meter height along with an aerial field of 500 to 900 acres. In case of High Power Short Wave Transmitters, a number of additional devices such as antenna selection switches, motorized plungers, selector switches and antenna curtains, for re-orienting the short wave beams, are also installed at the station. In nutshell, the engineering head of the Super

Power Transmitter/ Group of High Power Transmitter, must have sufficient theoretical background and experience to tackle very complicated tasks and to train and prepare the junior staff for operation and maintenance of the transmitting stations. AIR broadcasts are not like other public utility services such as water supply, electricity, telephone, gas supply, etc. There are very strict standards set for tackling breakdowns . Any interruption for more than 15 minutes is considered to be a major breakdown. If a breakdown occurs it is absolutely essential that guidance and supervision of senior officers are readily available for solving the breakdown. It is imperative that engineering officers having proper supervisory capacity and administrative and financial delegation, are posted at the Transmitter. For all the above factors, it is proposed that a Super Power Transmitter/ Group of High Power Transmitters located at Chinsurah, Rajkot, Nagpur, Yehlanka(Bangalore), Panaji, Khampur, & Kingsway, Aligarh, Malad, Avadi and Chandi & Amtolla(Kolkata), may be headed by a Chief Engineer.

Metro studios of AIR & Doordrashan

The working of the AIR & DD studio centres at four Metro cities of Delhi, Kolkata, Chennai & Mumbai is complex. The studio centres have got the following facilities:

1. Fully air conditioned studios equipped with latest digital electronic machines.
2. Transmission set-up for home services, external services & news services.
3. Coverage of national & international O.B.s
4. Coverage of national & international games events such as, Olympics, Commonwealth Games, ASIAD, etc
5. VVIP coverage
6. Transmission Studios
7. Recording Studios
8. Dubbing Rooms
9. Electronic (Paperless) News Room
10. Centralized Digital Audio Storage & other State-of-Art equipment to provide tapeless environment
11. Elaborate phone-in and voice cast facilities
12. Air conditioning plants
13. Silent generators

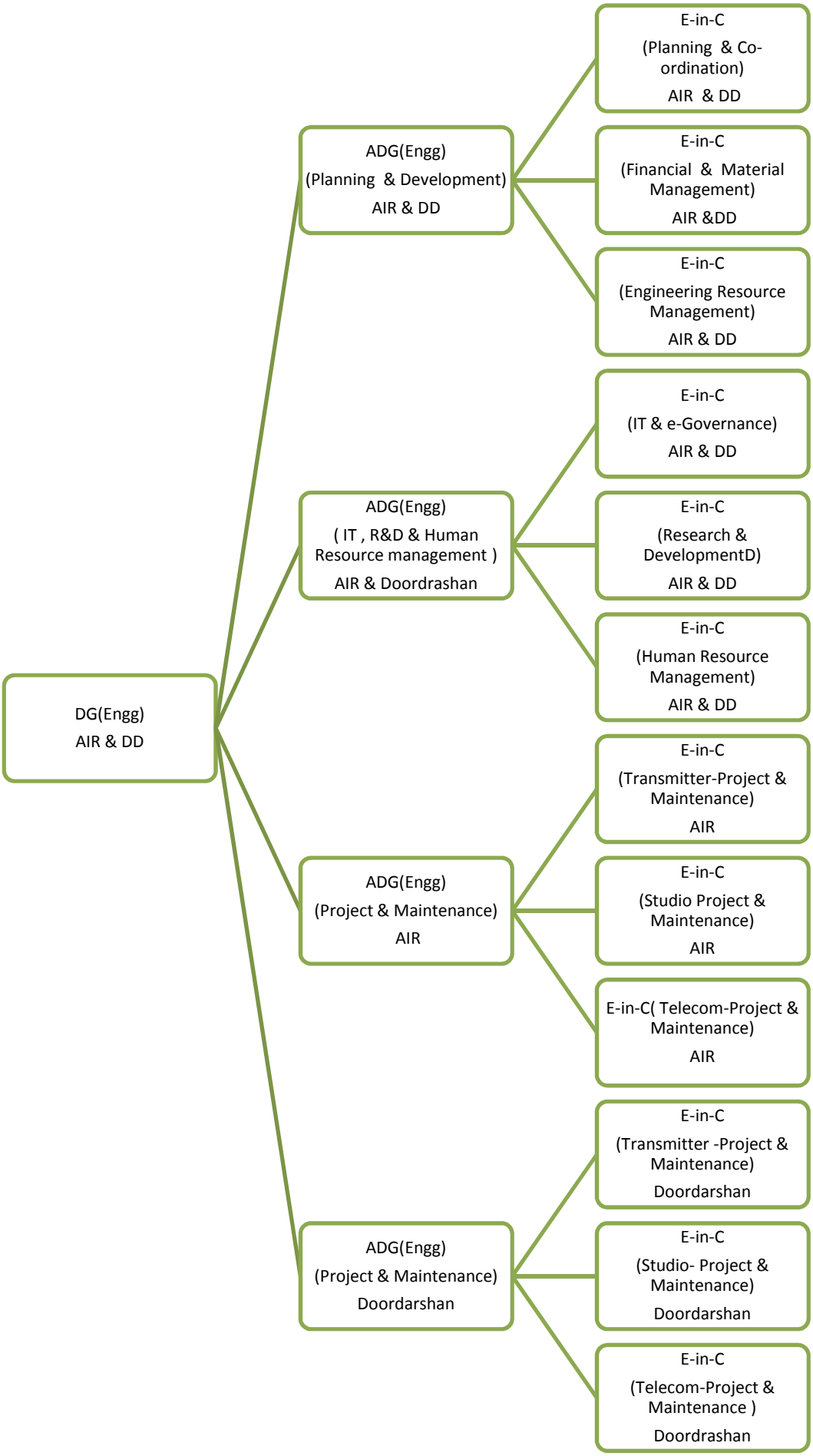
In view of the very complex nature of jobs being performed at the above mentioned studio centres, it is proposed that the DD & AIR Studio Centres at Delhi, Chennai, Kolkata and Mumbai may be headed by a Chief Engineer in respect of the engineering operations.

The Committee recommends that 50 DDK centres having the facilities of HPTs as well as Programme Production Centre, which are currently not headed by a Superintending Engineer, should be headed by a Superintending Engineer. Similarly, the Committee recommends that 71 AIR stations having 10/20/50/100 KW Transmitters and Programme Production Centres and which are not headed by Superintending Engineer, should be headed by a Superintending Engineer. About 40 Station Engineers after the up-gradation of the headship at such AIR stations shall be deployed and utilized in the Zonal E-in-C's offices at Guwahati, Delhi, Kolkata, Mumbai and Chennai.

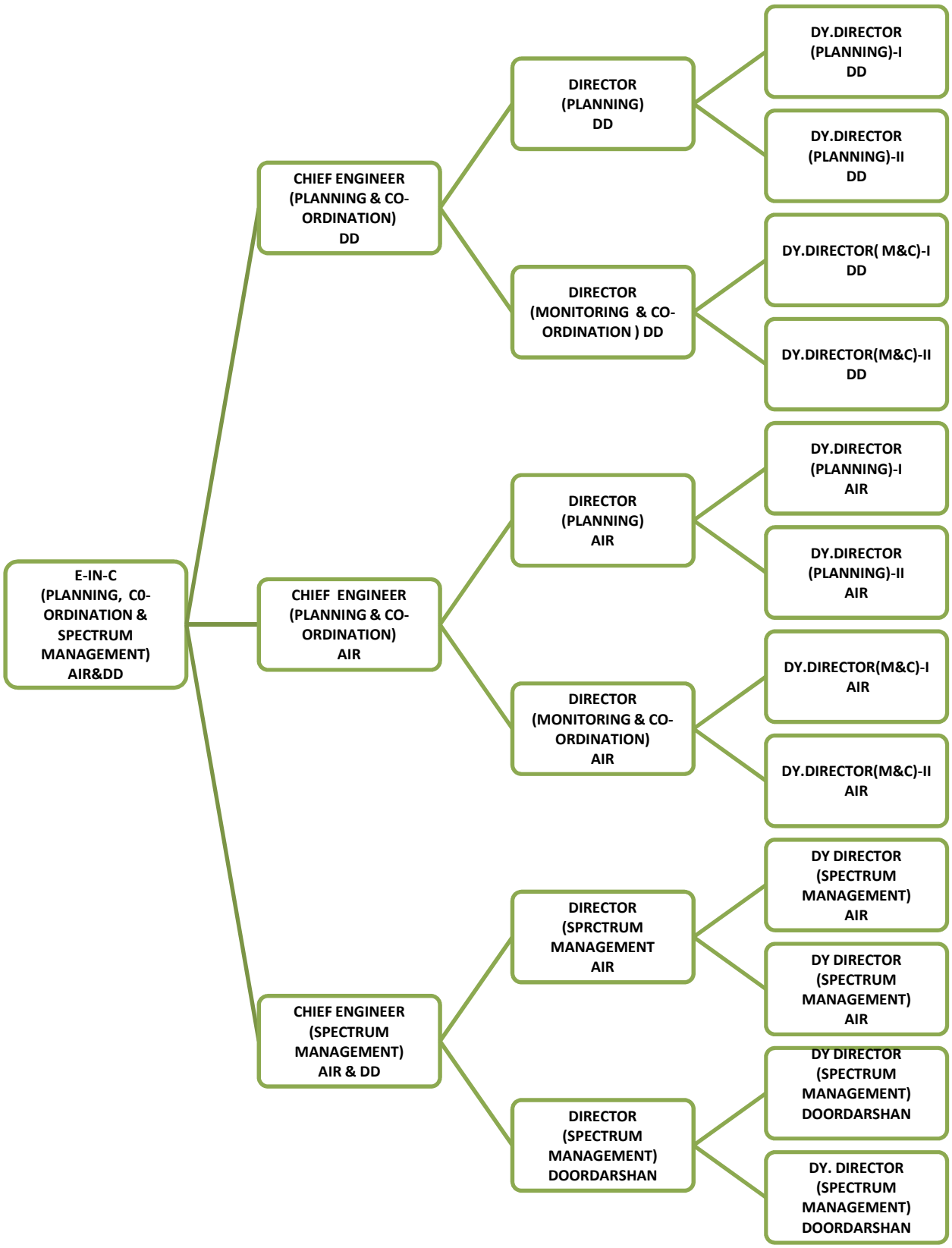
The hierarchal trees for DG, ADG, E-in-C have been shown in the next few pages. There are two main philosophies behind the proposed hierarchies:

1. The planning, budgeting, estimating, human resource management, engineering resource management, IT, resource marketing have been merged at the higher levels to achieve complete synergy between the two organizations viz., AIR and Doordarshan.
2. The project and maintenance activities have been merged at the central and zonal HQ level to achieve complete synery between the people who ninstall and commission new projects and the people who have to operate and maintain these installations.

Core Group of DG(Engg), ADG(Engg) & E-in-Cs at the Central HQ

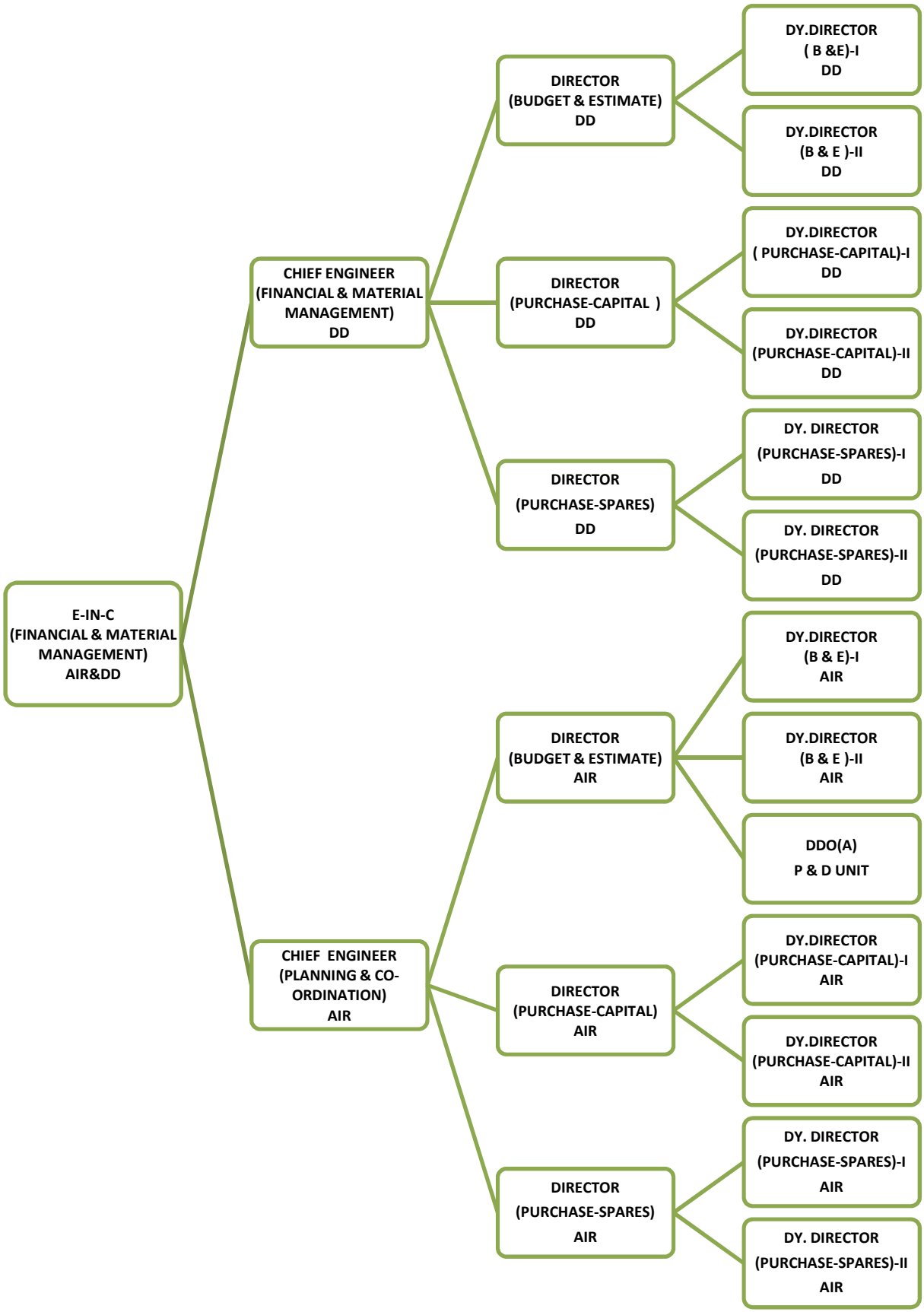


Core Group of Planning , Co-ordination & Spectrum Management of AIR & Doordarshan at the Central HQ



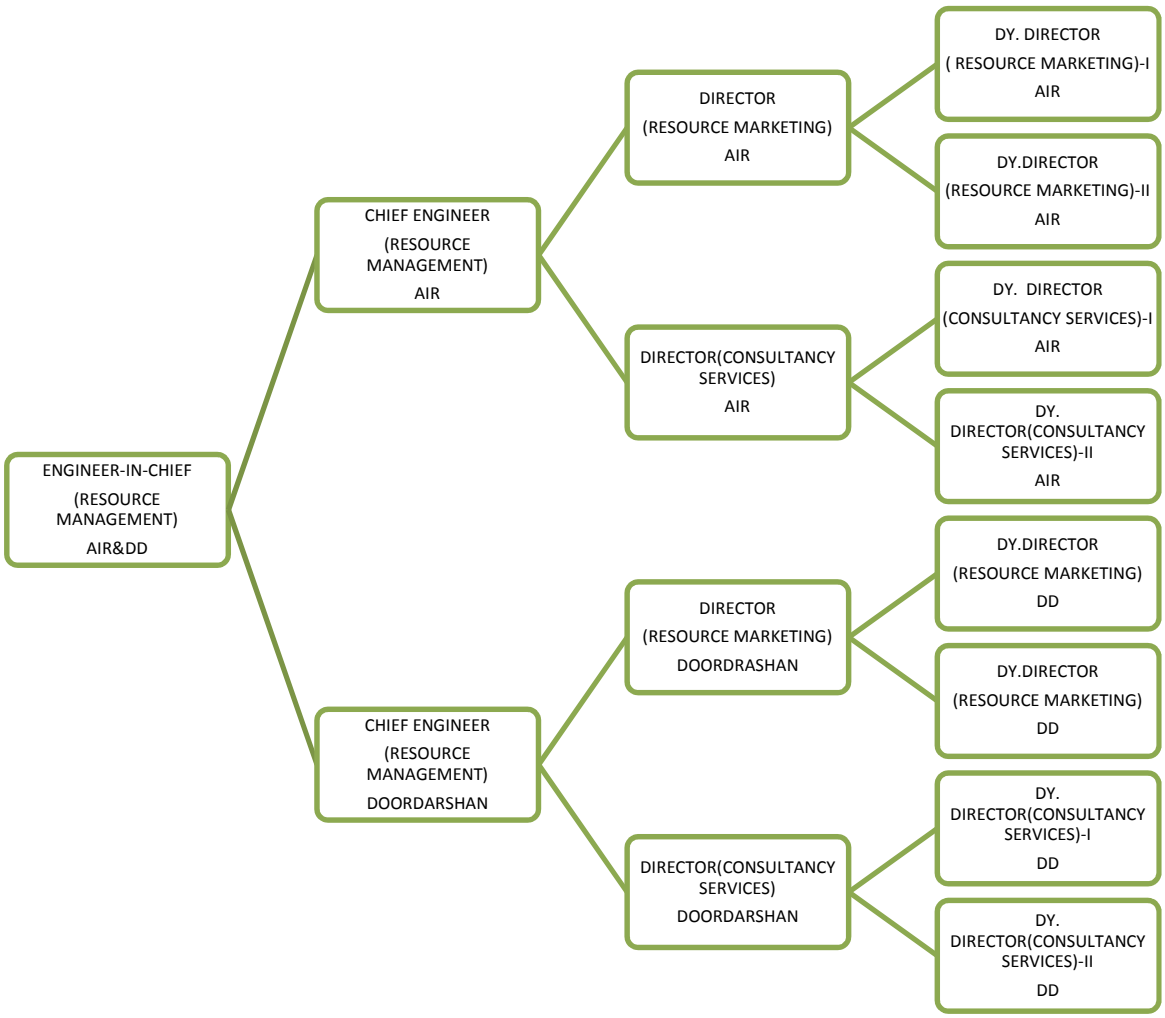
Core Group of Financial Management & Material Management of

AIR & Doordarshan at the Central HQ

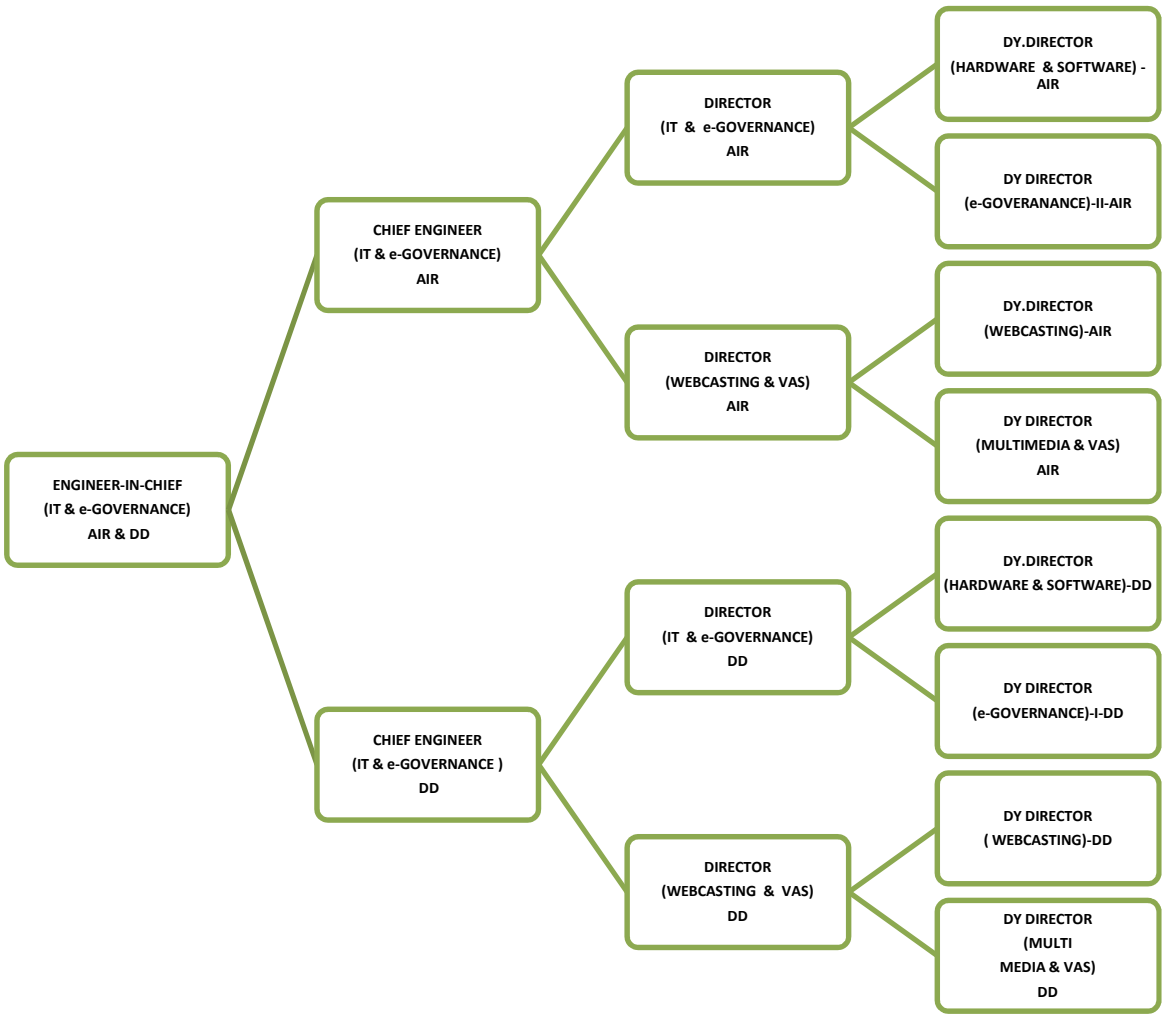


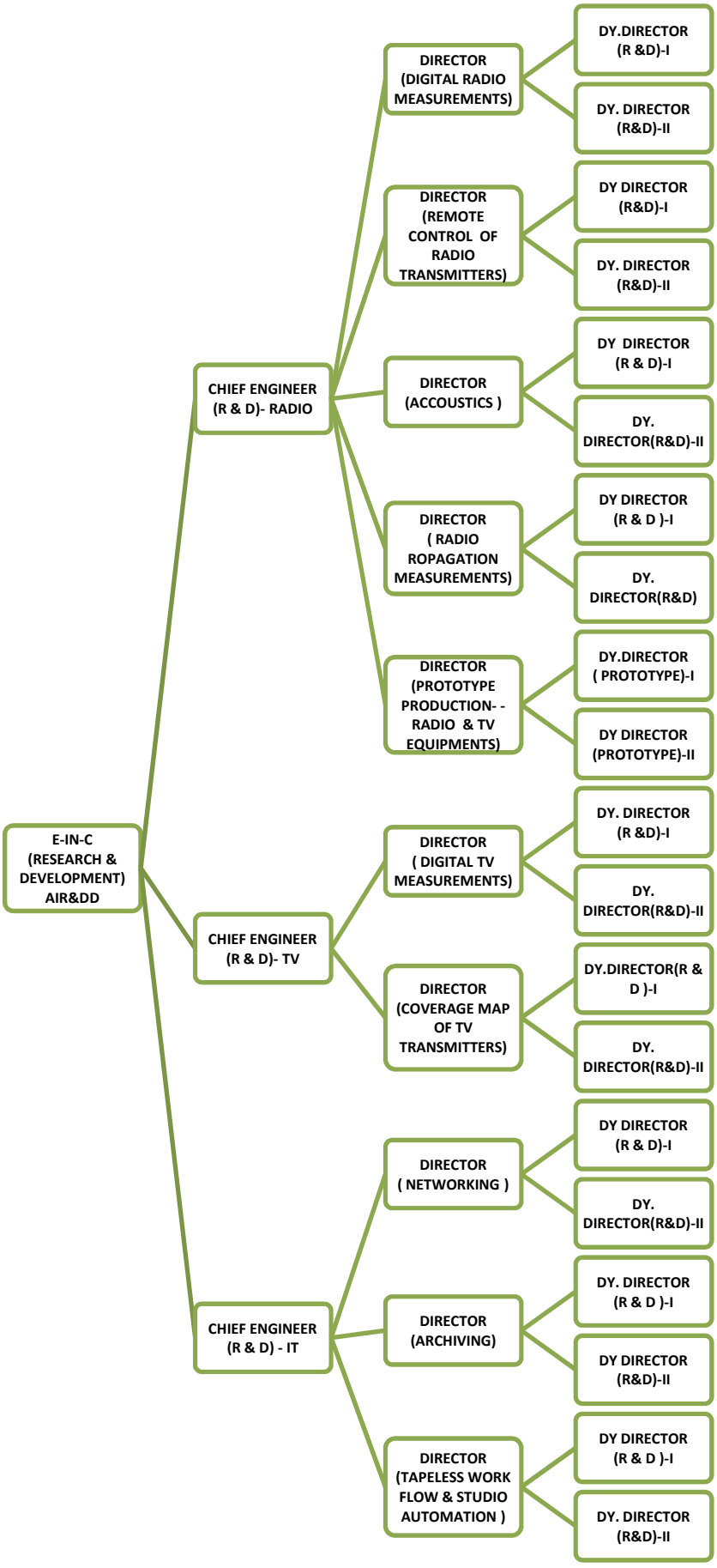
Core Group of Resource marketing & Consultancy Services of

AIR & Doordarshan at the Central HQ

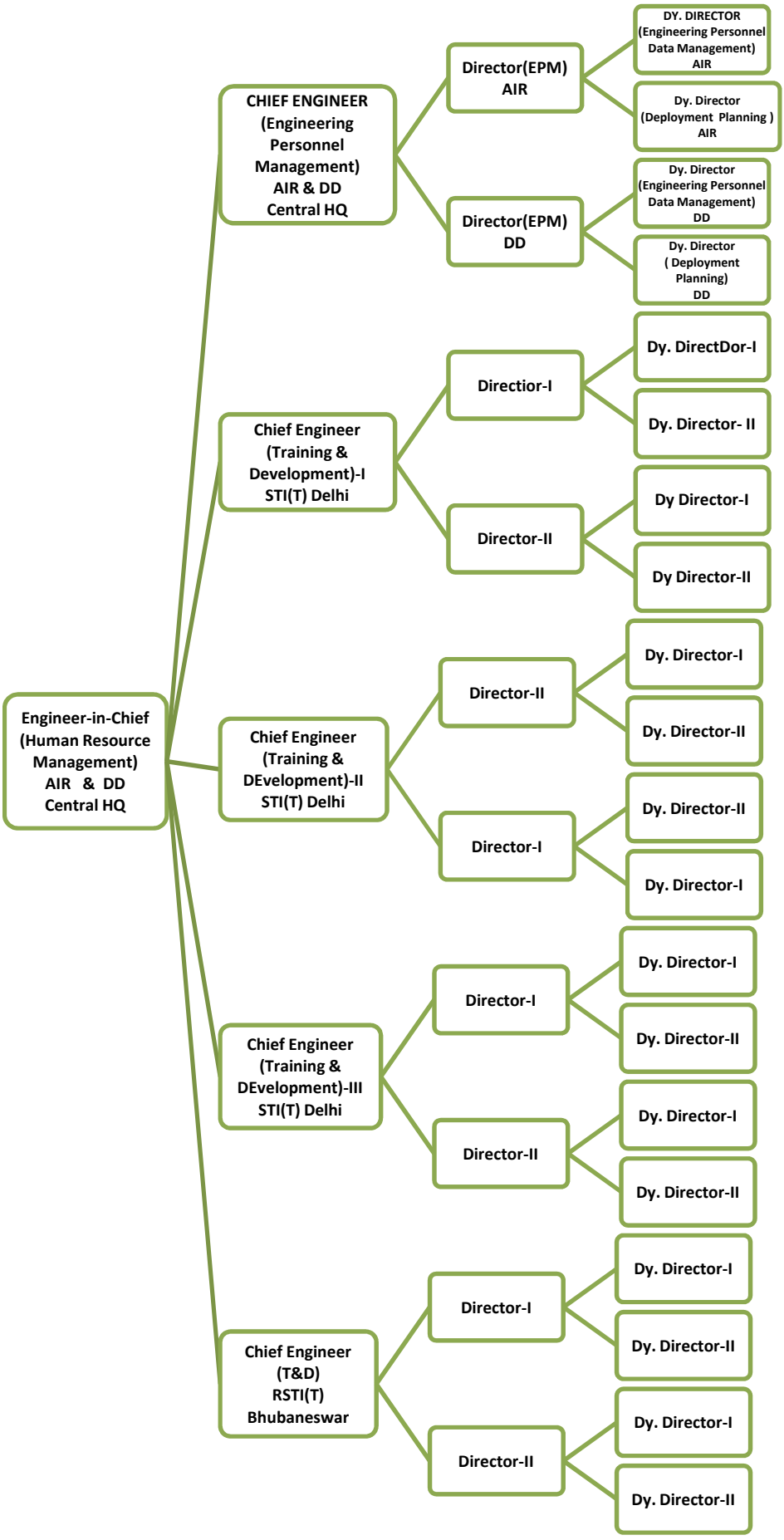


Core Group of IT & e-Governance of AIR & Doordarshan at the Central HQ



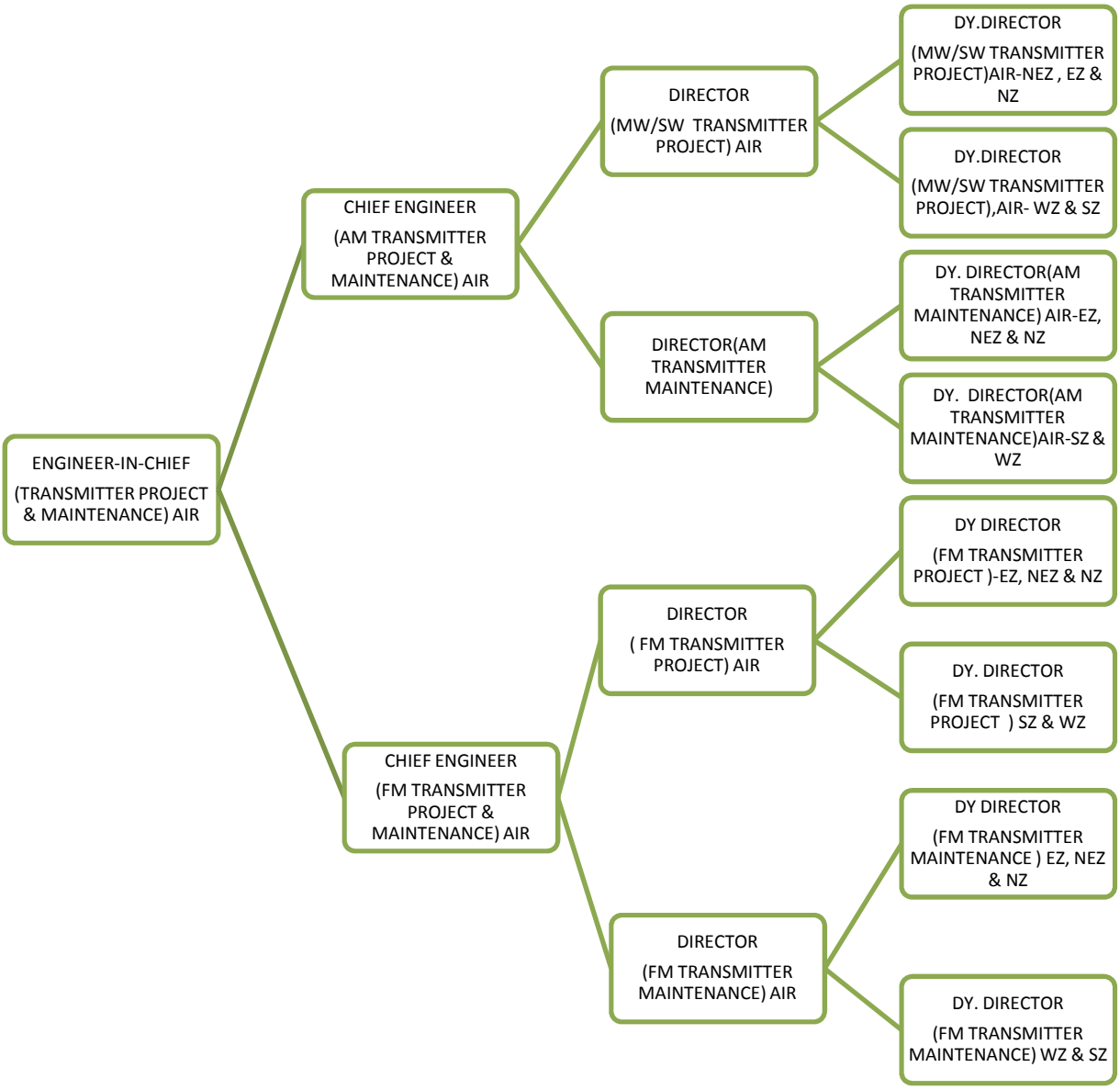

E-IN-C (RESEARCH & DEVELOPMENT) AIR&DD
CHIEF ENGINEER (R & D)- RADIO
DIRECTOR (DIGITAL RADIO MEASUREMENTS)
DY.DIRECTOR (R &D)-I
DY. DIRECTOR (R&D)-II
DIRECTOR (REMOTE CONTROL OF RADIO TRANSMITTERS)
DY DIRECTOR (R&D)-I
DY. DIRECTOR (R&D)-II
DIRECTOR (ACCOUSTICS)
DY DIRECTOR (R & D)-I
DY. DIRECTOR(R&D)-II
DIRECTOR (RADIO ROPAGATION MEASUREMENTS)
DY DIRECTOR (R & D)-I
DY. DIRECTOR(R&D)
DIRECTOR (PROTOTYPE PRODUCTION- - RADIO & TV EQUIPMENTS)
DY.DIRECTOR (PROTOTYPE)-I
DY DIRECTOR (PROTOTYPE)-II
CHIEF ENGINEER (R & D)- TV
DIRECTOR (DIGITAL TV MEASUREMENTS)
DY. DIRECTOR (R &D)-I
DY. DIRECTOR(R&D)-II
DIRECTOR (COVERAGE MAP OF TV TRANSMITTERS)
DY.DIRECTOR(R & D)-I
DY. DIRECTOR(R&D)-II
CHIEF ENGINEER (R & D) - IT
DIRECTOR (NETWORKING)
DY DIRECTOR (R & D)-I
DY. DIRECTOR(R&D)-II
DIRECTOR (ARCHIVING)
DY. DIRECTOR (R & D)-I
DY DIRECTOR (R&D)-II
DIRECTOR (TAPELESS WORK FLOW & STUDIO AUTOMATION)
DY DIRECTOR (R & D)-I
DY. DIRECTOR (R&D)-II

Core Group of Engineering Human Resource Management & Training of AIR & Doordarshan Engineering Personnel

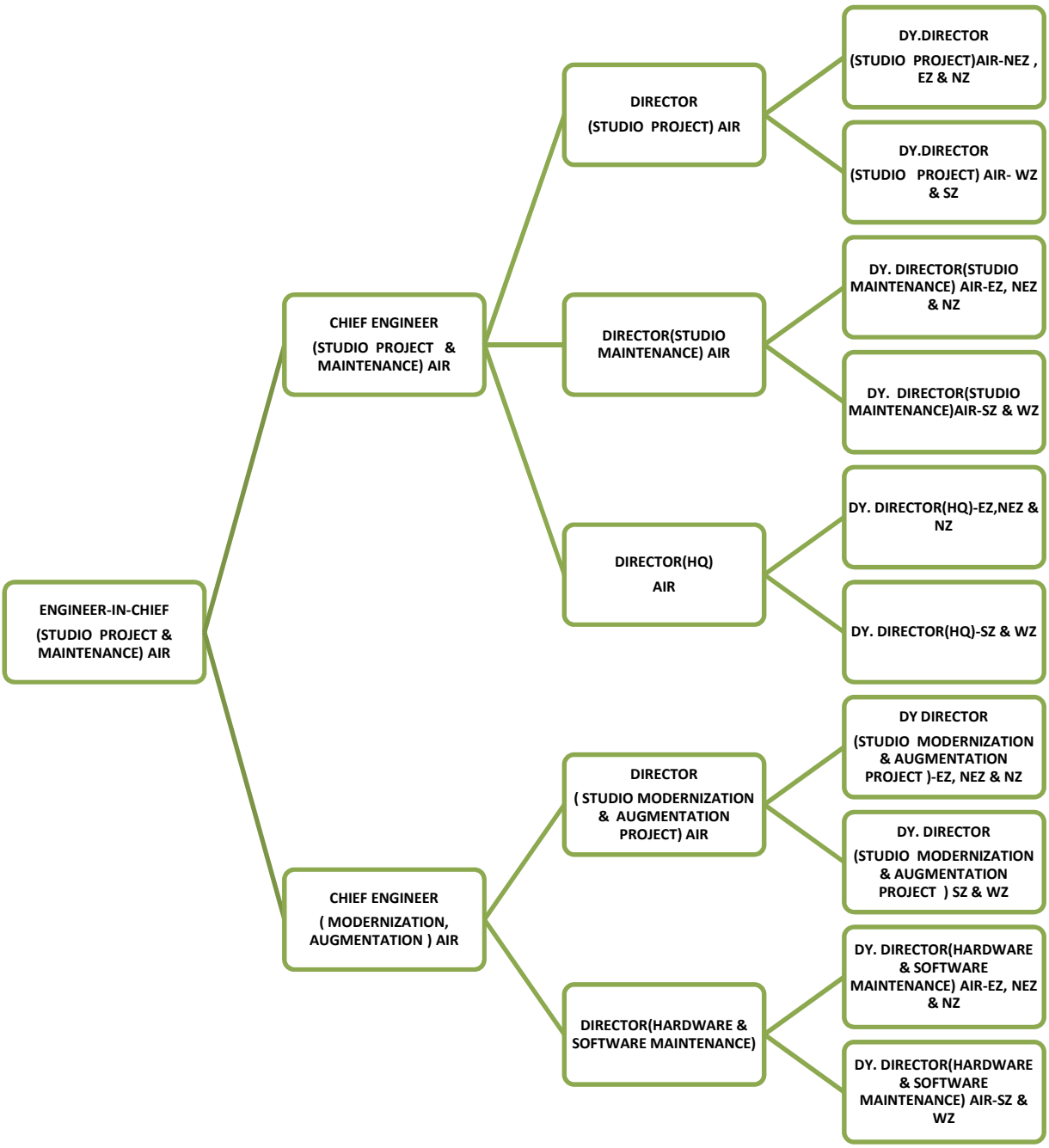


Core Group of Project Implementation & Operation & Maintenance of

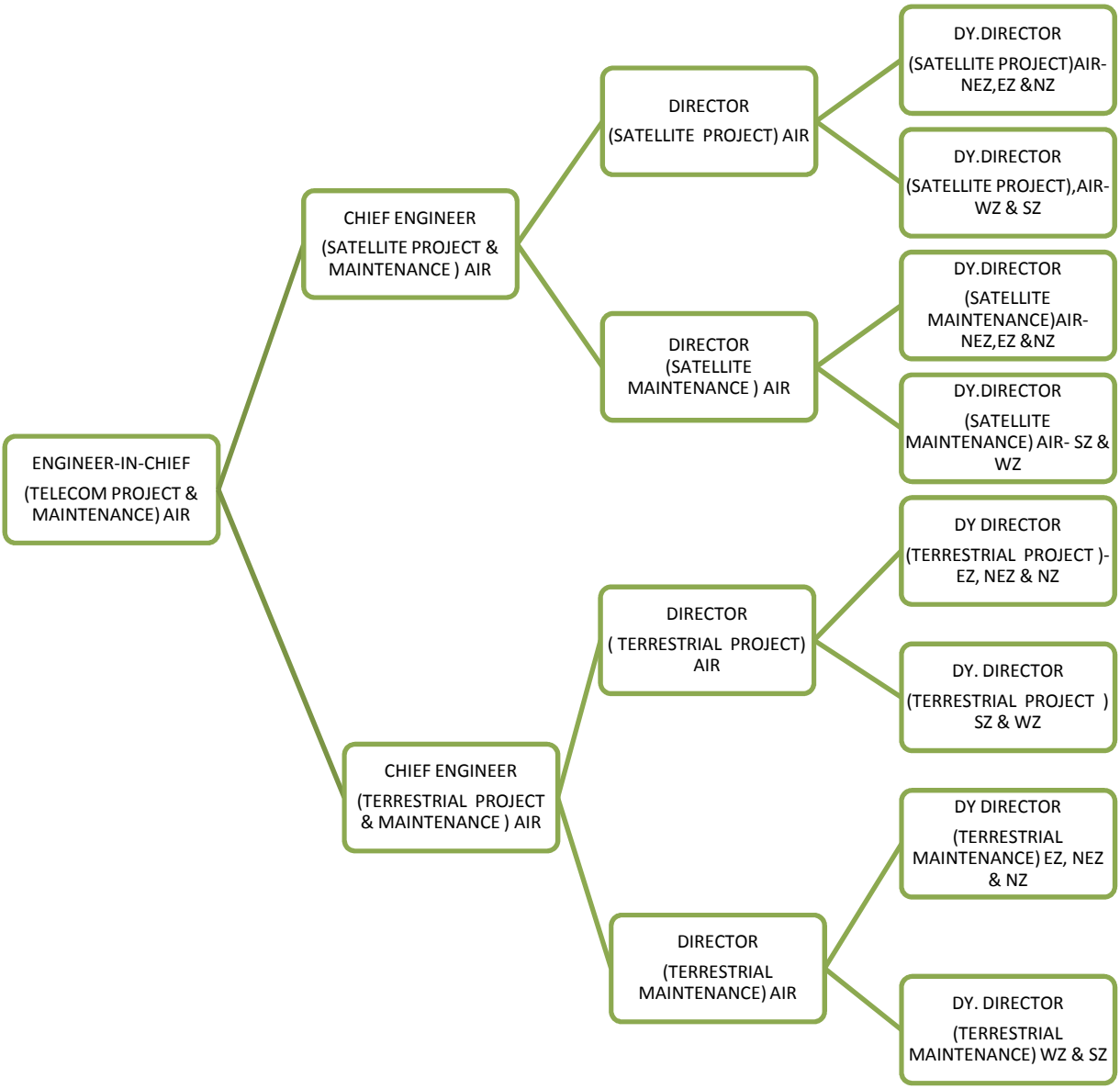
All India Radio Transmitter installations at the Central HQ



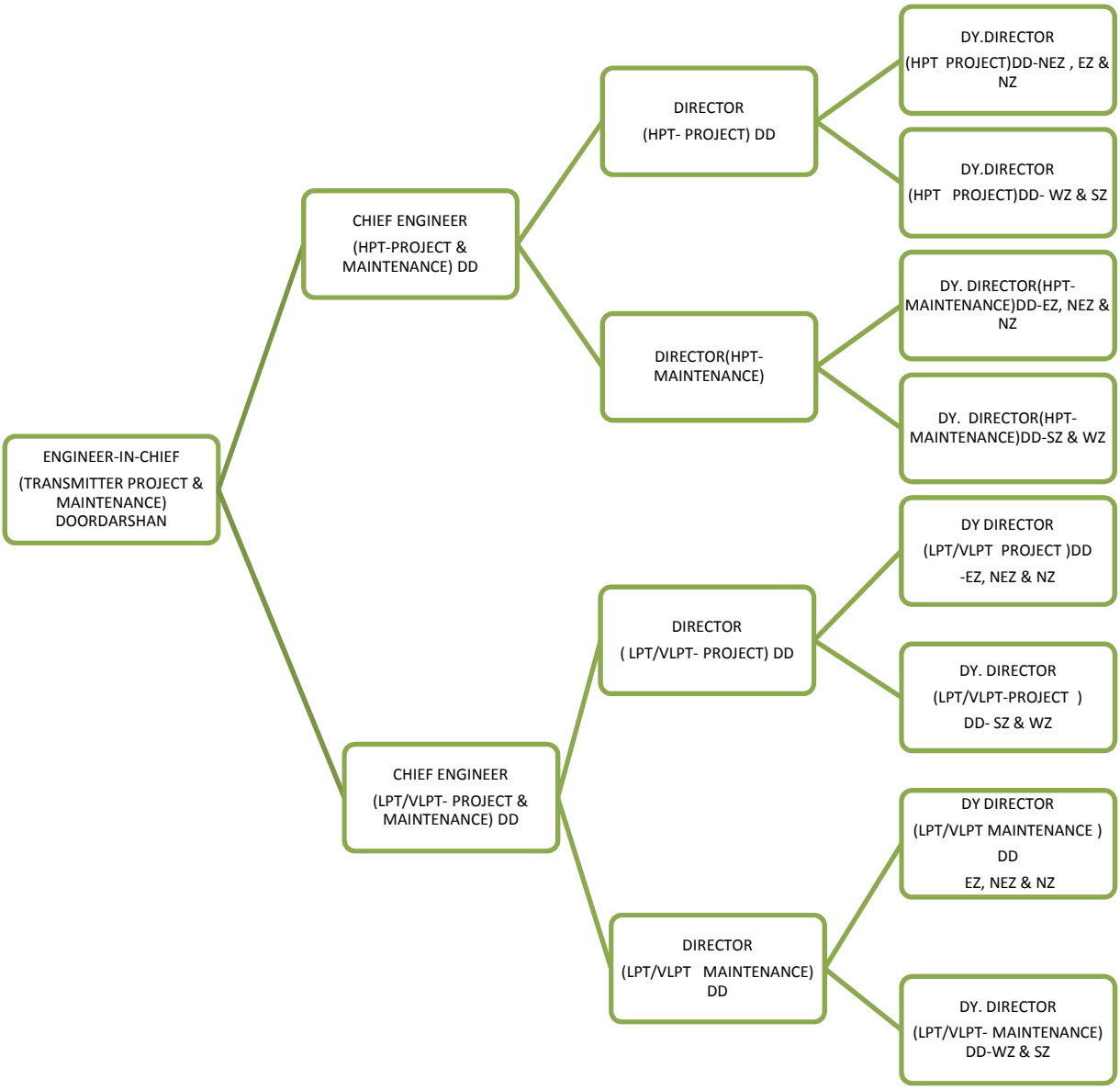
Core Group of Project Implementation & Operation & Maintenance of All India Radio studio installations at the Central HQ



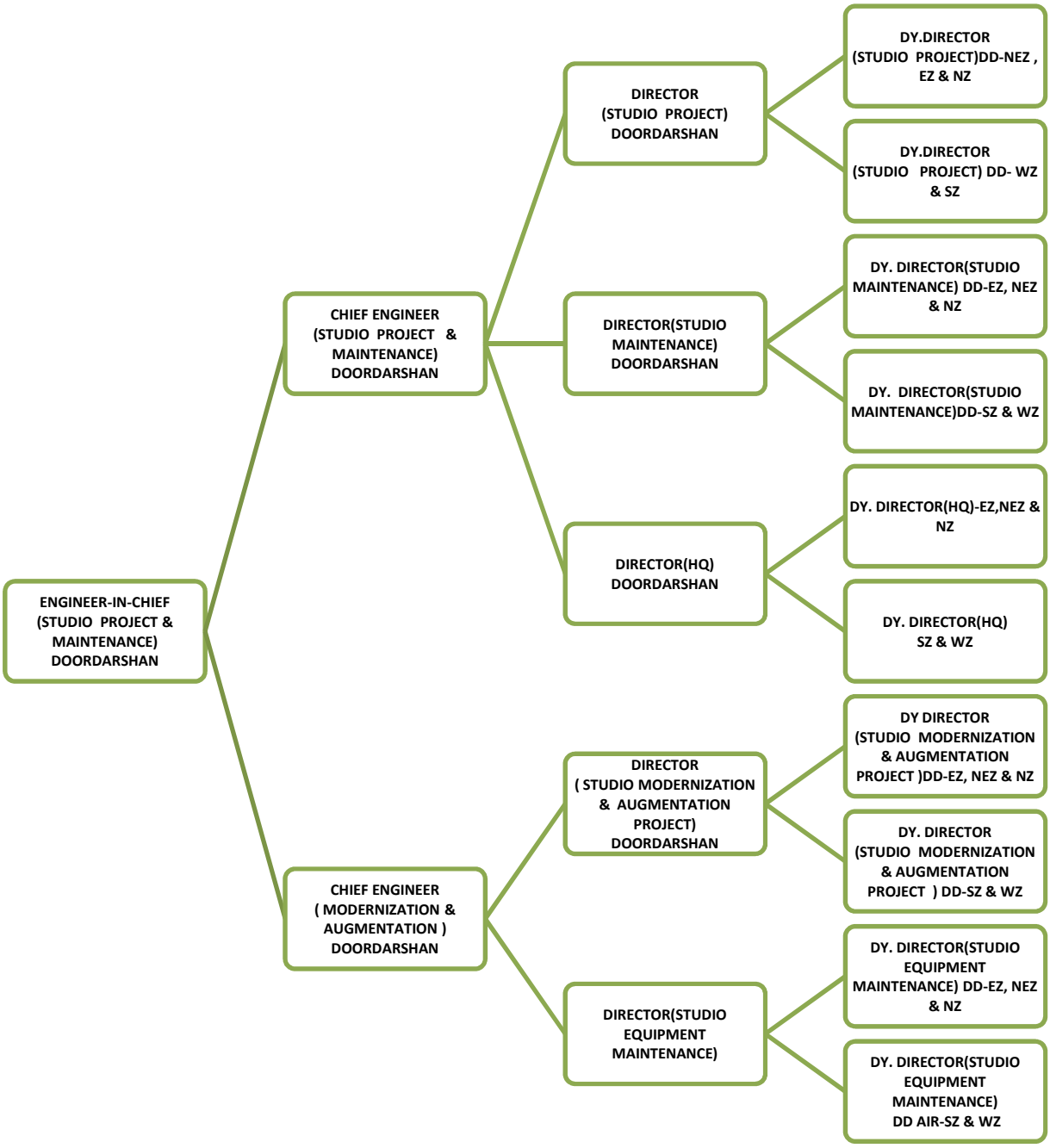
Core Group of Project Implementation & Opeartion & Maintenance of All India Radio Telecom installations at the Central HQ



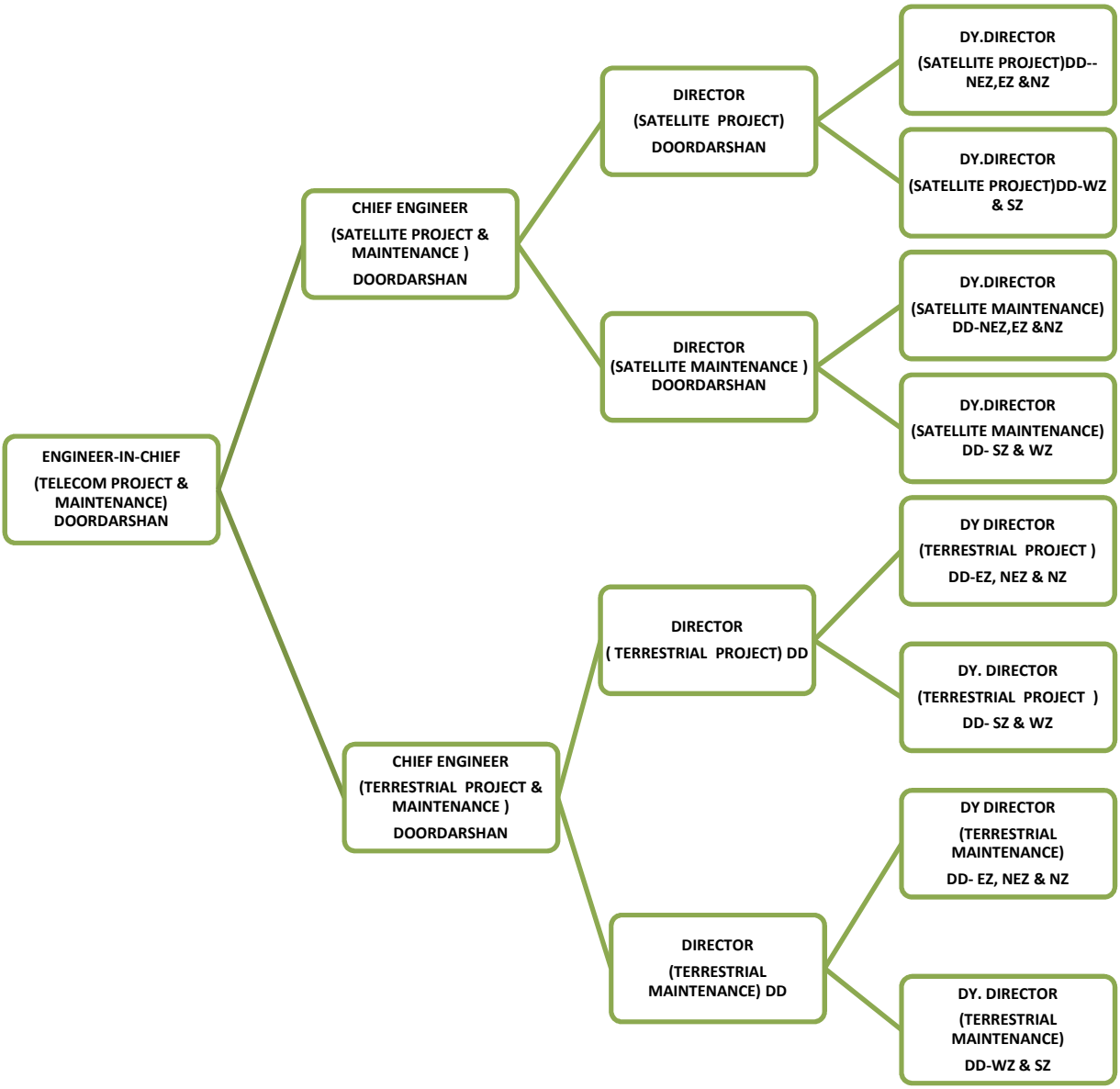
Core Group of Project implementation & Operation & Maintenance of Doordarshan Transmitter installations at the Central HQ



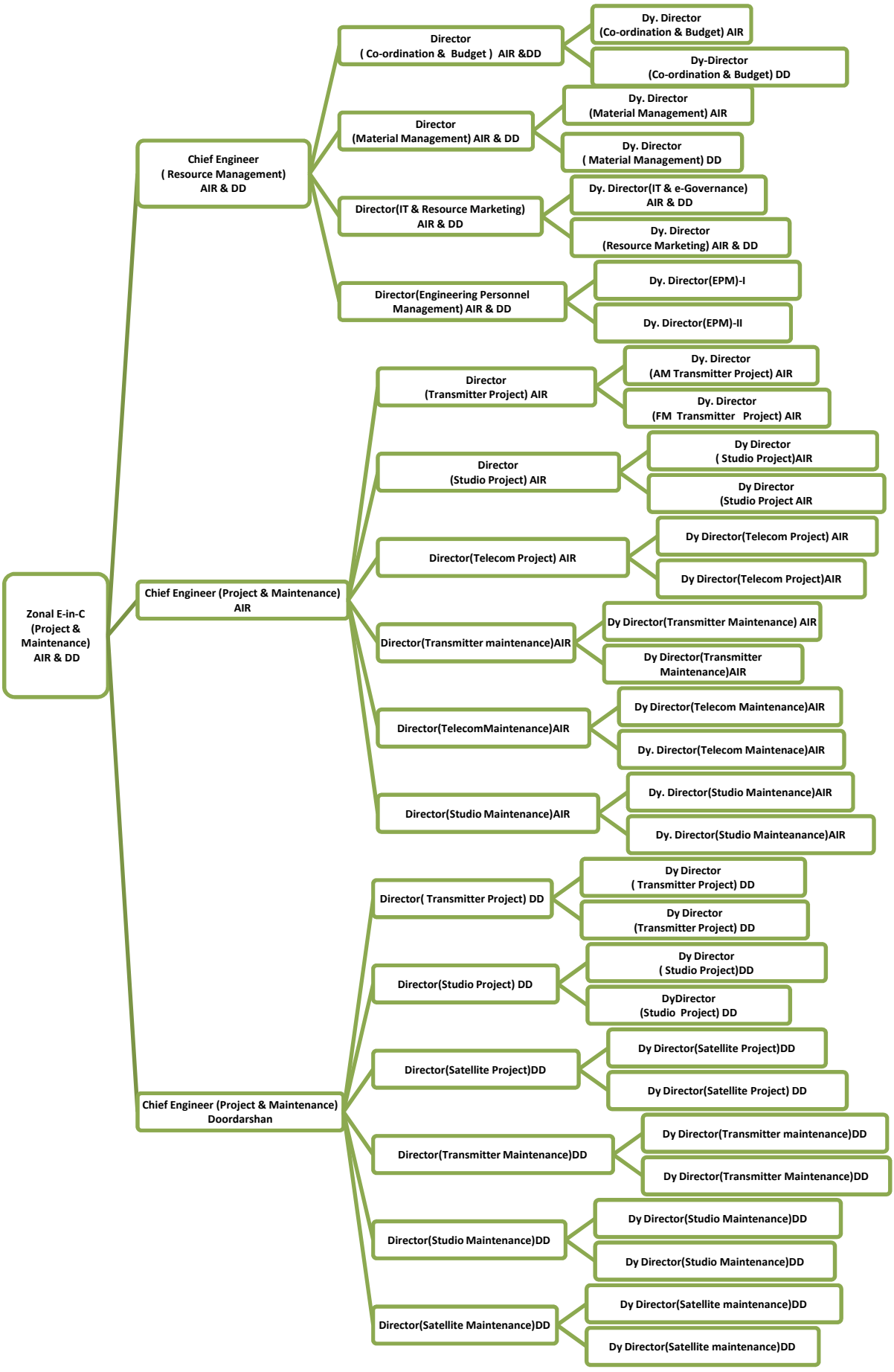
Core Group of Project implementation & Operation & Maintenance of Doordrashan Studio Installations at the Central HQ



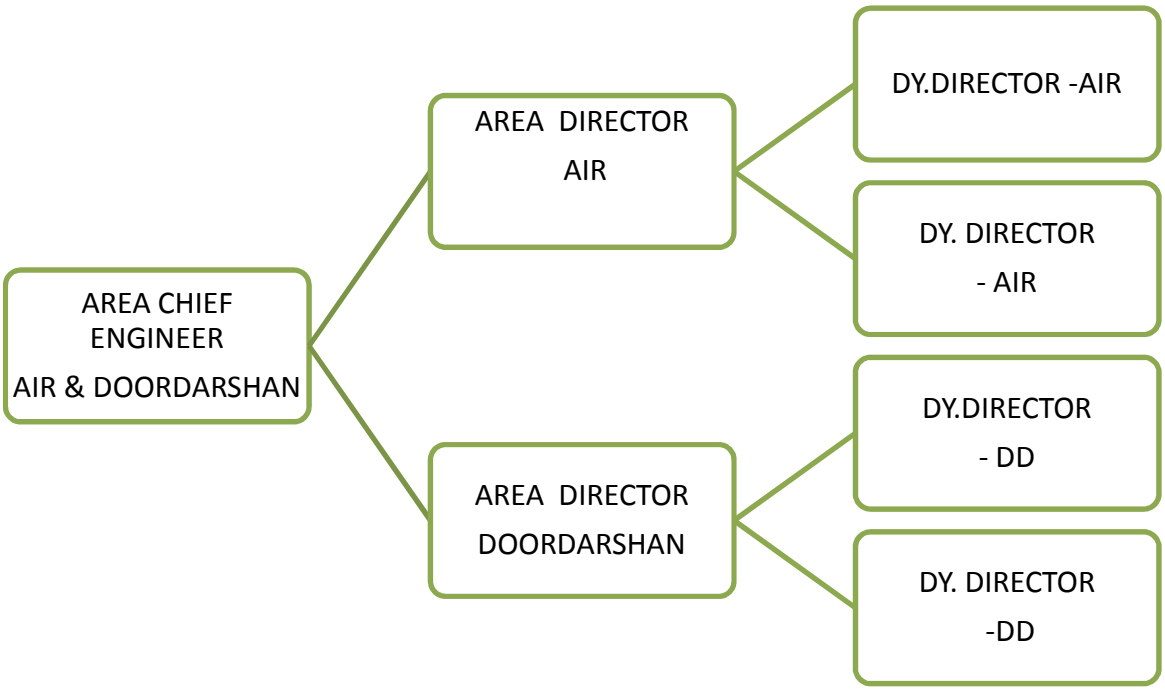
Core Group of Project implementation & Operation & Maintenance of Doordarshan Satellite links at the Central HQ



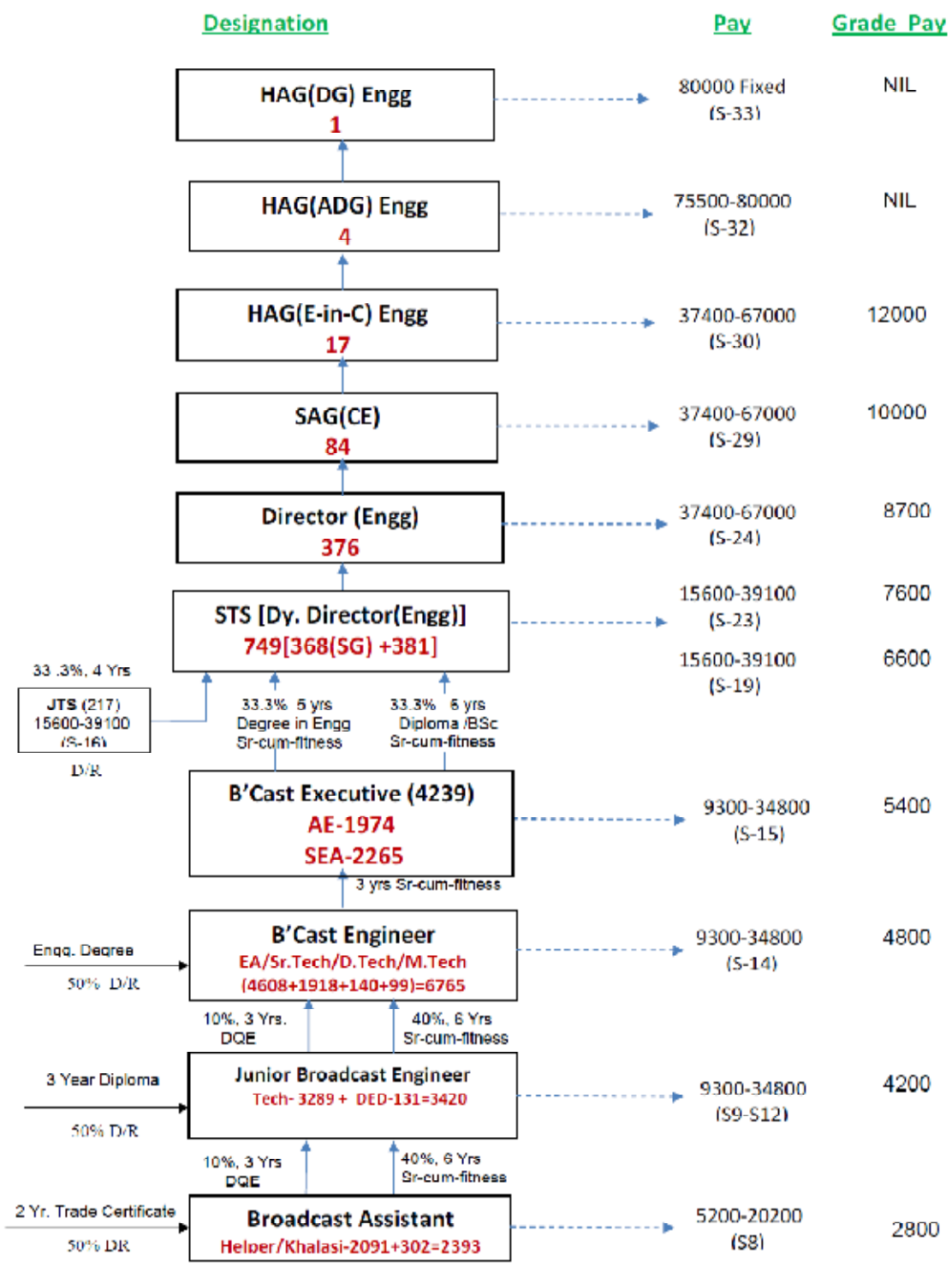
Core Group of Project implantation & Operation & Maintenance of AIR & Doordrashan stations at the Zonal HQs of Kolkata, Delhi, Guwahati, Chennai & Mumbai



Proposed Structure of Area Chief Engineers of AIR & Doordarshan



Integrated Cadre Restructuring of Group "A", "B", "C" & "D" Engineering Officers & Staff



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