

THE ECONOMICS OF THE ONE SEA

A STUDY

ON

INTEGRATED

DEVELOPMENT AND ECONOMIC

STRATEGY SYSTEMS OF

THE TROPICS

VOLUME 3

A STUDY STUDY

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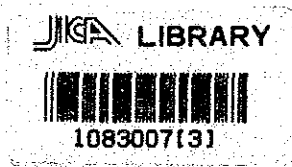
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THE REPUBLIC OF INDONESIA

**THE STUDY
ON
INTEGRATED
RADIO AND TELEVISION
SERVICING SYSTEM PROJECT**

**FINAL REPORT
VOLUME 3
FEASIBILITY STUDY**



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MARCH.1990

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団

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PREFACE

P R E F A C E

In response to a request from the Government of the Republic of Indonesia, Japanese Government decided to conduct a study on Integrated Radio and Television Servicing System Project in the Republic of Indonesia and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Indonesia a survey team headed by Mr. Hiroo Suzuki, All Japan Radio & Television Engineering Services Co., Ltd., comprising members from the said company and Yachio Engineering Co., Ltd., from April to June, and September to November, 1989.

The team held discussions with concerned officials of the Government of Indonesia, and conducted field surveys. After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Indonesia for their close cooperation extended to the team.

March, 1990



Kensuke Yanagiya

President

Japan International Cooperation Agency

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Abbreviation used in the Report

ABBREVIATION	SPELLING-OUT	TRANSLATION IN ENGLISH OR INDONESIA
1 APBN	Anggaran Pendapatan dan Belanja Negara	State Budget; National Routine and Development Budget
2 BAKN	Badan Administrasi Kepegawaian Negara	State Personnel Administration Board
3 BPKP	Badan Pemeriksa Keuangan dan Pembangunan	Governmental Board of Audit
4 BSF	Badan Sensor Film	Board of Film Censors
5 BUMN	Badan Usaha Milik Negara	State Owned Enterprise
6 DEPPEN	Departemen Penerangan	Ministry of Information
7 DFN	Dewan Film Nasional	National Film Council
8 DIK	Daftar Isian Kegiatan	List of Activity Contents National Routine Budget; APBN
9 DIP	Daftar Isian Proyek	List of Project Contents
10 Dir/Dit	Direktur/Direktorat	Director/Directorate
11 Dir-Jen/ Dit-Jen	Direktur Jenderal/Direktorat Jenderal	Director General/Directorate General
12 DTK	Departemen Tenaga Kerja	Ministry of Man Power
13 DSN	Dewan Siaran Nasional	National Broadcasting Council
14 EC	Engineering Center	Pusat Pembinaan Sarana Teknik
15 EFP	Electronic Field Pick-up	Electronic Field Pick-up
16 EIRR	Economical Internal Rate of Return	Economical Internal Rate of Return
17 ETC	Employee's Educational and Training Center	Pusat Pendidikan dan Latihan (DIKLAT) Pegawai

ABBREVIATION	SPELLING-OUT	TRANSLATION IN ENGLISH OR INDONESIA
18 FAL	Foreign Aid Development Budget	Foreign Aid Development Budget
19 FC	Foreign Investment Cost	Foreign Investment Cost
20 FIRR	Fainancial Internal Rate of Return	Fainancial Internal Rate of Return
21 GBHN	Garis-Garis Besar Haluan Negara	The State Policy Guide Lines of 1988; Broad Outlines of State Policies
22 IBW	Indische Bedrijven Wet	Act on Government undertakings in Netherlands East Indies.
23 ICW	Indische Comptabiliteits Wet	Act on Accountability in Netherlands East Indies
24 I-R	Interim Report	Laporan Interim
25 Kep	Keputusan	Decision, Decree
26 KUHD	Kitab Undang-Undang Hukum Dagang	Code of Trading Laws
27 LAN	Lembaga Administrasi Negara	State Administrative Institution
28 LC	Local Investment Cost	Local Investment Cost
29 LF	Local Investment Fund	Local Investment Fund
30 LPN	Lembaga Penerangan Nasional	National Broadcasting Institution
31 MB	Maintenance Base	Dasar Pemeliharaan
32 MMTC	Multi-Media Training Center	Pusat Latihan Multi-Media
33 MPU	Mobil Production Unit	SPK; Stasiun Produksi Keliling
34 O&M	Operation and Maintenance	Operation and Maintenance

ABBREVIATION	SPELLING-OUT	TRANSLATION IN ENGLISH OR INDONESIA
35 OJT	On-the-Job Training	Latihan Kerja
36 PELITA	Pembangunan Lima Tahun	Five-year Development
37 Perjan	Perusahaan Jawatan	State Company
38 Persero	Perusahaan Perseroan	Corporate Company
39 Perum	Perusahaan Umum	Public Corporation
40 PERUMTEL	Perusahaan Umum Telekomunikasi	Telephone & Telecommunication; State Owned Public Corp.
41 PN	Perusahaan Negara	State Corporation
42 POS & GIRO	Perum Pos dan Giro	Post and Money Order State- owned Public Corp.
43 PPFN	Perum Produksi Film Negara	National Film Production Corporation; Stated-Owned Public Corporation
44 P.T.	Perseroan Terbatas	Limited Liability Company
45 RCTI	P.T. Rajawali Citra Televisi Indonesia	Rajawali Citra Television of the Republic of Indonesia
46 REPELITA	Rencana Pembangunan Lima Tahun	Five-year Development Plan
47 RI	Republik Indonesia	Republic of Indonesia
48 RRI	Radio Republik Indonesia	Radio of the Republic of Indonesia
49 R-TC	Radio Operational Training Center	Pusat Diklat Operasi Radio
50 RTF	Radio Televisi dan Film	Radio, Television and Film
51 RTRI	Radio Televisi Republik Indonesia	Radio and Television of the Republic of Indonesia

ABBREVIATION	SPELLING-OUT	TRANSLATION IN ENGLISH OR INDONESIA
52 RUPS	Rapat Umum Pemegang Saham	General Meeting of Shareholders
53 Sek-Jen	Sekretariat Jenderal	Secretariat General
54 44 TVRI	Televisi Republik Indonesia	Television of the Republic of Indonesia
55 TVTC	Television Operational Training Center	Pusat Diklat Operasi TV
56 TX	Transmitter/Transmission Station	Stasiun Transmissi
57 UUD 1945	Undang-Undang Dasar 1945	The 1945 Constitution
58 Yayasan TV	Yayasan Televisi Republik Indonesia	TV foundation; Television Juridical Foundation of the Republic of Indonesia

**PART I DEVELOPMENT STRATEGIES FOR FIFTH
FIVE YEAR DEVELOPMENT PLAN**

PART I DEVELOPMENT STRATEGIES FOR FIFTH FIVE YEAR DEVELOPMENT PLAN

CHAPTER 1 Target of Fifth Five Year Development Plan

1-1 Drawing Up of Fifth Five Year Development Plan

Broadcasting is a mass medium capable of conveying a large volume of information through sounds and images to a large number of unspecified listeners/viewers scattered over a wide area, simultaneously and quickly. It is an extremely effective means of communication that is of great use in promoting various national policies, such as, enhancing people's literacy rate, spreading the national language, improving living standards, and vitalizing the industries, all through its application to education. This is especially because of this medium's outstanding capability of delivering information from the national center to the regions, even to the residents in the districts where the infrastructure has not yet been developed sufficiently.

The Government of Indonesia, which considers that broadcasting has the most effective and efficient role to play as a means of conveying information essential to national development, raises the following three points as being the main objectives of broadcasting:

- (1) Spreading of "education" to all the Indonesian people
- (2) Ensuring "permeation of the national ideals" to all the Indonesian people
- (3) Supporting the national development plans

And the Government of Indonesia expects broadcasting to produce such concrete effects as follows:

- Enhancement of people's literacy rate.
- Spreading of the public-hygiene concept.
- Improvement of living standards, and spreading of knowledge about nutrition to promote health.

- Spreading of family planning to hold down population increase.
- Promotion of the policy of encouraging migration in order to solve the problem of overpopulation.
- Controlling concentration of population in urban areas.
- Promotion of agriculture.
- Development of Indonesia's social culture.
- Cultivation of the spirit of mutual trust.
- Lowering of the unemployment rate.
- Conveying of information at the time of emergency.

However, the site survey and the analysis work in Japan have shown that, in Indonesia's broadcasting, one cannot but notice degradation of functions of facilities owing to superannuation and inappropriate maintenance management, as well as deficiency of programme-production functions in broadcasting stations. In other words, the broadcasting in Indonesia today can be judged as being in a state incapable of conducting sufficient activities to achieve the objectives or to produce expected effects as mentioned above.

Therefore, if the broadcasting in Indonesia were to be left as it is, it is feared that the functional degradation may continue at the broadcasting stations, eventually resulting in a total halt of functions, thus preventing the broadcasting as a whole from performing its important mission as outlined above.

So, for the period of fifth five year development plan, improvement is necessary for enabling the broadcasting to regain its original form and strength in line with the targets of the long-term plan taking into consideration the above-mentioned points.

1-2 Targets of Fifth Five Year Development Plan

(1) Targets of the Fifth Five Year Development Plan

As to the targets to be attained during the period of the fifth 5-year development plan, it will be determined with the following measures listed in the order of priority, in line with the targets of the long-term plan and taking into account the limitations on the budget that can be used during the period of the fifth 5-year development plan (short-term plan).

First priority : Rehabilitation of facilities

Second priority : Establishment of a maintenance system

Third priority : Improvement of facilities for the purpose of enhancing the quality of programmes

Fourth priority : Expansion and improvement of networks

As to the improvement and expansion of the facilities, the on-going and committed projects scheduled to be carried out during the period of this short-term plan, in principle, should be pushed ahead, and targets will be set within the permissible range.

The improvement of programmes in their contents and improvements and integration of organization will be made in stages side by side with the progress to be made in the planning of facilities.

(2) Contents of the Plan

1) Objectives

A system to restore the functions of facilities and to maintain such functions will be established. The plan also aims at enhancing the quality of programmes, expanding a stable medium-wave broadcasting network and eventually achieving sound management and operation in broadcasting that focuses on audience servicing.

2) Contents of the Plan

(a) Software Project

a) Integration of Organization

- Organization merger of radio and TV services and rearrangement of the operational system
- Securing of personnel and their training
- Securing of financial sources

b) Broadcasting Programme

- 24 hours service of RN-I programme in all RRI stations
- Increment of overseas programme service hour
- Increment of TVN-I and Metropolitan programme service hour
- Establishment of a "Liaison coordination organ" for Educational Radio and TV programmes

c) Broadcast-audience service

- Establishment of organization of the division in charge of audience servicing.

(b) Hardware Project

a) Rehabilitation of Eight High-power Radio Stations

At the eight medium-wave radio transmitting stations installed under J-10 and M-2, viz., Jakarta, Medan, Banjarmasin, Ujung Pandang, Pekanbaru, Palembang, Surabaya and Semarang, the transmitters, antenna system and power-source system will be overhauled so as to restore their functions.

b) Rehabilitation of Five TV Transmitting Stations

The superannuated transmitters at the five TV transmitting stations, viz., Bandar Baru (Medan), Ujung Pandang, G. Muncung, G. Mangkol and G. Tajam, will be renewed and, at the same time, overhauls will be conducted for the power-source and antenna systems.

c) Establishment of a Maintenance System (Jakarta + two bases)

In order to conduct thoroughgoing management of facilities, a computer system will be introduced into the Jakarta Engineering Centre and, at the same time, a workshop will be

set up and be provided with measuring instruments, substitute equipment and spare parts. Further, as the first step, two regional engineering centres, which also functions as a maintenance base, will be established at each of the Medan and Ujung Pandang and will be provided with necessary equipment.

- d) Improvement of an Engineering Communication Network (between Jakarta and the regional radio and TV stations)

An engineering communication network will be constructed and a facsimile communication equipment will be installed so as to enable sending and receiving of messages by fax.

- e) Construction of TV Up-links (two stations)

In order to transmit the programmes produced in regional stations to Jakarta, mobile-type up-links will be installed.

- f) Improvement of Radio Programme Transmission lines

The programme transmission lines for RN-I will be improved into those of 10kHz in frequency band. Also, the down-stream lines of 5kHz bandwidth will be established between Jakarta and Ujung Pandang as RN-II programme transmission line and between Jakarta and Medan/Biak as the Overseas programme transmission line. Further, for RN-III, the stereophonic transmission line will be improved between Jakarta and 6 regional stations.

- g) Additional Construction of Medium-wave Facilities at Shortwave-only Stations (5 stations)

Medium-wave transmitting facilities will be installed at each of the stations in Fak-Fak, Ternate, Sorong, Palangkaraya, and Bukittinggi.

- h) Rehabilitation of Studios at Regional Radio Stations (4 stations)

Of the five stations mentioned in g) above, four stations excluding Palangkaraya will have new installations or improvements made concerning studio equipment, master control

equipment and FM transmitters and receivers which will also serve as an STL.

CHAPTER 2 Policy for the Design of Development Plan

2-1 Organization and Management

(1) Basic Philosophy

The plan is made on the basic theory as stipulated in the Long-Term Plan and the Supporting Report, that is, Fundamentals of Organization, and Contribution and Inducement.

(2) Study on the Alternatives Proposed by the Indonesian Side

The proposed plans are studied in the extent to the papers obtained, and comments on them are made.

(3) Recommendation

Recommendation is made on the method/process for the integration of RRI and TVRI.

2-2 Broadcast Programming Plan

It is expected that broadcasting facilities for both RRI and TVRI will be greatly improved by the Projects under implementation and planning by RTF during the period of Repelita V. The production facilities such as studios for both radio and TV, TV OB vans, ENG systems and so on, will be modernized. In addition to the above, radio programme transmission lines of high quality will be distributed to the whole RRI stations from Jakarta, while mobile TV Up-links will be introduced at two major cities in Java and Sumatera islands.

In order to enable the listeners/viewers in the whole Indonesia to receive programmes of good quality through radio and TV broadcast, RRI and TVRI should do their best to enrich the contents of programmes and should at the same time endeavor to further improve the quality of the programmes by making effective use of the improved facilities.

2-2-1 RRI Broadcast Programming

The 24-hour programming schedule for the 49 stations of RN-I (remaining 3 stations) to be maintained. This is the first step to assure that radio can be listened throughout the day in the whole country as well as a time sharing scheme.

(1) Increasing of the nationwide programmes at the RRI Regional Stations

Upon completion of the transmission lines of high quality for nationwide network, the programming at every regional station will be such that about 60% of the on-air hours will be relayed from Jakarta being covered with more rich and colourful programmes of the national network. At the regional stations, effort will be emphasized on improvement of their own local programmes and also integrated programmes for the network.

(2) RN-II Programming

RN-II (educational programmes) will not be established within the period of Repelita V. However, the educational programmes to be

broadcasted through RN-I until the completion of RN-II network will be produced in further systematic way under a "Liaison Coordinating Committee" as mentioned later.

(3) RN-III and Overseas Broadcasting Programming

Upon Construction of the facilities, strive will be made for the production of more attractive and better quality programmes for respective broadcasting channels.

Preparations will be made to start compiling the programmes for transmission as soon as transmission facilities and lines are established and are ready for use.

2-2-2 TVRI broadcasting Programming

(1) Education Programming

1) It would not be practical to set up a TVN-II network (educational programmes) within the next decade, TVRI must newly start educational programming by extending the broadcasting hours in the morning and in the afternoon of TVN-I and the Metropolitan station.

2) Thus in relation to educational programme production a liaison coordinating committee should first set up and initiate preparation and plans for educational broadcasting (details outlined in Part II, the Project). The open hours of TVN-I and Jakarta Metropolitan Station could be utilized for the broadcast of new programmes. This presenting of better Information and entertainment to the people might be considered the most important objective for the next five years.

(2) Public-service Advertising Programme

Commercial programmes are not allowed to broadcast since 1982/83.

Public-service advertising will be reinforced with the aim of replenishing a part of the programming budget for further improvement of programme quality.

TVRI brisk publicity campaigns to be increased for such programmes as "Use of helmet by motorcyclists", "Environmental protection", "Promotion of trade, tourism and agriculture", and "Difussion of the sense of public hygiene and family planning".

(3) Shift to ENG from Film news gathering

Efforts will be made to increase air hours for news programmes and promote the replacing of film cameras with video and ENG system.

(4) Measures to cope with the time difference

The problem of time difference adjustment operation will be dealt with by "racking of ingenuity by producers in their presentation" for the time being.

2-2-3 Setting up of Liaison Coordinating Committees for Programmes, News Gathering and Audience service

In order to reinforce educational programming and news gathering for both radio and TV broadcasting, a liaison coordinating committee will be newly established respectively between RRI and TVRI, and the affiliated organizations. Furthermore, for the purpose of promoting audience services in programming aspects, a committee for public-relation activities will be organized as within a total audience-service committee.

2-3 Maintenance Plan

2-3-1 Background of Maintenance Planning

The establishment of an overall maintenance system was proposed already in the study report on the 1984 long-term plan. Furthermore, even a detailed implementation plan was drawn up in the Study Report on the Government's short-term 5 year plan. However, the results of this study show that scarcely any change has been brought about in the conditions since 1984. The only notable development since made is the progress achieved in the structuring of the Engineering Centre; practically no improvement has since been made in the maintenance work.

On the other hand, the conditions of transmission and studio facilities have undergone some deterioration since 1984.

At the individual stations, they each have a maintenance group that takes charge of the maintenance work but what is mainly done is the repairing of breakdowns. And because of lack of supply of spare parts, the phenomenon of "cannibalism" involving the standby equipment is seen taking place frequently. As a result, some pieces of the standby equipment are out of order, having lost their functions. And regrettably, this trend is still continuing and there is no sign of improvement in sight.

Considering these situations, implemetation plan is proposed toward the establishment of an overall maintenance system again.

2-3-2 Situation of Broadcasting Facilities and Maintenance Work

(1) Situation of broadcasting facilities

There is a whole variety of equipment installed at stations without any kind of uniformity. Equipment produced by many different manufacturers over a period of 40 years exist side by side. Many of the pieces of equipment are no longer functioning. The conditions of deterioration vary from equipment to equipment though the equipment was made by the same manufacturer during the same period of time.

(2) Situation of local maintenance work

The maintenance system was found to be insufficient in most of the stations studied this time.

- 1) Measuring equipment required for daily maintenance and inspection is not allocated sufficiently. And some of the pieces of equipment owned by the stations are unusable because of inadequate functions or not functioning at all.
- 2) Spare parts for repair work were in short supply, and some of the stations had no such spares at all.
- 3) There are few skilled maintenance workers. And, on the whole level of the engineering staff actually engaged in operation is low.
- 4) There are no patrol inspections by highly skilled technicians. The support extended by the headquarters to the local maintenance work is close to zero.

(3) Situation of maintenance programme at the headquarters

Both RRI and TVRI have national facilities management departments, but neither are functioning sufficiently at present.

- 1) No systematic maintenance work is conducted from the headquarters to regional stations level.
- 2) No systematic measure has been planned to maintain the functions, or to prolong the life, of equipment.
- 3) There is none of the planned stocks of spare parts for standby or repair use. The problem is that, at the headquarters, no consideration is given to such spare parts required by regional stations.
- 4) There is no planned budgeting done for maintenance.

2-3-3 Correction of Concept of Maintenance of Equipment

The conventional concept of equipment maintenance consists of repairing only after a failure has been found, and places no great importance on the conception of preventive maintenance. The proposed maintenance programme is directed at preventing failures, prolonging the useful life of the equipment and maintaining facility functions, by means of periodical inspections and planned procurement of spare parts. In this way, facility failures are kept at minimum levels, and broadcasting sustained as far as possible. The functions of the Engineering Centre must be reinforced, so that such a maintenance programme can be incorporated at the facilities planning stage.

2-3-4 Outline of the Maintenance Programme

- (1) To firmly establish the maintenance programme, it is advised to expand the organizational functions of the present Engineering Centre (hereafter EC), and unify the technical management regarding the planning, construction and maintenance work, of RRI and TVRI broadcasting facility. For this end, the work and staff of the planning, construction, and maintenance that is included in the RRI and TVRI headquarters' technical organization are to be absorbed to the EC Headquarters.
- (2) Regional ECs are to be established to mediate or represent the technical managements of the EC HQ to each station of RRI and TVRI within their jurisdiction.
- (3) A Maintenance Base is to be established within each EC to carry out periodical inspection and to support repairs of serious damage that occurred in the territory, as well as to give educational training to regional maintenance workers.

2-3-5 Organization of the Engineering Center, and the Scope of its Activities

(1) Jakarta Headquarters

The Jakarta Headquarters are to be constituted by 6 divisions, to share the work of planning, investigation, construction and maintenance.

The scope of work of each of the division constituting an EC will be listed below.

1) Planning Division

This will handle coordination of work of the entire EC, facilities plan, and conduct various researches.

2) Transmission Facilities Division

This division will handle the construction and modification of transmission facilities.

3) Studio Facilities Division

This division will handle the construction and modification of studios and programme production facilities.

4) Infrastructure Division

This division will construct, procure and distribute power facilities and various instruments.

5) Maintenance Division

This division will plan and manage maintenance work.

6) Administration Division

This division will handle personnel, accounting and other affairs within the EC.

(2) EC Regional Branch (Medan, Ujung Pandang)

The tasks of a Regional EC will consist of technical management and maintenance.

2-3-6 Work of EC

(1) EC Jakarta Headquarters

- 1) To manage and support regional ECs
- 2) To investigate facilities planning
- 3) To collect information on facilities, exchange information with regional ECs and other stations within the region
- 4) To plan, procure and distribute spare parts
- 5) To manage and lend alternative equipment
- 6) To witness construction and refurbishment works
- 7) To handle serious damage, often by sub-contracting outside maintenance
- 8) To train maintenance personnel
- 9) To inspect equipment of the stations within the region periodically (Those under Jakarta's jurisdiction)
- 10) To conduct various repairs, adjustment and overhaul works at a workshop
- 11) To manage technical operations regarding facilities planning and designing

(2) EC Regional Branch (Medan, Ujung Pandang)

A Regional EC undertakes much the same operation as the Jakarta Headquarters for the regional stations. It also mediates between the headquarters and the regional stations in terms of technical management.

2-3-7 The Territory of Each EC

The territory under the jurisdiction of each EC, and the number of stations, is represented in the table below.

The location of each EC	Jakarta Headquarters	Regional EC Medan	Regional EC Ujung Pandang
The Territory	(a) All Stations of RRI, TVRI (2) The territory of direct control Whole of Jawa Bali N.T.B N.T.T Tomor-Timur Kalimantan (excepted Kalimantan Timur)	Whole of SUMATERA	Whole of Sulawesi Maluku Kalimantan Timur Irian Jaya
Number of R. TV Stations in each Territory	R. 21 Stations TV. 100 Stations	R. 12 Stations TV. 76 Stations	R. 16 Stations TV. 68 Stations

The establishment of four more regional ECs is being planned for Repelita VI. When these are completed, each EC will have less stations to supervise, and therefore its overall work quality is expected to improve.

2-3-8 Staffing at EC

ECs are to be staffed as in the table below. As is seen on the table, required number of staff members of the EC Jakarta Headquarters is remarkably bigger than the present number of the staff. This difference shall be partly supplemented by absorption of the department which now handles technical management and maintenance work at the Headquarters of RRI and TVRI. Should there be a shortage, more support from other divisions could be considered. Technicians at the ECs need to be highly qualified in terms of education and skill.

Personnel for the Regional ECs should be selected from each region, but it is recommended that some be shifted from Jakarta.

The contents of the staff plan are represented as in the table below.

EC Jakarta Headquarters		Regional EC	
Division	Number of Staff	Occupation	Number of Staff
Planning Division	20	Technical Management	3
Transmitter Facility Division	15	Maintenance	12
Studio Facility Division	15	Administration	2
Infrastructure Division	15	Subtotal	17
Maintenance Division	30	Total (2 ECs)	34
Administration Division	15	Note : The figure excludes Director of EC	
Total	110		

Jakarta Headquarters are to be headed by a Director, who will supervise all the affairs of ECs including the regional ECs. The number of personnel at Repelita V will be 145 including the Director of EC.

2-3-9 Information on Technical Management

One of the most important factors when undertaking equipment maintenance is to exchange necessary information. Hitherto, the inefficiencies of maintenance at RRI and TVRI are mostly attributed to the lack of information and information mistreatment. The proposed maintenance programme will set the flow of information as follows, in order to facilitate the technical management of equipment maintenance.

(1) The flow of technical information relating to an EC is represented as in Fig. 2-3-1 below.

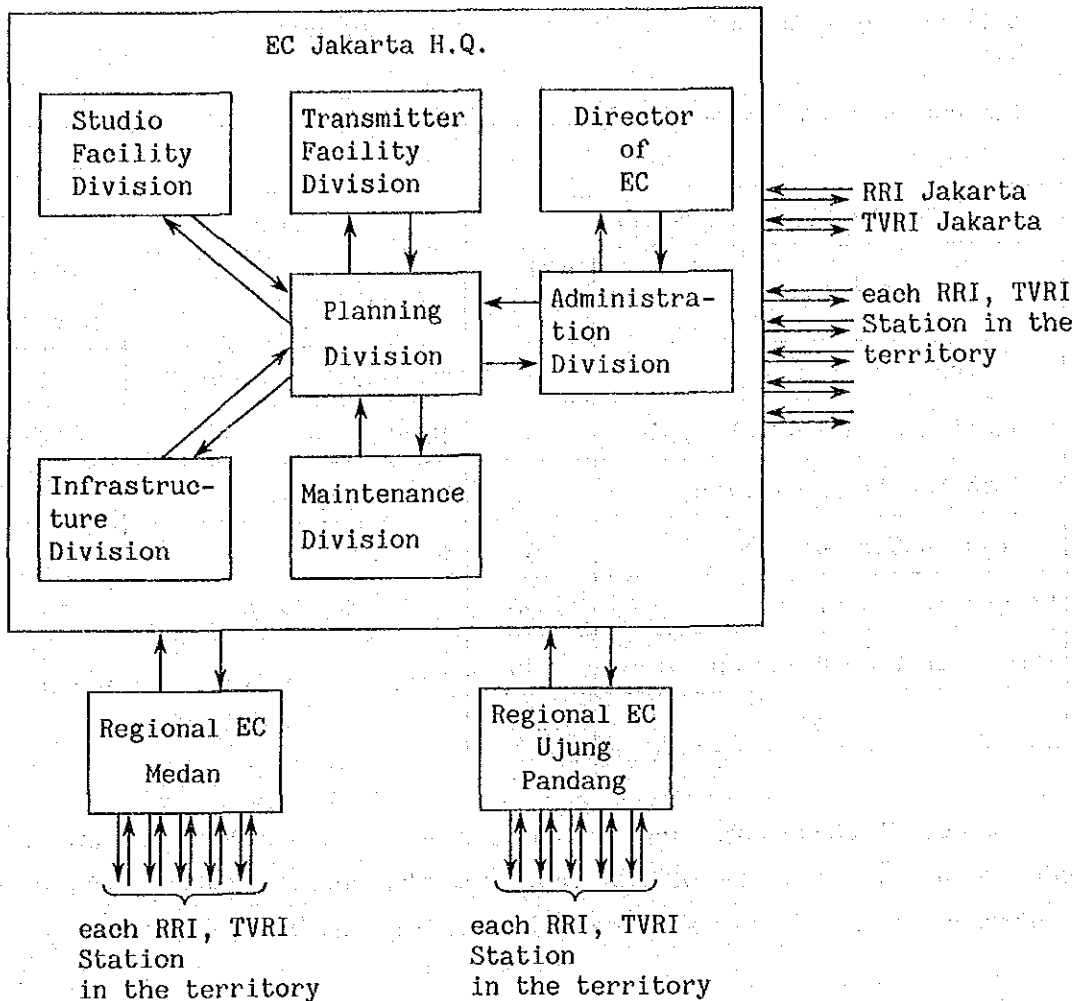


Fig. 2-3-1 The Flow of Technical Information

The flow of information is controlled by the planning division as the supervising division, which will process and accumulate all information. New information is to be received by the administration division, which in turn will pass the information on to the Planning Department or other departments concerned.

Information is to be processed and accumulated by a CPU at each department. Ideally, each CPU should be connected in an on-line system, but for the time being, exchange of large information could be conducted through Floppy Disks (hereafter FD).

The maintenance division is expected to receive a lot of updated information. Therefore, it should be in close contact with the planning division, so that it can take appropriate action promptly.

The Regional ECs will process the information pertaining to their jurisdiction, and send it to the headquarters wherever necessary. Since the regional ECs will be equipped with the same CPU as the headquarters, the exchange of information can be conducted by an FD. Communications between EC and various stations, or between the Jakarta headquarters and the Regional EC should be done through conventional channels, but in future it will be conducted through the proposed Engineering Communication Link.

(2) CPU system

A CPU will be introduced to process technical information. As mentioned above, the most desirable method is to link each division of the headquarters and the Regional ECs in a large-frame system. However, since this is not possible under current circumstances, the alternative is to deploy the same, high-function personal computers at each division and the regional ECs, and to exchange a large volume of information through FDs.

2-3-10 Technical Management

The technical management tasks that the EC takes charge of consist of the followings. Each item covers a diverse range of duties, which need to be elaborated at the time of execution. However, most of them are somehow related with the maintenance of the equipment, and some of the more significant points have been explained. Brackets indicate the supervising division.

(1) Collection, edition, registration of various information materials on the facilities; standardization of formats. (Planning division)

This will cover materials of all types of RRI and TVRI equipment. A list of facilities does exist for RRI and TVRI even now, but they are inadequate as technical management documents. The materials will need to cover detailed records and information with regard to data, useful life of

equipment, rehabilitation works, disposal, plan of renewal, present functioning and exchange of parts. Furthermore, it is important to update the data, whenever there are changes in the information. A format must be standardized in order to facilitate input and registration of these pieces of information. The original of the documents are to be kept by the planning division, and copies are sent to each division and the regional ECs.

(2) Establishment of technical standards. (Planning division)

Technical standards here mean those related with the operation, maintenance and construction of radio-TV broadcasting facilities, and include rules and international standards.

(3) Drafting facilities construction/improvement plan.
(Facilities division -- planning division)

This clause has a close relationship with the overall maintenance plan.

(4) Conducting various researches (Planning division)

It will survey electric fields, and investigate where to locate stations.

(5) Standardization of construction and equipment specifications
(Facilities division)

It will also set standards on spare parts required for equipment maintenance, and a maintenance manual.

(6) Deciding maximum useful life for each equipment. (Planning division)

This clause is closely related with the maintenance program, including procurement of parts.

(7) Deciding which equipment to discard, and when. (Planning division)
Same as (6).

(8) Planning technical developments (Planning division)

Acquisition of new technology from the technical library.

(9) Standardization and distribution of technical work record slips.
(Maintenance division).

It is important to establish the same format as (1).

(10) Collection of materials concerning maintenance of equipment, such as service manuals published by equipment manufacturers. (Maintenance division)

All copies are to be distributed to the departments concerned.

(11) Planning periodical maintenance programmes. (Maintenance division, Regional ECs)

(12) Establishing guidelines for daily maintenance duties at regional stations. (Maintenance division, Regional ECs)

(13) Determining how to respond to serious breakdown of equipment
(Maintenance division, Regional ECs)

(14) Planning procurement of spare parts for repairs.
(Maintenance division)

(15) Planning budget (Each division -- Administration division)

Each division is to submit two budgets -- one for long-term construction works and the other for the forthcoming fiscal year.

2-3-11 Maintenance Work

(1) Patrol maintenance inspection

This is a detailed inspection of equipment which will be handled by maintenance personnel of the maintenance division or the Regional ECs. The inspector will carry with him the necessary measuring equipment. He will check thoroughly each equipment, as well as the accuracy of various meters. Any parts seen to be deteriorating will be replaced. The data obtained thus will be registered in the facilities document mentioned above. The inspection is utilized to enhance the technical ability of local technicians as well.

(2) Periodical maintenance inspection

Periodical inspections will be conducted by the headquarters' maintenance division, Regional EC or local technical division, depending on the level of the inspection. A plan is to be drawn up by the maintenance division or the Regional ECs. The patrol inspection mentioned above forms part of this periodical inspection. Data obtained by periodical inspection is to be accumulated at the headquarters, and will be used for plan of the overhaul and procuring spare parts.

(3) Local maintenance

The technical division of each station is to conduct inspection on a daily basis, under the guidance of the headquarters. It could also conduct periodical inspection up to a certain level. Any work related with the functions of equipment, such as the replacement of deteriorated parts, must be reported to the EC.

Equipment failures are to be repaired by the local technical division in principle, but it can ask for the assistance of the headquarters or Regional EC according to the level of failure.

(4) Planned procurement of spare parts and distribution

Procurement of spare parts is to be undertaken in a planned manner, on the basis of various inspection/maintenance data, useful life, and

inventory of spare parts. Only after priorities are set and the budget calculated, can the actual procurement take place. When acquiring foreign-made parts, it is necessary to ask for them far in advance, considering that delivery will take a long time. Therefore, one must establish a firm contact with the manufacturer of foreign parts or trading companies concerned, and be able to exchange information smoothly.

Spare parts procured are to be kept by the headquarters or the EC, and will be distributed to the stations when the time of replacement comes near.

(5) Outside maintenance

The overhaul of some of the equipment and repairing of special IC modules require maintenance by manufacturers at present. As for the overhaul, one must appropriate it in the fiscal budget in foreign currency. Since repairing of failures cannot be predicted, one should appropriate some budget in foreign currency within the contingency.

All outside maintenance work must be controlled by the headquarters, and the maintenance division will make necessary contact to the manufacturers.

2-3-12 Measuring Equipment

It is proposed that high-precision measuring equipment will be supplied to the EC Headquarters and the Regional ECs for their maintenance operations.

Moreover, measuring equipment for daily maintenance will be deployed in part of the present RRI and TVRI stations.

2-3-13 Substitutive facility

Substitutive equipment will be deployed at the EC Headquarters and Regional ECs. This will replace the existing equipment at the time of construction or failures.

2-3-14 Tool and Working Machine

The workshop at the EC Headquarters and Regional ECs will be equipped with tools etc.

2-3-15 Spare Parts

Spare parts of main equipment will be supplied. They include tubes for high power transmitter and several parts for transmission equipment, TV camera tubes, and various components for overhaul of VTR. Details are to be determined in the maintenance programme.

2-3-16 Construction Expenses

Construction expenses for this project will be mentioned in PART II, CHAPTER 2, 2-3.

2-3-17 Operational Expenses

Operational expenses are to be appropriated each fiscal year under the following items.

- (1) Power and energy (electricity, fuel, etc.)
- (2) Office expenses (communication, stationery, etc.)
- (3) Transportation (patrol inspection, researches, etc.)
- (4) Transport of equipment
- (5) Repairing of equipment (including overhaul)
- (6) Procurement of spare parts
- (7) Contingencies
- (8) Others

2-4 Broadcasting Network Plan

2-4-1 Radio Broadcasting Network

Forty-four years have already passed since the RRI started radio broadcasting in September, 1945. During these years, RRI's broadcasting network expanded rapidly, spurred by assistance from overseas, including financial assistances from the Japanese government, the Western nations and so on. Today, the RRI has achieved a 68% population coverage with its broadcasts conducted through 49 stations across the country.

However, as a result of the subsequent superannuation of equipment and other reasons including inadequate maintenance of technical facilities, a large number of stations constituting the broadcasting network have been found to be operating with equipment and facilities whose original functions have already been lost, as explained below. Thus, today, the actual coverage of RRI's radio broadcasts has become lower than what it should be. The following is an outline of the present state of affairs with regard to RRI's technical facilities:

- (1) Transmitters which are superannuated and are left unrepaired for many years, just because of lack of standby equipment or spare parts.
- (2) Transmitters with which adequate output power cannot be obtained, because there is no spare parts and, consequently, cannot be repaired even if their functions have been found to have degraded substantially.
- (3) Transmitting station facilities which cannot obtain sufficient antenna output power because of the inappropriate antenna matching circuit between feeder and antenna.
- (4) A large number of superannuated facilities which are considered to become unnecessary, once the main devices are made to function properly.

Therefore, for the RRI today, the most important task will be to restore the functions of the existing facilities and to maintain such functions, rather than to further expand its broadcasting network.

As a part of the policies to be pursued by a country, it is, of course, necessary to ensure that the broadcasting service covers the entire nation. However, for reasons mentioned above, it is proposed that top priority be given to the restoring of the functions of the existing superannuated and functionally degraded facilities, the establishing of a maintenance system and the improving of the quality of radiowaves and that the expansion of the broadcasting network be planned only after the existing broadcasting network has been found to have reached the stage where it can be maintained stably.

Under such a strategy as outlined above, it is proposed that, as a part of the measures to improve the broadcasting network hereafter, a plan shall be made to additionally construct medium-wave transmission facilities at the existing shortwave-only stations.

Among the 49 existing broadcasting stations of the RRI, the 12 stations listed in Table 2-4-1 below have had, since their establishment, no medium-wave transmission facilities installed on their premises and has been operating on shortwave only.

Because it uses the sky wave, the shortwave broadcasting is suitable for a long-distance propagation. However, it is inevitably accompanied by fluctuations in the receiving field strength by time of the day and by season of the year, with the result that stable broadcasting service cannot be assured. For that reason, it is proposed that, during the period of the long-term plan, medium-wave transmission facilities be installed at those stations so as to stabilize the broadcasting service.

Table 2-4-1 Additional Construction of Medium-wave Transmission Facilities at Shortwave-only Stations

Station Name	Frequency (kHz)	Output power (kW)
Bukittinggi	1,512	10
Palangkaraya	1,197	5
Fak-Fak	774	10
Sorong	909	10
Ternate	891	10
Kupang	1,107	5
Dili	(711)	(5)
Wamena	(1,125)	(1)
Serui	(1,008)	(1)
Manokwari	(1,035)	(1)
Gorontalo	(1,008)	(1)
Nabire	(936)	(1)

Note: Figures in () are frequencies and output powers under examination; not yet registered with IFRB.

In accordance with the plan as outlined above, with the exception of the two stations for which the plan has already been decided on, the short-term plan to be carried out from now on shall call for the improvement of the broadcasting network by first additionally installing medium-wave transmission facilities at five stations of the shortwave-only stations already registered with IFRB. As for the remaining stations, there is the need of obtaining consent from each of the surrounding countries through IFRB during the said period.

2-5 Facility Plan

In consideration of the 25-year plan of 1975, 15-year plan of 1984 and present conditions, facility plan has been made up in accordance with the following priority order.

- First priority : Recovery of the malfunction and rearrangement of the system
- Second priority : Establishment of a maintenance system
- Third priority : Improvement of facilities for the purpose of enhancing the quality of programmes
- Fourth priority : Expansion of the broadcasting coverage

In addition to the above, effective and urgent matters are picked up among the problems and the facility plan for the project is planned with the consideration of capacity for maintenance, volume of the existing plan and budgetary conditions.

The planned system in the project, in principle, is the same system as it is. However, some countermeasures are taken into consideration for the portions which seem to be unreliable.

The points to be considered on the facility plan for each project are as follows.

- (1) Rehabilitation of High-power Radio Stations
 - As actual operation hours of each station are between 21,000 hours and 45,000 hours and many big parts still remain good conditions, overhaul is planned.
 - It is expected that all systems overhauled shall be operated at least for ten (10) years to come.
- (2) Rehabilitation of TV Transmitting Stations
 - It is planned to renew the equipment which has been used 15 years after the installation.
 - A standby transmitter shall be added to the station which has no standby transmitter.
 - Antenna system shall also be overhauled.

- (3) Establishment of a Maintenance System
- Necessary numbers and kinds of measuring instruments shall be arranged for periodical maintenance and troubleshooting.
 - Some kinds of equipment shall be arranged to cover the damaged equipment temporarily in case of emergency.
 - A computer system shall be arranged for property management, information gathering and data processing.
- (4) Introduction of TV Up-links
- It is planned to introduce mobile-type TV up-links in consideration of mobility and flexibility.
- (5) Improvement of Radio Programme Transmission Line and Engineering Communication Network
- It is the first consideration to be economical and reliable.
 - Depression of rental fee for the programme transmission line is essential.
- (6) Additional Construction of MW Facilities at SW-only Stations
- Output power, frequency and antenna height shall be in accordance with the registration to the IFRB (International Frequency Registration Board).
- (7) Rehabilitation of Studios at Regional Stations
- The system shall be designed as a stereophonic one in consideration of the local FM broadcasting.
 - FM transmitters shall be employed for the programme link and broadcasting in common.

2-6 Programme Transmission Plan

The programme transmission plan shall be a plan that is well balanced in all respects, such as, technical, operational and financial, including requirements from the point of view of programming, construction expenses, leasing fee and line usage efficiency, and shall be implemented in accordance with the following policies:

2-6-1 Introduction of TV Up-links

(1) Regional TVRI stations possessing Programme Production Facilities

At present, among the regional TVRI stations, those capable of producing programmes are as follows:

1) Regional TVRI stations possessing studio facilities

- Medan
- Palembang
- Bandung
- Yogyakarta
- Surabaya
- Denpasar
- Balikpapan
- Ujung Pandang
- Manado

2) Regional TVRI stations possessing MPU facilities

- Banda Aceh
- Padang
- Semarang
- Potianak
- Banjarmasin
- Kupang
- Ambon

(2) Selection of Mobile-type TV Up-link

A comparison is made, as follows, between the mobile-type and the fixed-type:

1) Construction Expense

There is no difference between the two in the cost of the TV up-link itself, but the construction expense of the mobile-type is higher by the cost of the vehicle.

2) Operational Expense

In the case of the fixed-type, there is the need of composing a line between the fixed-type up-link and the event hall when the outside broadcast is conducted on that event.

In this case, PERUMTEL's line will be used and this requires payment of the rental for the line leased.

In the case of the mobile-type, no such payment will be necessary.

3) Mobility

In the case of the mobile-type, the up-link can go anywhere as long as there is a road. In the case of the fixed-type, however, mobility will be confined to the location where the line composition is feasible. However, the availability of PERUMTEL's lines is far from sufficient and therefore the locations from which outside broadcast can be conducted will inevitably have to be very limited.

From the comparisons made above, a judgment may be made that, even though the construction cost will be a bit higher, the mobile-type better matches the current conditions and can be operated effectively, in view of the advantages it has in such aspects as operatability and mobility. For that reason, the mobile-type TV up-link shall be selected.

(3) Priorities in the Allocation

The priorities in the allocation of the TV up-links shall be as follows:

The allocation will start with the stations having high programme

production capabilities and possessing studio facilities. Considering the developmental conditions of the infrastructure (especially the road conditions), it would be more effective to allocate the equipment to Jawa and Sumatera islands.

Generally speaking, various kinds of events tend to take place more frequently in major cities with a large population. In Jawa, for example, with the exception of Jakarta, the city in which population is concentrated most is Surabaya.

In Sumatera, on the other hand, the most populous city is Medan. Furthermore, because mobile-type up-links are allocated, maximum coverage can be attained in the islands of Jawa and Sumatera where the infrastructure is well developed.

Hence, in this project, it is proposed that two mobile-type TV up-links, viz., one each to Surabaya and Medan, be allocated.

2-6-2 Establishment of Wide Bandwidth Radio Programme Transmission Lines

Considering the current conditions in Indonesia, the following three plans are thinkable as a means of establishing wide bandwidth lines for transmission of radio programmes.

(1) The First Plan

This is a general type of method of using the telephone line leased, as hitherto, from PERUMTEL. What is proposed in this First Plan is to increase the lease from the present one channel to either three (for RN-I) or two (for RN-II and Overseas).

With this method, the radio programme transmission line can easily be composed simply by remodelling the terminal equipment at each of the PERUMTEL stations. (However, PERUMTEL says that terminal facilities should be provided by RRI.)

If this method were to be adopted, it would naturally become necessary for RRI to pay three times the amount of the rental it has been paying for the lease of the RN-I Programme transmission line and two times the amount of the rental it has been paying for the lease of the RN-II and Overseas programme transmissions lines respectively.

Meanwhile, at the eight stations (especially the Sumenep station) which are not yet provided with PERUMTEL line, a difficulty is faced in starting wide-band radio programme transmissions because of the difficulty of constructing a transmission line between a regional PERUMTEL station and a regional RRI station. For that reason, there seems to be little likelihood of PERUMTEL lines being established in those regions during the period of the present project.

As to the line between regional PERUMTEL and regional RRI, which is currently posing the most difficult problem, it does not seem that the establishment of a wide-band transmission line will immediately result in the clearing up of such problems as hum noise and crosstalk.

On the other hand, for the transmission of RN-III stereophonic radio programmes, it is essential to establish a line of wide-band and high standard. In this case, an extensive remodelling of terminal facilities will be required at the PERUMTEL's earth stations linked with the six stations which are to carry stereophonic programmes. Furthermore, in actually composing the system, there is the need of conducting sufficient survey and transmission tests in advance to finding out whether the line will enable transmissions without impairing the stereophonic effects.

Thus, this First Plan has the advantage in that its construction cost will be lower than the other two Plans. However, in view of the operational and financial conditions of RRI at present, the substantial increase in the amount of rental payable to PERUMTEL lines (three times in the case of RN-I line and ten times in the case of stereophonic line) would not only become a heavy burden for RRI but would mean a considerable risk because of many uncertain factors involved.

Therefore, this First Plan is not quite recommendable.

(2) The Second Plan

At present, when transponders are made exclusive use of, there is a worldwide trend of conducting, with much effects, not only the transmission of TV signals but also the multiplex transmissions in which audio signals, facsimile, data, etc., are multiplexed over the TV signals. In the case of TVRI, it makes 24-hour exclusive use of one transponder aboard the PALAPA B-1 for transmission of TV programmes. What is proposed

here is the multiplexing of radio programmes onto this transponder currently being used exclusively by TVRI.

By this method, TVRI and RRI would be making common use of a single transponder and this would mean a reduction in the rental for the programme transmission lines for both TVRI and RRI as compared with what they are paying at present. However, since this would mean a vast change in the current system, the adoption of this Second Plan would cause TVRI to run the following risks:

- Remodelling of the terminal installation at PERUMTEL's Cibinong MSC Ground Station.
- Remodelling of facilities at the regional PERUMTEL's earth stations linked with 35 TVRI stations which receive, through that earth station, the TV signals distributed via the PALAPA satellite.
- Remodelling of the TVRO facilities at 118 stations which receive TV signals through the TVRO facilities.

As mentioned above, the adoption of this Second Plan would cause the need of an extremely large volume of remodelling of the existing facilities. Moreover, it would mean remodelling of facilities owned by PERUMTEL which is another company and this, for TVRI, is not only extremely risky but also provides a factor for a substantial increase in costs.

Moreover, such remodelling of the system cannot be carried out in stages but needs to be done all at a time and this means an enormous amount of work to be undertaken.

Hence, even though this Second Plan has a big advantage of reducing payments for the lease of lines, it cannot be recommended either, since it involves too much risk.

(3) The Third Plan

This is the method of making exclusive use of the transponder, the same as in the Second Plan.

As explained in the Second Plan, the remodelling of the existing system involves an enormous amount of risks. Therefore, in this Third Plan, it is proposed that the remodelling of the existing system be kept to the minimum. So, instead of multiplexing onto the transponder in exclusive use by TVRI, one more transponder will be leased.

Since the transponder to be additionally leased is intended for use in transmitting the sound, there is no use of making exclusive use of a full transponder as in the case of TV signals.

In order to transmit four waves of radio sound signals (for RN-I, RN-II, Overseas and RN-III), and also the four both-way communication signals mentioned later on by multiplexing them onto the transponder, it would be sufficient to make exclusive use of a bandwidth of about 3MHz.

Meanwhile, in order to receive those signals, a VSAT device will be installed at each RRI station. This VSAT, unlike the TVRO, does not require an antenna with a big diameter; one with a small diameter of about 2-3m ϕ would be sufficient.

With this method, which does not require the line to pass through between regional PERUMTEL and regional RRI, a high-quality line unaffected by such interferences as hum noise or crosstalk can be composed.

As to the eight stations which are not yet provided with adequate programme transmission lines, too, a line can easily be composed without being influenced by PERUMTEL.

Compared with the Second Plan, this Third Plan requires payment of rental for the lease of a transponder, but the amount of construction expense will be reduced considerably.

The following table shows a comparison of the three Plans, arranged in the descending order of advantage that each Plan has in different aspects:

	Top	Second	Third
Construction Cost	1st Plan	3rd Plan	2nd Plan
Amount of Rental for the line	2nd Plan	3rd Plan	1st Plan
Reliability	3rd Plan	1st Plan	2nd Plan
Adaptability for the Future	3rd Plan	2nd Plan	1st Plan
Compatibility with Other lines	3rd Plan	2nd Plan	1st Plan
Stereophonic line	3rd Plan	2nd Plan	1st Plan

From the above, it may be concluded that the best method will be the Third Plan. Hence, in this project, the Third Plan shall be adopted.

2-6-3 Establishment of an Engineering Communication Network

As mentioned in 2-6-2 above, this communication line will be multiplexed on the radio programme transmission line.

The communication line will be a both-way type and will be composed of two lines each for TV and for radio.

The installations will be as follows:

(1) RRI : The facilities for programme transmission lines can be used. So, for all the 48 regional stations, the facilities for communication lines will be added to them.

(2) TVRI : It is quite feasible to compose a communication line network by installing necessary facilities at all of the 244 stations. However, in this project, it is proposed that, considering various factors including the construction cost, such installations for communication lines be made at about 50 stations according to the priority order, which shall be as follows:

Top : Stations possessing studio facilities and MPU equipment.

Second : Stations located in provincial capitals.

- Third : Stations located in provincial sub-capitals.
- Fourth : Stations on remote islands
- Fifth : Others

2-7 Staff Plan

2-7-1 Estimation of Number of Staff/Personnel

The broadcasting projects which RTF is either implementing or planning during the period of Repelita V are, as mentioned also in the Long-term Plan, as follows:

- On-going projects	6 (including Grant Aid)
- Committed projects	2
- Projects under planning	2

In order to ensure maximum effectiveness of above and new proposed projects, it is necessary to assign, in an appropriate manner, the personnel who are capable of operating the facilities smoothly. In conducting an estimation concerning the staff planning, the following basic ideas will be adopted:

- (1) The number of staff/personnel that will newly become necessary on completion of the projects will first be calculated for each of the three different functional categories, viz., news/programmes, engineering and administration, and then, in order to meet that requirement, the number of staff/personnel who can be transferred from the existing staff members and that of those who should be newly employed will be calculated.
- (2) Detailed analysis shall be made about the number of staff/personnel that are required and that of those who are currently assigned, taking the character of each project into account, along the following lines:
 - 1) With regard to the projects which simply concern renewal of superannuated equipment and facilities, the number of required staff/personnel will be assumed as remaining unchanged and therefore such projects will be excluded from the studies concerning estimation of number of staff/personnel required.

2) As regards the projects involving such works as construction of new facilities, expansion of the existing facilities and of broadcast programmes, each project shall be examined carefully, based on the data concerning the actual operational condition of RRI and TVRI and also on the results of discussions with the officials concerned.

2-7-2 Training of Personnel

(1) Training of the Newly-employed Personnel

As will be mentioned later on in this report, the number of staff/personnel to be newly employed during the period of Repelita V is expected to exceed 800, which is the result of estimation made on the basis of ideas as outlined above.

So, the need arises to conduct smooth employment of such new personnel as mentioned above and the training of these new employees.

The training of personnel should be carried out not only in the form of short-term professional training making effective use of the facilities of MMTC, RRI-TC and TVRI-TC but also through systematic OJT to be conducted at each workplace.

(2) Training of Currently-employed Personnel

In implementing the various projects which are scheduled for the period of Repelita V, broadcasting equipment and devices of the latest type based on the newest electronic technologies will invariably be introduced.

In order to ensure effective operation of such new broadcasting equipment, it is most essential that each and every member of the engineering staff should be fully trained so as to gain necessary skills to operate them efficiently.

PART II THE PROJECT

PART II THE PROJECT

CHAPTER 1 Software

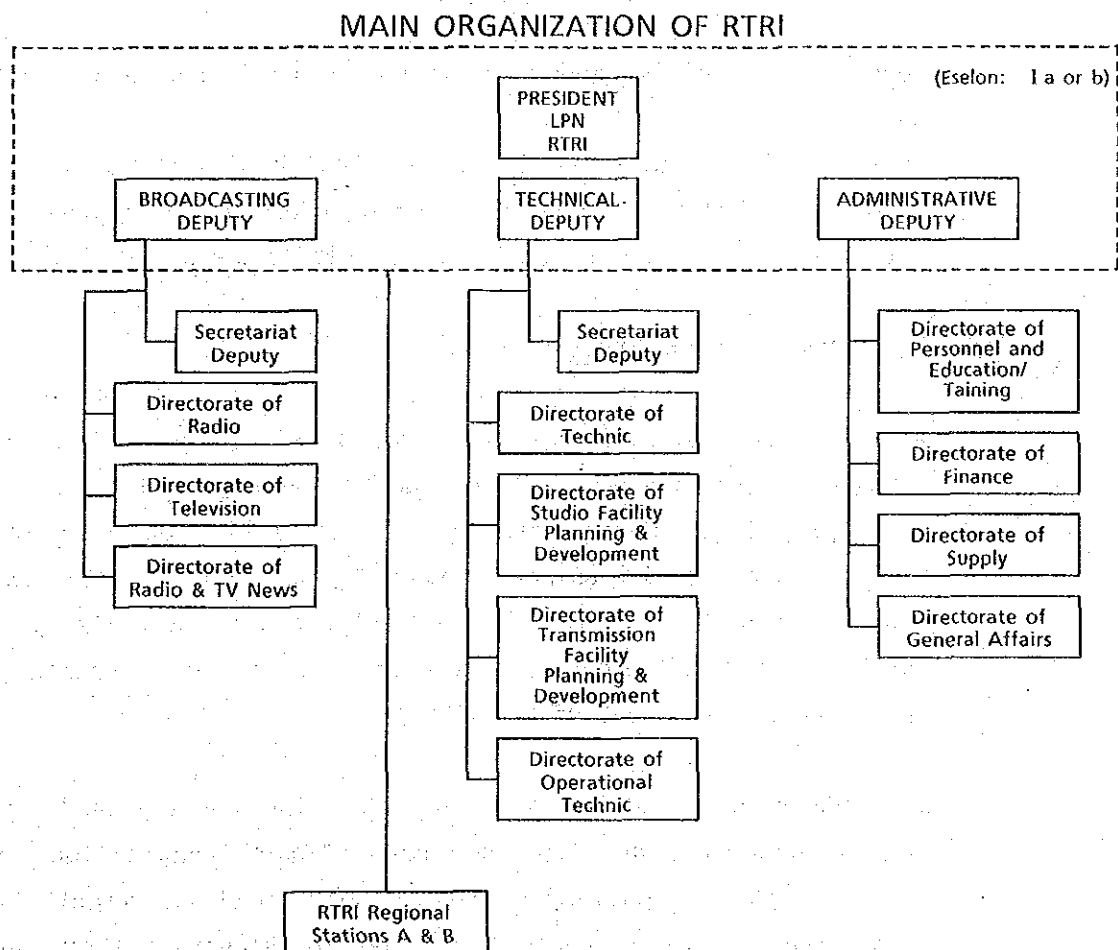
1-1 Organization and Management

(1) Study on the Alternatives Proposed by DEPPEN and RTF

1) Proposal from DEPPEN

(a) Organization Structure

Alternative I



Remarks: Institution is considered in the form of Perum.

LPN..... National Broadcasting Institution

(b) Comments

a) Simplified Organization

Comments can scarcely be made on the Alternative of DEPPEN, though, because only the main organization of RTRI has been obtained from DEPPEN. However, it can be commented at least that the said organization is simple enough for anticipating a smooth flow in operation and an effective/efficient management of LPN-RTRI when LPN-RTRI is established as shown on the said chart.

b) President

Head of LPN-RTRI is named "President" which is suitable for a corporation.

As for "Eselon", although it is reported that "Ib" will be of strong possibility, "Ia" has better be proposed since head of the sole national broadcasting enterprise is worthy of "Ia".

c) Three Deputies and Their Directorate

Although the simpler an organization is, the better a management and operation is considered and expected to be in principle, it is anxious whether the simplified organization will be drastically changed and will be realized directly from the existing organizations of RRI and TVRI even though a further study on reformation may continue during Repelita V upto the establishment of LPN-RTRI.

No mention about MB and Audience Servicing Working Units(s) can be observed only on the paper "Main Organization of RTRI". It is envisaged that those matters might be considered at lower levels than that of Directorate in the documents yet to be obtained.

Should the matters happen not to be comprised in the documents, it could be commented at least to put them into consideration.

d) Type of State-Owned Public Enterprise

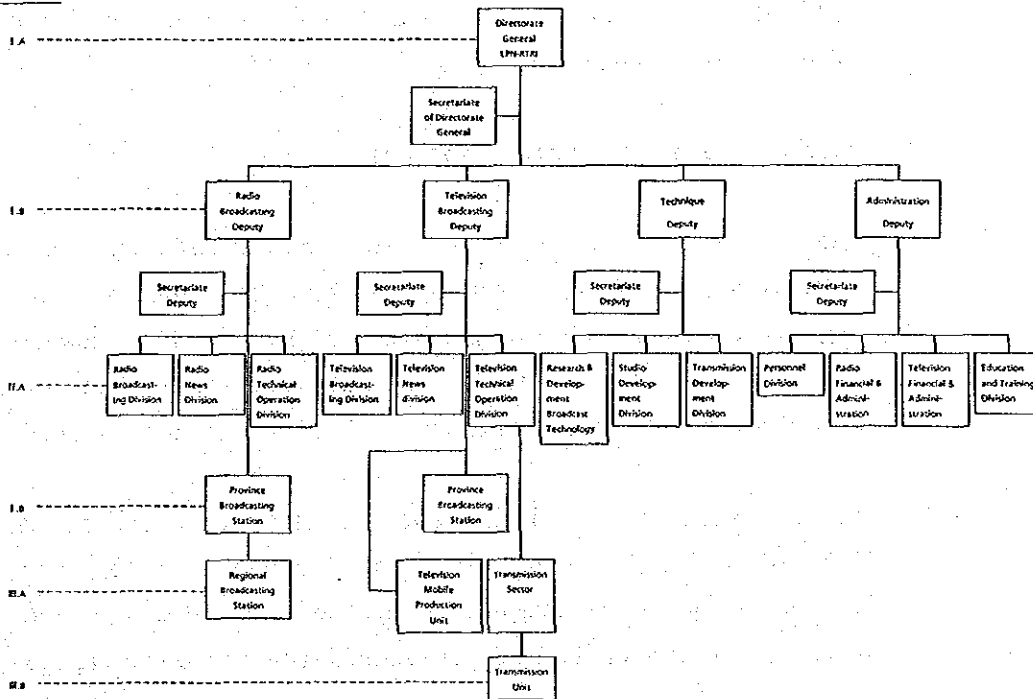
It is reported in the Study that DEPPEN is aiming at Perum as a type of state-owned public enterprises for LPN-RTRI.

The thought is agreeable to the plan because it is practically possible to establish LPN-RTRI even now so far as the type is concerned since the laws/regulations exist in force.

2) Proposal from RTF

(a) Organization Structure

Alternative II
ESELON



Remarks: The detailed organization charts are referred to the Data File.

(b) Comments

a) Real Organization

The organization structure is formed in light of the existing organizations of RRI and TVRI. From such a viewpoint, it can be said that the Alternative seems to be more practical and actually functional even though the structure itself is considered complicate.

b) Director General

Head of LPN-RTRI is still called "Director General". In the sense, the entity seems to be reflected by not a type of the public enterprises but still one of the governmental authorities.

It is recommended as a comment on the abovementioned that "President" or "President Director" had better be named head of a public enterprise.

c) Four Deputies and Their Divisions

The structure is made on the basis of the existing conditions. In this sense, it can be expected that the organization will be deemed to be practical. However, no comments can be made on the process from the existing organizations to the structure without any chart in process.

It is taken up as a comment on the organization whether "Education and Training Division" includes the existing TCs, EC including MB is comprised in the structure and Audience-Service Working Units are considered for the organization.

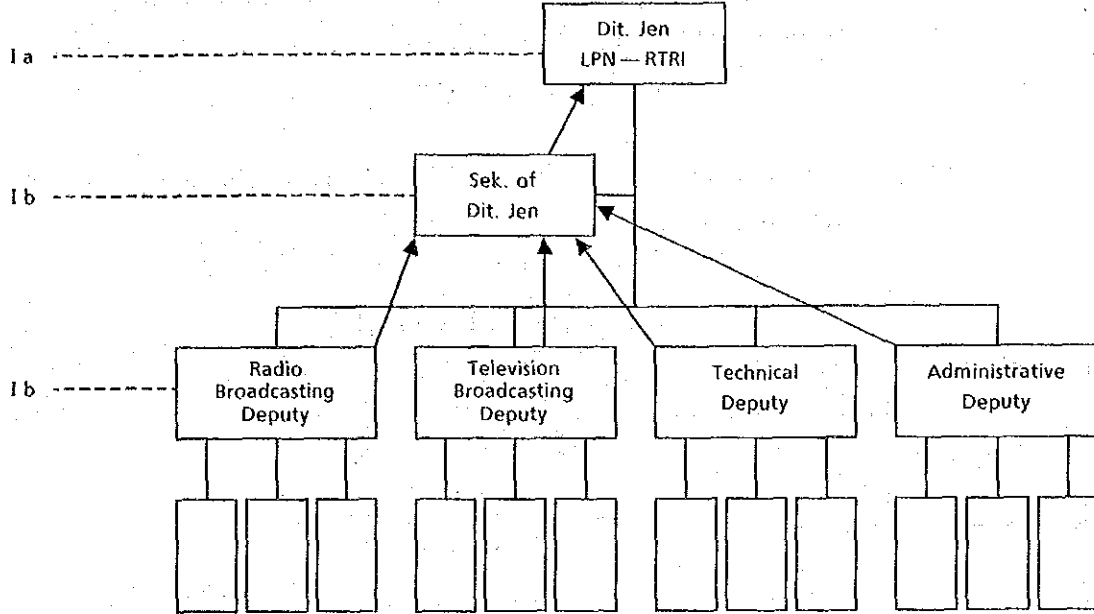
(i) Alternatives of the Alternatives II Proposed by RTF

The alternative II is composed of two Alternatives A and B which differ in a practically operational line among

Dit. Jen, Sek. of Ditjen, Deputy(-ies) and the four Deputies themselves, as simply drawn below.

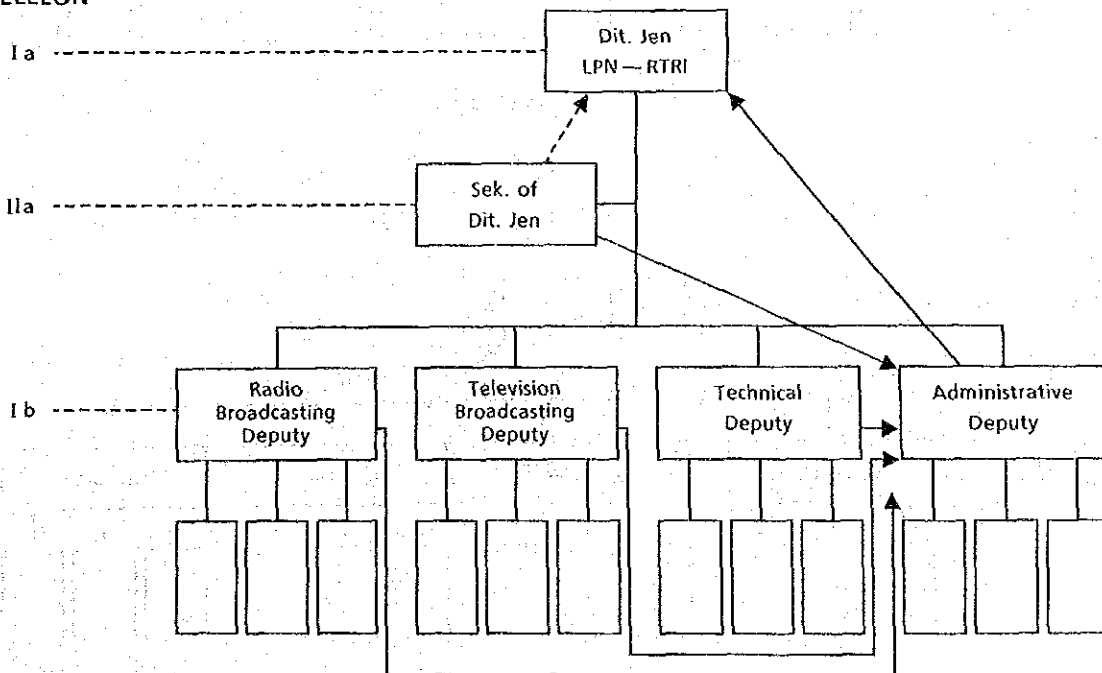
Alternative A.

ESELON



Alternative B.

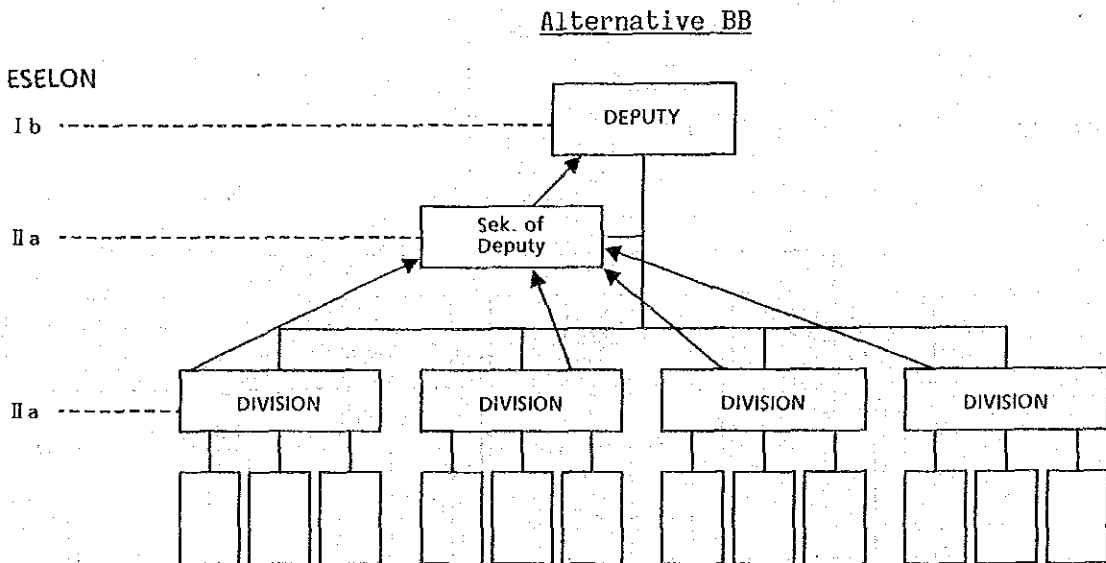
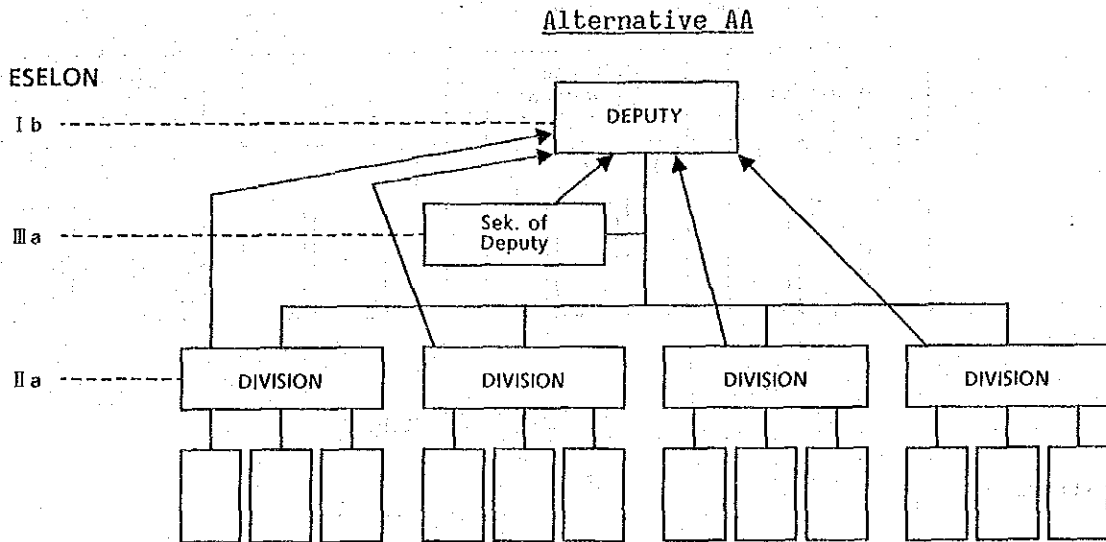
ELELON



The comments may be allowed to make as follows.

As regards "Eselon", Alternative A is thought to be better since Sek. of Dit.-Jen is not lower in Eselon than Detupies, while Alternative B is considered better in reporting channels since Administrative Deputy will be in a position to grasp matters as a whole, particularly financial and personnel matters.

(ii) Alternatives AA and BB in the Alternatives A and B of the Alternative II



Comments on the above organizations in comparison read as follows.

Alternative BB is deemed to be better since Sek. of Deputy is not lower in Eselon than head of Divisions and in a position to comprehend all the matters concerning all the Divisions.

(iii) Type of State-Owned Public Enterprise

It is reported in the Study that RTF is aiming at another new entity excepting Perum, Perjan and Persero, as a type of state-owned public enterprises for LPN-RTRI.

It is recommended that laws/regulations had better be arranged first based on one of the existing types of the enterprises in order to realize an easy establishment of LPN-RTRI, even with the target of altering Articles of LPN-RTRI when the integration is materialized not only nominally but also virtually.

3) Comparison

Drafting Authority	Type of Enterprise	Organization Structure
DEPPEN	Perum	Total Reform of the existing Organization
RTF	Another Entity	Respective Reform of RRI and TVRI except Technic and Administration

Comments are made on the contents listed above for comparison, as follows.

With a view to easily establishing LPN-RTRI, it is considered better to choose the idea of DEPPEN for a type of the enterprise

and the idea of RTF for the organization structure in light of the existing situations.

(2) Preparation for Establishment of a National Broadcasting Entity

1) Review on Number of Personnel of the Existing Organization towards the Integration of RRI and TVRI

It is reiterated that both RRI and TVRI have superfluous personnel to be attended to and strongly wish to reduce the supernumeraries despite the fact that both are compelled to receive new employees in obedience to the national policy as elucidated in PART IV CHAPTER 1, 1-4-2 (6) for the Long-Term Plan.

Recommendation is made on the following.

(a) Execution of Personnel Reshuffle and Cut

A personnel reshuffle and cut had better resolutely be done at respective-working units without adhering to organizationally and personally respective reasons after checking the situations and deciding a number of the personnel regarded as being overstaffed.

(b) Execution of Personnel Transfer to New Jobs

The surplus personnel including some capable employees selected only for the reason why new jobs are created had better boldly be transferred to the new jobs such as MB, Audience-Service Working Units, and so forth after studying and determining organizations of such a unit as MB which is referred to Part IV Chapter 6 "Maintenance Plan", Audience-Service Working Units which are referred to PART IV CHAPTER 7 for the Long-Term Plan even in the form of Committees, respectively, taking into account Golongan(s) and Eselon(s) as well.

(c) Creation of Expert Post

Reference is made to PART IV CHAPTER 1, 1-4-1 (8)-5 (d)-b) for the Long-Term Plan in which the idea is explicated as a measure for streamlining the organizations.

2) Improvement on Amelioration of Treatment for RRI Personnel

The RRI excess personnel once transferred to a working unit under TVRI domain such as MB in EC from the existing viewpoint, and a committee and/or unit, needless to explain of its task force when established for TV licence fee collection, should be well treated enough to enjoy a gradual increase in pecuniary benefits towards the level for TVRI personnel.

3) Office Regulations

The arrangement of office regulations is necessary for rationalization of the existing organizations, based on the system of "Sure Penalty and Certain Reward".

4) Laws of TV Licence Fee

The arrangement is indispensable to improve a collected amount and a collection rate by means of a forcible fee-collection way.

(3) President Decision/Laws

1) Decision of the President of RI No. 215-1963 Regarding the Establishment of Television Foundation of RI

Since Yayasan TV was set up based on the Presidential Decision (Keputusan President RI) No. 215 Tahun (Year) 1963, it can be considered that Yayasan TV will be liquidated based on Chapter X "Liquidation" Article 22 of the said Kep.

(Excerpt of the Kep. Nr. 215/1963)

DECISION OF THE PRESIDENT
OF THE REPUBLIC OF INDONESIA
No. 215/1963
THE ESTABLISHMENT OF TELEVISI
REPUBLIK INDONESIA FOUNDATION

Chapter X

Liquidation

Article 22

1. The liquidation and the appointment of a liquidator will be decided by the President.
2. All TVRI properties after the liquidation are handed over to the Chief of staff and TVRI is discharged from responsibility of the work which had been accomplished.

Chapter XI

Transitional regulation

Article 23

1. Before transferring of the authority and the management of TVRI Foundation according to this regulation all buildings can be transferred to TVRI, and therefore likewise all organization which already existed including all personnel working and still doing their job as usual, until the issuance of another decision from the Chief of staff.

Chapter XII

Closing Regulation

Article 24

Matters not yet sufficiently stipulated in this decision will be decided by the Chief of staff.

This decision is valid on the day of issuance.

Published
in Jakarta on
20th October 1963
Secretary of State
(signed)
Moch. Iehsan S.H.

Issued in Jakarta
on: 20th October 1963
President of the
Republic of Indonesia
(signed)
SUKARNO

2) New Presidential Decision/Decree

- (a) A new Presidential Decision (Keputusan President RI) is essential for the establishment of an entity of LPN-RTRI, in exchange for the abolishment of Yayasan TV.
- (b) It is desirable that both retainment of profits and receipt of governmental subsidies should be implicated as an article in the said new Presidential Decision so as to materialize the sound establishment of an entity from a financial viewpoint in name and reality as well.

(3) Comparison among Perjan, Perum and Persero

COMPARISON AMONG STATE COMPANY (PERJAN), PUBLIC COMPANY (PERUM) &
CORPORATE COMPANY (PERSERO)

NUMBER	OPERATION	STATE COMPANY (PERJAN)	PUBLIC CORPORATION (PERUM)	CORPORATE COMPANY (PERSERO)
01	Type of Business CPP 3/1983	Operates in the public services field including social services.	Operates in the public utility services and for commercial purposes.	Operates with the objective to develop profits and encourages the development of private sectors and cooperatives outside the PERJAN and PERUM activities.
02	Supervision (PP 3/1983)	By the Minister who is assisted by the Director General in technical operations and by the Secretary General in the field of administration, in line with their respective responsibilities.	By the Minister who is assisted by the Director General. The Minister determines the Director General's authority in accordance with his duties. The Director General receives and follows the directives given by the Minister and reports all matters to the Minister.	By the Minister of Finance as shareholder. The Minister is assisted by the relevant Director General and based on the shareholders' power of attorney determines all matters related to the development of PERSERO.
03	Management/ Operator	President Director	Management Board	Management Board
04	Administrative Responsibility	President Director	President Director	President Director
05	Approval of Annual Report	BPKP	BPKP	BPKP
06	Work Program and Company Statutes and/or Amendments as well as Annual Reports	By the President Director to the Minister to obtain his approval based on a joint evaluation by the Minister and Minister of Finance. The Minister requires prior approval from the Minister of Finance concerning all deliveries and all transfers of fixed assets.	By the Management of PERUM to the Minister to obtain his approval based on a joint evaluation by the Minister and Minister of Finance. The Minister requires prior approval from the Minister of Finance concerning all deliveries and all transfers of fixed assets. Bears the responsibility and/or removal of fixed assets. Medium/Long term loans.	By the Management of PERSERO to Shareholders to obtain his approval. The Minister as the shareholder's proxy requires prior approval from the Minister of Finance as shareholder, concerning intentions of the following nature: a. Amending the portion of PERSERO's shares. b. Plans to deliver as well as transfer or burden the fixed assets of PERSERO

NUMBER	OPERATION	STATE COMPANY (PERJAN)	PUBLIC CORPORATION (PERUM)	CORPORATE COMPANY (PERSERO)
06				<ul style="list-style-type: none"> c. Plans to participate capital or withdraw participation of PERSERO capital from a P.T. (Limited Liability Company) or other entity. d. Plans to establish sister company. e. Plans to release part of all PERSERO shares. f. Plans to receive or issue short-term, medium term, long term loans not exceeding the value stipulated by the Minister of Finance. g. Plans for liquidation, merger or reorganization. h. Articles of Association and its amendments. i. Plans to establish management contracts, license contracts or contracts of a similar type. j. Plans for establishing profits and its distribution. k. Plans to establish management salaries, facilities and/or other benefits. l. Plans to cease collection and remove outstanding receivables from the books and release those inventory which exceeded the quantity stipulated by the Minister.

NUMBER	OPERATION	STATE COMPANY (PERJAN)	PUBLIC CORPORATION (PERUM)	CORPORATE COMPANY (PERSERO)
07	The appointment and termination of Management	President Director by the President as proposed by the Minister. Director by Minister.	President Director and Director by the President and Proposed by the Minister.	President Director and Director by the Minister of Finance as RUPS based on the recommendation of the Minister.
08	Supervision	By the Minister and technical-wise implemented by the Director General and administration-wise for financial and personnel matters by Secretary General. Inspector General conducts supervision and tests and evaluation as well as examines PERJAN.	By a Supervisory Committee responsible to the Minister. The Minister designates further authority to the Director General in line with his field of responsibility in developing the Supervisory Committee.	By the Supervisory Board responsible to: a. RUPS or b. Minister of Finance.
09	Reporting	Submitted to the Minister with copies to the Minister of Finance, Director General and Secretary General.	To the Minister with copies to the Minister of Finance, Director General and Supervisory Board.	To the Minister of Finance with copy to the Director General.
10	Personnel Affairs (INPRES: 17/1967)	Civil Servants	State Company personnel placed under those regulations outside the prevailing stipulations for civil servants or private company/holding companies of the state.	Ordinary private company employee.
11	Capital	Included in the part of State Budget (APBN) which is managed by the Department that subordinates the PERJAN.	All the capital is owned by the State from a separate portion of the state's wealth.	The entire capital or part of the State property from a separate portion of the state's wealth.
12	Legal Status (UU No.: 9/1969)	Connected with the public law and forming a part of the Department/Director General.	A legal Entity based on the Laws.	Legal Entity.
13	Activities	IBW	Laws No.: 19 year 1960	KUHD (Indonesian Trading Laws)

(4) IBW and ICW

- 1) IBW is "Indische Bedrijven Wet" in Dutch and "Act on Government Undertakings in N.E.I. (Netherlands East Indies)" in English.

IBW is the act stipulating that a state-enterprise is permitted to reserve and utilize its profit for it according to the provisions of the said act.

- 2) ICW is "Indische Comptabiliteits Wet" in Dutch and "Act on Accountability (chamber of A/C) in N.E.I. (Netherlands East Indies) in English.

ICW is the act stipulating that all the profits of a state-enterprise, if any, are National Treasury receipts without permitting it to keep any profit for it.

It is recommended that an entity should be at least entitled to reserve such a revenue from its activities as TV Licence Fee, Commercial Fee and so forth by adopting for it not ICW but IBW which is not contrary to the provisions of Perum.

(5) Establishment of a State-Owned Broadcasting Enterprise

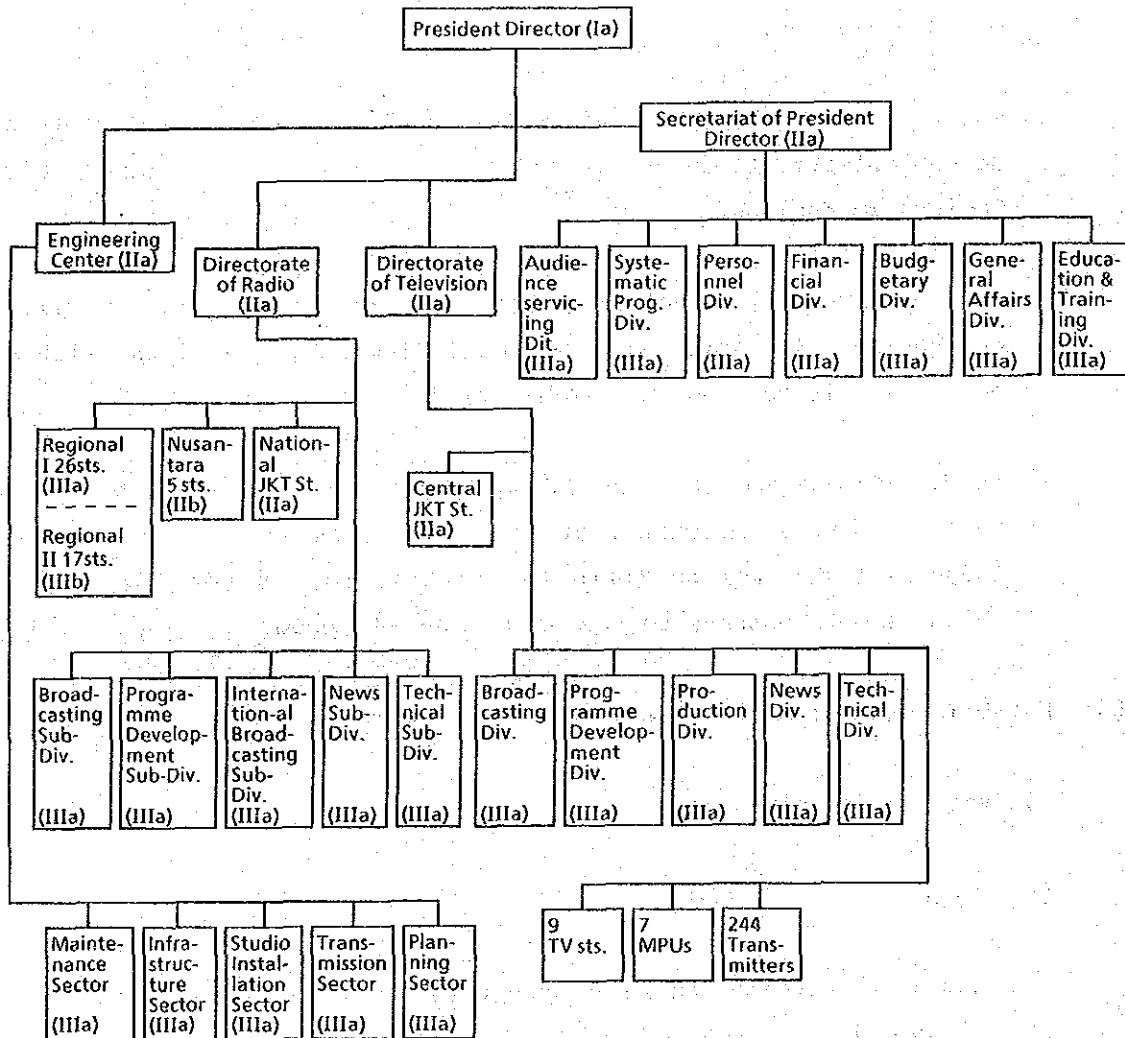
- 1) Type and Organization

- (a) Type

Perum is recommended as a type because it is considered easy to select it as proposed by DEPPEN since its provisions exist in force.

(b) Organization

The following organization similar in a sense to that in the proposal of RTF is recommended as an organization for the application of LPN-RTRI since it is considered practical in light of the existing conditions.



2) Time Schedule

One year before Repelita VI, the establishment of LPN-RTRI will be declared in the form of a state-owned public enterprise and all the necessary documentations will be ready to be approved subject to the commencement in operation of LPN-RTRI at the beginning of Repelita VI.

Repelita V		VI
	Four Years	One Year
(a)	Preparation →	
(b)	Declaration & Approval of Documentation ●	
(c)	Commencement in Operation	● →

1-2 Staff Plan

1-2-1 Estimation of Number of Staff/personnel

It is necessary to secure required number of operational staff/personnel to execute the new projects scheduled to be implemented or commenced during Repelita V. The details of the projects are already explicated in the reviewed Long-term Plan and also this report. The total number of required staff/personnel and the number of personnel to be shifted and the number of personnel to be increased for Repelita V by those projects are estimated on the result of the study through materials and discussions with officials concerned in the respective organs.

The result of the estimation by each project is summarized on Table 1-2-1. Details of breakdown are shown in the Supporting Report. The basic preconditions for the estimation has already been given in 2-7 CHAPTER 2 in this Volume and detailed notes for conditions are given after the Table.

According to the result of the estimation, it will require a total of 1,226 persons for the projects scheduled during Repelita V, and among them, 407 persons will be possible to be shifted from existing jobs and 819 persons will be newly recruited.

Those persons to be newly recruited include both technical and news/programme persons who requires highly professional skill and knowledge for broadcasting operation, and special arrangement to recruit proper persons having basic capability should be made for recruiting.

Table 1-2-1 Distribution of staff/Personnel by Item of Projects

(Unit: Person)

Item	News/Programme			Technic			Administration		
	Plan	Shift	Increase	Plan	Shift	Increase	Plan	Shift	Increase
(1) Enhancement Phase 1 Programme production facilities a) OB Van 3 sets (Jakarta, Yogya, Denpasar) Total (TV)	(3)	(3)		(27)	(24)	(3)			
b) ENG system 23 sets (at 9 stations) Total (TV)	(23)	(19)	(4)	(46)	(46)				
(2) Enhancement Phase 2 Programme production facilities a) ENG system 8 sets (at 8 stations) Total (TV)	(8)	(8)		(16)	(16)				
b) Production Studio at 3 stations (B. Aceh, Samarinda, Ambon) (Existing function of Balikpapan studio shall be shifted to Samarinda) Total (TV)	(150)	(4)	(146)	(150)	(24)	(126)	(100)	(14)	(86)
(3) TV studio extension at Bandung Total (TV)	(75)	(36)	(39)	(75)	(33)	(42)	(50)	(17)	(33)
(4) Production studio extension (No. 5 & No. 6 studio at Jakarta) Total (TV)	(20)	(20)		(36)	(36)				
(5) Maintenance Base in E/C a) Jakarta Total (EC)				(96)	(51)	(45)	(15)	(15)	
b) Local Maintenance Base Medan, U. Pandang (Repelita V) Total (EC)				(30)	(16)	(14)	(4)	(4)	
(6) Broadcasting network expansion (Radio) a) RN-II SW high power transmitting station - Jakarta - Ujung Pandang b) Overseas broadcasting SW high power transmitting station - Jakarta - Medan - Biak Total (Radio)	(25)	(10)	(15)	(27)	(11)	(16)	(0)		
(7) Broadcasting network expansion (TV) 50 relay stations Total (TV)				(150)		(150)	(100)		(100)
Total RRI	25	10	15	27	11	16	0	0	0
TVRI	279	90	189	500	179	321	250	31	219
EC	0	0	0	126	67	59	19	19	0
Grand Total-1	304	100	204	653	257	396	269	50	219

Grand Total

	Plan	Shift	Increase
Total	1,226	407	819
Total of RRI	52	21	31
Total of TVRI	1,029	300	729
Total of E/C	145	86	59

Notes:

- (1) a) OB vans at Jakarta, Yogyakarta, Denpasar

A video engineer will be increased to handle a sophisticated video equipment of high technology. The remaining staff/personnel will be shifted from the existing allocation.

- (1) b) ENG System 23 Sets and (2) a) ENG System 8 Sets

Existing staff/personnel for film shooting will be shifted to operate the new ENG System.

- (2) b) Production studio at Banda Aceh, Samarinda, Ambon

Samarinda studio among the above 3 stations, is planned to shift from the existing Balikpapan studio.

The standard allocation of the staff/personnel for a TV station having production facilities is considered as follows based on the existing data at the other TVRI stations.

News/Programme	75
Technic	75
Administration	50

In this table the existing staff/personnel allocated to MPU at Banda Aceh and Ambon will be shifted into the above numbers.

- (3) TV studio extension at Bandung

The same standard mentioned in (2) b) is applied.

- (4) Production studio extension, No. 5 and No. 6 studio, Jakarta
For both programme production and technical operation, the existing staff/personnel will be shifted to the new studios.
- (5) Maintenance Base in EC
In order to manage a maintenance work with other engineering activities, each function within EC shall be enhanced in parallel with the schedule implementation of the project.
- (6) b) RN-II SW high power transmitting station at Jakarta and Ujung Pandang
As for RN-II (educational Programme Network), the implementation of the plan is scheduled to be commenced during Repelita V and will be completed during Repelita VI. In this Table a required number of programming personnel is partly considered for upgrading educational programme production at Jakarta prior to completion of the network.
- (6) c) Overseas broadcasting SW high power transmitting at Jakarta, Medan and Biak
A required number of staff/personnel for expansion of overseas programme production at Jakarta are also included in this item.
- (7) Expansion of broadcasting network (TV)
A required number of technical and administrative are planned to increase for expansion of TV network by construction of 50 stations.

1-2-2 Staffing Plan

As explicated in the previous section in this Report, it has been estimated that the Projects scheduled in the period of Repelita V will need about 400 persons to be transferred from existing positions and about 820 persons to be newly recruited. These figures only concern with required numbers. And as a matter of fact, actual deployment of the staff/personnel should be carefully planned so that the completed projects will function in a smooth and effective way.

It is recommended that personnel deployment will be arranged by combining the senior staff as the core of operation with the junior staff including newly recruited persons. The senior staff shall be transferred from existing operational positions under a total rotation plan from the viewpoint for the better operations of every station.

1-2-3 Staff Training

In order to ensure development of the broadcasting services in response to the demand of the times and to the trust placed by the nationwide radio and TV audiences, it is most essential for each of the staff members engaged in the broadcasting to continue his or her efforts to enhance the abilities to discharge the duties assigned to each. It is, in fact, for that purpose that the training of personnel is regarded as being absolutely indispensable.

(1) Training for New Employees

The MMTC was established for the purpose of offering training courses for the new employees in 1985. At present, two types of courses are conducted regularly; the Diploma I Course and the Enrichment Course. While these two types of courses can be considered quite sufficient as training courses for new employees as far as the contents of the curriculums and the length of training period are concerned, either of the two conversely falls much too short of meeting the training demands from RRI and TVRI.

In order to cope with the steadily growing number of mass-hiring of new employees by RRI and TVRI from now on, it is considered necessary to organize, in parallel with the courses at MMTC, short-term orientation courses at each of RRI-TC and TVRI-TC, or on regional basis.

As for the curriculums, it is necessary to take the following into account as the fundamental factors:

- 1) General matters concerning the state, society, morals, etc.

2) Basic knowledge required in carrying out the duties assigned to personnel in the respective fields of broadcasting.

(2) Professional Training for Personnel of Middle and Upper Classes

This is the training aimed at providing the personnel with professional knowledge required in enhancing the quality of staff members in their respective fields of work, such as programme production, technical operation and administration.

In conducting this professional training, it is desirable to use the facilities of RRI-TC, TVRI-TC or the MMTC.

As for the curriculums, they shall be compiled with the aim of providing the trainees with a broad range of knowledge and abilities. For that purpose, the curriculums shall be so compiled to include provision of:

1) General knowledge concerning the state, society, morals, etc.

2) Advanced knowledge required in carrying out the duties assigned to personnel in the respective fields of broadcasting.

(3) Specialized Training for Personnel in Specific Fields

This is a specialized training to be conducted to enable the personnel to carry out their respective specialized works effectively in each field of broadcasting.

This specialized training should be conducted extensively, not only by using the facilities at RRI-TC, TVRI-TC and MMTC but also seizing various opportunities, such as the routine work meetings, discussions, conferences and the work of installing technical facilities, depending on the content and nature of the training course concerned.

The curriculums for the specialized training course shall be determined in such a way as to suit the objectives of the course.

(4) Special Training Relating with the Projects

Apart from above-mentioned training courses provided by the training organs such as MMTC, RRI-TC and TVRI-TC, the special training for the equipment and facilities to be provided by the projects must be conducted to the technical staff concerned. In order to operate and maintain the equipment and facilities of highly sophisticated electronic technology in smooth and effective way, a special training for the technical staff concerned is absolutely indispensable.

It is recommended that RTF will make all the effort to make them participate the training course taking such opportunity as ones offered by overseas broadcasters or institutions in the developed countries, the factory test and installation work by the manufacturer and so on.

(5) The Conducting of On-the-job Training Courses

On-the-job Training (OJT) is to enhance one's ability to discharge his or her own duties through engagement in day-to-day work conducted at one's own workplace. Hence, there is the need of conducting systematic OJT activities in all fields of broadcasting and on all levels. Especially in order to enhance the professional ability of personnel in the younger generation, appropriate guidances given by senior staff members are most essential.

For that purpose, it is recommended that each broadcasting station will have an OJT system to be conducted by senior leaders through daily operational activities and that the central training organs should give necessary guidances to each station, distribute teaching materials, dispatch lecturers and allocate budgets.

Especially for the new projects, the technical knowledge and skills for the equipment and facilities should be distributed to all the technical staff concerned in the station by the appropriate OJT system.

1-3 Broadcasting Programme

1-3-1 Radio Broadcasting Programming Plan

In order to enable the listeners in the provinces to receive programmes of good quality through RN-I, RRI will do its best to enrich the content of the daily 24-hour programmes and will at the same time endeavor to further improve the quality of the programmes by making effective use of improved facilities.

As to RN-III and Overseas Service, too, preparations will be made to start compiling the programmes for transmission as soon as the transmission facilities and lines are established and are ready for use.

(1) RN-I Broadcasting Programming Plan

1) Improvement of the Programmes and 24-hour Broadcasting

It is expected that radio studio facilities of RRI network stations will be greatly improved with modernized production facilities by the projects which have been already scheduled and presently under planning. The stations covered by the Projects are a total of 30 regional stations as well as Jakarta National Stations, during the period of Repelita V.

Upon completion of the studio facilities, the production capability will be greatly enhanced compared with the current conditions.

RRI is currently broadcasting the RN-I programmes following the 24-hour time schedule as a standard pattern for all the stations, and the percentage ratio by category is as below:
(1989/90)

News and Information	25%
Education	17%
Culture and Entertainment	43%
Others (Commercial, etc.)	15%

Table 1-3-1 shows the time schedule standard pattern of RN-I.

RRI will make a best effort to enrich the contents of each programme allocated in the time schedule by fully utilizing the improved production facilities. It is also expected that the integrated programmes produced by each regional station for the nation wide broadcast will be improved in both quality and quantity.

Table 1-3-1 Time Schedule Standard Pattern of RN-I

<Dec. 1989>

	0	1	2	3	4	5	6
Sun	N	N	N	N	N	N	Educational
Mon	E	M	N	M	M	N	Educational
Tue	W	M	N	M	M	N	Educational
Wed	S	M	N	M	M	N	Educational
Thu							
Fri							
Sat							

	6	7	8	9	10	11	12
6	N	M	N	M	N	N	M
7	E	M	N	M	M	N	M
8	M	N	N	E	M	N	M
9	N	M	N	M	M	N	M
10	N	M	N	E	M	N	M
11	N	M	N	M	M	N	M
12	N	M	N	E	M	N	M
13	N	M	N	M	M	N	M
14	N	M	N	E	M	N	M
15	N	M	N	M	M	N	M
16	N	M	N	E	M	N	M
17	N	M	N	M	M	N	M
18	N	M	N	E	M	N	M
19	N	M	N	M	M	N	M
20	N	M	N	E	M	N	M
21	N	M	N	M	M	N	M
22	N	M	N	E	M	N	M
23	N	M	N	M	M	N	M
24	N	M	N	E	M	N	M

« M = Music and Entertainment E = Education N = News »

2) Regional Programmes

It is expected that radio broadcasting transmission lines from Jakarta to each regional station will be greatly improved from narrow-band telephone lines to wide-band broadcasting lines.

At present, the programmes at each regional station relayed from Jakarta are confined to only 20% of the all broadcasting programmes for obligatory relaying of broadcast of news and the government's publicity programmes. The remaining 80% of programmes are produced at their own stations. By the improvement of the transmission lines, programmes from Jakarta are available for the regions in high quality.

Considering the above-mentioned conditions, programming plan at all the RRI regional stations will be such that 60% of the regional broadcast programme be relayed from Jakarta for additional broadcasting of superior educational and entertainment programmes produced at Jakarta station.

Table 1-3-2 shows Organization and Distribution of RN-I programme.

Table 1-3-2 Distribution of RN-I Programme

Programme	CLASS OF STATION			
	National station Jakarta		Nusantara and Regional station	
	A	B	A *1	B *2
National Network (News and other programme *3)	60%			60%
Regional Network (Local Programme)	40%		40%	

Remarks *1 Original production programme
 *2 National broadcast programme
 *3 When high quality programme transmission line is available
 (1995)

Laying down additional up-stream lines will be deferred after the year 2000. Therefore, programme-exchange between stations concerned will be mostly conducted by means of the tape-exchange.

3) Fixing of Broadcasting Frequency

It is often observed that the most of RRI stations operate their transmitter by changing one frequency to another as many as 4 times in a day. This fact supposedly offers much inconvenience to the audience who really wish to enjoy listening to radio programmes.

From the viewpoint of audience servicing in programming aspects, improvement should be made on the transmitter operation consulting with the technical side in each station.

(2) RN-III Broadcasting Programming Plan

As for the RN-III network, 6 regional stations (in Medan, Bandung, Yogyakarta, Semarang, Surabaya and Banjarmasin) will have FM stations under the project committed by RTF. Programmes of these stations will be the same, in principle, as those of RN-I.

However, those programmes for RN-I produced in the regional stations by utilizing stereophonic resources can be transmitted in stereophonic through its RN-III transmitter.

In addition to that, the stereophonic programmes from Jakarta Metropolitan channel will be available upon completion of the transmission lines for those stations. As a result, a mixed programming with monophonic and stereophonic programmes will be possible in accordance with the request of listeners.

(3) Overseas Broadcasting Programming Plan

When Jakarta studios are rehabilitated and new shortwave stations are built in Jakarta, Medan and Biak, the current overseas broadcasting will be conducted with almost 24-hour service in 15 languages as RRI envisages.

1-3-2 TV Broadcasting Programming Plan

(1) Improvement of TV programmes

It is expected that broadcasting facilities of TVRI will be greatly improved by the projects under implementation and planning by RTF during the period of Repelita V.

According to the projects, two more studios and new editing system in TVRI Central Station will be furnished and TV production facilities at four regional stations will be enhanced with the latest equipment of high technology. Furthermore, three stations will be enhanced with new TV production facilities.

In addition to above, a mobile TV Up-Link is planned to be introduced at two major cities in Java and Sumatra islands. The TV Up-Links will enable to broadcast live programmes through TVN-1 from distant sites covering various events and traditional topics.

In order to enable the viewers in the whole Indonesia to receive programmes of good quality through TV broadcast, TVRI should do its best to enrich the contents of programmes and should at the same time endeavor to further improve the quality of the programmes by making effective use of the improved facilities.

(2) Sports and News Programmes

In relation to Broadcasting of Sports, there are sports activities of national or international character, such as PON (National Sports Week), Asian Games, Olympic Games and other interesting sport events by direct broadcast or as a journal.

TVRI broadcasted special programme of 12th PON (Indonesian National Sport Week) which was held in Jakarta from October 18th through 28th. More than 5094 athletes from 27 provinces of Indonesia participated in the games and competed for 1485 medals. The programmes covering PON attracted many audience and the audience rating reportedly reached 40 to 50%.

For the screening of all games, TVRI News Division working with a united effort broadcast more than 63 hours during the week.

The News Division mobilized 635 persons, 14 ENG crews (crews from 8 local stations) and 7 OB Vans (Jakarta, Surabaya, Semarang stations)

If broadcasters make more events planning as possible, Indonesian people will obtain more profit from broadcasting programmes. The broadcast must motivate the society, inspire the people's spirit that is based on the principles of the Pancasila.

(3) Upgrading of Programme by ENG System

TVRI covers news events by means of both film camera and ENG system. In the case of a regional station, the covering ratio by the film cameras and ENG cameras is about 2:1 whereas the ratio is 1:2 in the case of Jakarta station.

The film camera system is generally inferior to the ENG system in picture quality. In order to upgrade quality of the TV news programmes, it is recommended to use more ENG systems by making effective use of the enhanced facilities. Furthermore, it needs a film development machine which is rather troublesome in handling and the waste fluid causes an environmental pollution.

(4) Imported Foreign Programmes

The Japanese TV Drama "OSHIN" Series which was broadcast on Monday, as of October moved to every Saturday at 19:40. "OSHIN" series will continue until March 1990.

TVRI's percentage of imported foreign programmes is from 20% to 30% of total programme time. It is mainly entertainment, especially movies or music programmes. TVRI purchases foreign-made programmes with music programmes. TVRI purchases foreign-made programmes with a limit of 20% of its total programme time. But, from April 1990, a limit of 15% will be set, as TVRI starts using new dubbing system equipment. TVRI will be able to make Indonesian version of foreign-made film drama TV series and other programmes.

(5) Expansion Plan of existing TVRI Broadcasts

As explained earlier, TVRI broadcasts about 8 hours a day (Sunday and holiday - 14 hours) on TVN-I from Jakarta, and about 2.5 hours a day on the Metropolitan channel for Jakarta area.

There are still the time zones remained unfilled with TV broadcasting programmes. In order to fulfil audience's strong desire for more programmes and to attain an effective use of TV channels, an expansion plan of the existing TV network will be drawn up as follows:

- TVN-I will gradually extend its daily broadcasting time until it eventually reaches 16 hours. Efforts will be made to further enrich the news, educational and cultural programmes in the morning and in the afternoon, and entertainment, news and the Indonesian versions of foreign programmes in the night.
- The Metropolitan station in Jakarta will gradually shift to programming centering on educational programmes, aiming at daily broadcasts of more than six hours.
- The following broadcast programming shows the plan to extend broadcasting hours gradually, utilizing the open hours of the TVN-I and the Jakarta Metropolitan station, in the early morning and in the afternoon hours. In this case, the broadcast programming should be carried out, closely considering audience desire, time use survey, production of programmes and technical operation by TVRI.

The expansion plan is shown in Table 1-3-3.

Table 1-3-3 Expansion Plan of TVRI Programmes

TVN-I (Ch6) Plan						Metropolitan TV (Ch8) Plan				
Stage Time	1	2	3	4	5	1	2	3	4	5
7:00	News (TVRI)									
8:00		Morning Show (NEW)								
8:00										
9:00			Education ① (New)							
10:00										
10:00				Education ② (New)						
11:00										
11:00					Education ③ (New)					
12:00										
12:00										
12:00										
13:00										
13:00										
14:00										
14:00										
15:00										
15:00										
15:00										
16:00										
16:00										

Ⓜ : Repeat

Each stage for programme plan of TVN-I and metropolitan TV is as follows:

1) TVN-I

- (a) On the first stage, as for the morning broadcasts from 7:00 a.m., the one hour will be reserved for "TVRI news".
The broadcast of afternoon programmes of "Afternoon Show" will start at 3:00 p.m..
- (b) The broadcast of the one-hour Programmes of "Morning Show" from 8:00 a.m. will start in the second stage.
From 2:00 p.m. "Afternoon Show" including science programmes will broadcast for one hour. From 3:00 p.m., there will be a one-hour broadcast of "Open University" programmes.
- (c) From the third stage, two 30' women's educational programmes ① time-slot will be reserved for 9:00 a.m.. The one-hour from 1:00 p.m. will be reserved for "Afternoon Show" programmes. During the one-hour from 2:00 p.m., there will be broadcast of repeats of educational programmes ①.
- (d) On the broadcast of the fourth stage, two 30' new educational programmes ②, will start at 10:00 a.m.. 30' TVRI News and 30' "Afternoon Show" will begin from noon. From 1:00 p.m., the repeats of educational programmes ① will be broadcast. On the one-hour from 2:00 p.m., educational programmes ② will be repeated, too.
- (e) On the fifth stage, two 30' new educational programmes ③ will start at 11:00 a.m. From 2:00 p.m., the same educational programmes ③ will be repeated.

2) Metropolitan TV

- (a) On metropolitan TV (channel 8), as for the morning broadcasts from 8:00 a.m., the one-hour time-slot reserved for the "Open

"Open University" will be filled with 2 programmes (each 30 minutes) in the second stage.

(b) The broadcast of the two 30' programmes for women and children from 10:00 a.m. will start in the third stage.

(c) From the Fourth stage, one-hour family programmes will be reserved for 11:00 a.m. On the same stage, Programmes will be produced for broadcast to 30' TVRI news and 30' "Afternoon Show" (same time as channel 6), starting at noon. The broadcast of "Afternoon Show" programmes will start at 1:00 p.m. The first one-hour will be wide programmes including some women's programmes.

(6) Estimation of the Total Production Cost of New Educational Programmes

According to the Development Plan of TVN-I (channel 6) and Metropolitan (channel 8) Time Table, the total production cost for each developing stage is calculated as shown below, assuming that: (Table 1-3-4 A, B)

- 1) Unit production cost of each programme is shown as the first stage of the operation.
- 2) The unit cost is increased at a rate of 10% due to the present escalation of commodity prices.
- 3) Repeat programmes will cost 30% of the original production cost for royalty fees.
- 4) As to the "Open University" programme, the production cost is estimated in another budget.

Table 1-3-4 A Cost of TVN-I (ch 6) Production

(thousand Rp)

	1 stage	2	3	4	5
A.M. 7:00	News				
60'	200	220	242	266	300
8:00		Morning Show (New)			
60'	250	275	303	333	366
9:00	Education	(New)①			
30'×2	200×2		484	532	600
10:00	Education	(New)②			
30'×2	200×2			532	600
11:00	Education	(New)③			
30'×2	200×2				600
12:00	200	News		266	300
30'×2	300	Afternoon Show		400	440
13:00			Afternoon Show (New)	Education ①	
60'			363	® 180	® 200
14:00		Afternoon Show	Education①	Education②	Education③
60'	300	330	® 160	® 180	® 200
15:00	Afternoon Show	Open University			
60'	300	®			
Cost	500	825	1552	2669	3586
Total (cost×365)	182,500	301,125	566,480	981,485	1,316,190

NOTE : ® = Repeat

<Total 3,347,780>

Table 1-3-4 B Cost of Metropolitan TV (ch 8) Production

(thousand Rp)

	1 stage	2	3	4	5
A.M. 8:00		Open University ®			
9:00					
30'					
10:00	Women 200	® 220	242 ®	266 ®	300 ®
30'	Children 200	® 220	242 ®	266 ®	300 ®
11:00	Family	® 330		400	440
60'	300			®	®
12:00			News	same (ch 6) ®	
30'			Afternoon Show ®	same (ch 6) ®	
13:00	300		Afternoon Show®	400	440
60'				®	®
14:00					

Cost		484	1,332	1,480
Total (cost×365)		176,660	486,180	540,200

NOTE : ® = Repeat
 ® = New

<Total 1,203,040>

1-3-3 Setting up of Liaison Coordinating Committees for Programmes, News Gathering and Audience service

(1) Liaison Coordinating Committee for Educational Programmes

For the purpose of planning educational programmes and setting up a related production system, a "liaison coordination committee" will be formed by such bodies as RRI, TVRI, Open Learning University, the Ministry of Education (Technology Communication Research Institute and others), PPFN (the State Film Production Center) and the Ministry of Health.

1) Flow Chart Plan for Educational Broadcasting

To be divided into 5 steps and the duration for each step to be set up for a short period of half year or one year. (Table 1-3-5)

Step 1: Organize and establish an Educational Radio and Television Programme "Committee" of the following members. The costs will be 5,000 Rp per member and the committee, to meet once a month.

Step 2: (a) Set up training courses for producers, TV writers, media teachers and the planning and drawing up of pilot programmes and texts. Subjects to be science, mathematics, national language, music, foreign languages, etc.

(b) Survey and analysis of TV viewing in school as well as the reaction and effects. The cost will be 400,000 Rp.

Step 3: (a) Programme planning of adult programmes such as science, technology, computer, health, agriculture, family planning and environmental problems.

(b) Survey and analysis of new trends in educational programmes. The cost will be 200,000 Rp.

Step 4: (a) Planning and formation of programmes on history and culture and for youth and women. *

- (b) Investigate media service outlets for all the programmes and draw up preparation plans for programme material, studio props, publications, etc.

Step 5: (a) Preparations for pre-school and lower age children (primary schools and kindergarten) television programme series. Preparations for adult education television programme series. The cost will be 200,000 Rp per programme.

- (b) Television school broadcast (including educational broadcasting) to be broadcast on general television.

<* Women Programmes>

The Department of Education and Culture is activating a course on management for women organizations, manages the group of learning and the group of selfsupport in the rural areas.

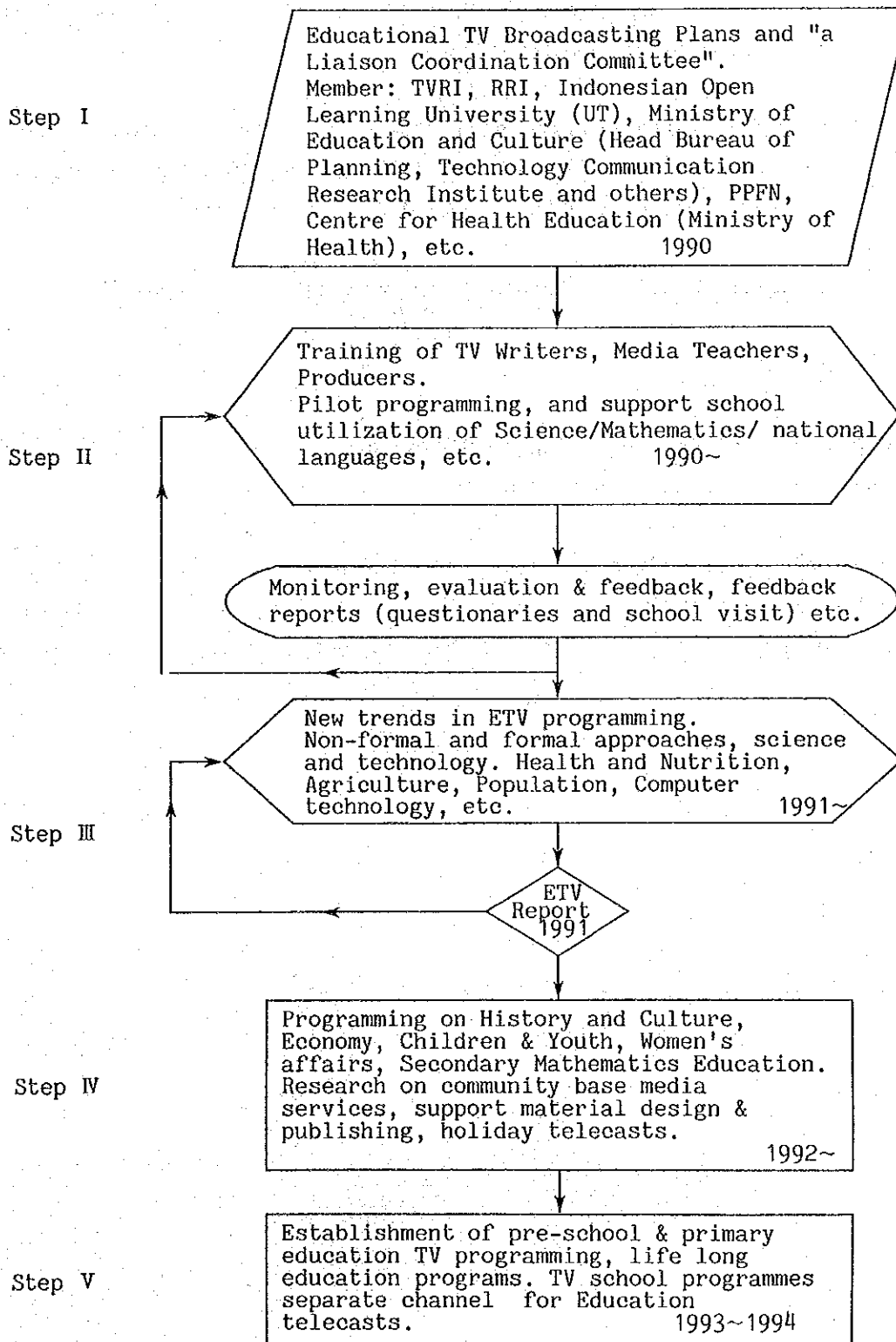
The National Centre for Research, Science and Technology produced a documentary on the role of women in Indonesia. Because of the above activities in the framework of the enhancement of the role of women in the development forms packages of activities it must be executed by the coordination of various integrated institutions. The programmes broadcast by RRI are the majallah Udara Ruang Wanita (Women Column Air Magazine) and the Majallah Udara Wanita Tani (Peasant Women Air Magazine). Programmes on women which are broadcast by TVRI are called packages on women and development above mentioned information packages are spread through RRI and TVRI as periodicals in accordance with the programme pattern as well as an incidental programme through a news coverage, as report, as interviews, etc.

The Department of Health is intensifying the Tamuan Gizi (Improvement of nutrition), the information of health and the use of mother-milk.

The Department of Agriculture launched various farmer activities as model executed by groups of women farmers, also the transfer of technology and the procurement of production facilities need to strive for the raising of income.

The Department of Religious Affairs is intensifying the information on the marriage act, the guide to the comprehension and practice of Panca Sila, courses of orientation of religion and packages on religious services.

Table 1-3-5 Educational Programmes
(Project Flowchart) 1990 ~ 94



(2) Liaison Coordinating Committee for News Gathering

For the purpose of rationalization and efficiency in the gathering of news material, RRI and TVRI should as soon as possible establish a "Liaison Coordinating Committee".

Main target will be placed on the mutually close cooperation in the news gathering between RRI and TVRI ranging from the daily topics to the large scale of events such as the Olympic Games.

The committee will be proposed to start as early as possible.

(3) Audience Service

Broadcast-audience servicing should be one of the most important jobs for a broadcaster to support its business activities.

Above all, the audience service in programming aspects is important in keeping contact with audience by PR of the Programmes and absorbing audience desire. The job should be done by cooperative work of RRI and TVRI.

1-4 Broadcast-audience Service

1-4-1 Present Status and Necessity of Measure concerning Broadcast-Audience Servicing

Regarding the measures concerning the servicing of radio and television audience, a plan to improve service offered to listeners/viewers in their reception of radio or TV broadcasts was proposed in the 1984 Study Report on the Long-term Plan. During the years that followed, no notable progress has been made in each aspect. There are personal relation, broadcast-reception technical services and collection of license fees.

Meanwhile, speaking of commercial broadcasting station, a large number of non-RRI stations have been quite active in radio, producing and broadcasting unique types of programmes. In the case of television, too, a commercial station have gone into operation. As a result, a number of regular audiences have started to emerge for such commercial stations. Thus the need arises for both RRI and TVRI to establish to offer positive services to the listeners/viewers by helping to improve their reception of broadcast.

To that end, it is proposed that both RRI and TVRI should take necessary measures, such as, surveying and analyzing the audience requests and desire about programmes. Should the receiving facilities were found to be inadequate, helping the Audiences improve the reception condition. The important thing, after all, is to enhance the audience's feeling of intimacy toward the broadcasting stations by asking positive approach to the listeners/viewers through day-to-day servicing.

1-4-2 The Work Concerning Audience Servicing

The work concerning Audience Servicing is divided into the following three categories; public relations, broadcast reception engineering services and activities related to collection of TV license fees. All three categories are to be carried out in mutual cooperation.

The contents of Audience Servicing are as follows.

(1) Public Relations

- 1) PR of information about programmes (to newspapers, periodicals, weekly magazines, etc.)
- 2) Conducting questionnaire surveys on listeners/viewers and analyzing the results of the surveys.
- 3) Classifying the letters from listeners/viewers, analyzing them and answering them.
- 4) Setting up a consultation counter.
- 5) Holding audience's meetings
- 6) Publication and distribution of PR pamphlets, picture postcards and other PR materials.
- 7) Planning and production of PR programmes.
- 8) Participating in the PR activities of the local DEPPEN office.
- 9) Other activities

Since the PR department of the DEPPEN headquarters is also handling similar types of work, it is necessary to establish a cooperative system with them.

(2) Broadcast-Reception Engineering

- 1) To have the engineer go around the service area of his station and offer suggestions and guidance if any inadequacy in receiving equipment is detected.
- 2) If some outside interferences were found, the engineer should investigate and make recommendations on the solution to the problem.
- 3) To take steps to organize a local servicing system comprising electric-appliance shops.
- 4) Spread of knowledge about broadcast reception techniques. (by broadcasting programme and pamphlets.)
- 5) Other work.

(3) Work relating to TV License Fee

- 1) Newly establishing a section in charge of cooperation with Pos dan Giro.
- 2) Distribution of a "Broadcast-receiver's Seal" to each household which has paid TV license fee.
- 3) Planning and implementing campaigns to promote the payment of TV licence fee.
- 4) Other work.

As regards the work mentioned in 1) above, such kinds of work as the promotion of the payment through investigation and persuasion of those who have not yet paid and the enhancing of fee-collection rates will be actively carried out.

1-4-3 Specialized Organizational Structure

In order to effectively carry out the work as mentioned above it will be necessary to establish a specialized department/division. Since Audience Servicing should be carried out on a nation-wide scale, the organizational structure would make Jakarta as the headquarters and newly set up a responsible section to handle the duties within the organizations of important stations in the different districts. All efforts should be made to complete this organizational structure in conjunction with the amalgamating of radio and television under the Repelita V.

(1) Organization of Jakarta Headquarters

To be divided into the following three divisions

- 1) Public Relations Division
- 2) Broadcast Reception Engineering Service Division
- 3) Business Division (Work related to broadcast licence fee collecting)

Each division shall not only carry out servicing duties but also supervise and assist subordinate organizations in their servicing activities. The Jakarta Headquarters shall be an independent body and not under the supervision of either RRI or TVRI. Its duties shall involve listeners and viewers of both radio and television.

(2) Organization of Regional Departments

In the initial stage, a section to be in charge of audience services should be newly set up in the organization of large stations in important cities with dense populations. The section is to be setup within either a RRI or TVRI station or in both. Initially the section is to be of a small scale and its duties to be carried out with the assistance of personnel from production, engineering, business sections. The work and structure are to be gradually increased and as previously mentioned, direct efforts towards a specialized section in time with the Integration of RRI and TVRI under the Repelita V.

1-4-4 Preparatory Work towards Broadcast Audience Servicing

As mentioned, while specialized organizational structure is necessary for broadcast audience servicing, at the present time, except for a certain amount of public relations, there are no personnel with experience in this field. Especially to Broadcast Reception Engineering Services, there are no specialized experts in either RRI or TVRI.

Thus for the time being, it is recommended that a small group be set up as a Preparation Committee for the purpose of drawing up plans for a broadcast receiving service system. It is hoped that this operation can be finished in a short period.

(1)

Work	Staff
Supervise	Senior staff of RTF
Work relating to PR	Staff of programme and administration (both of RRI and TVRI)
Work relating to Broadcasting Reception Engineering	Staff of technical department (both of RRI and TVRI)
Work relating to TV License Fee	Staff of TVRI administration

(2) Contents of Preparation Operations

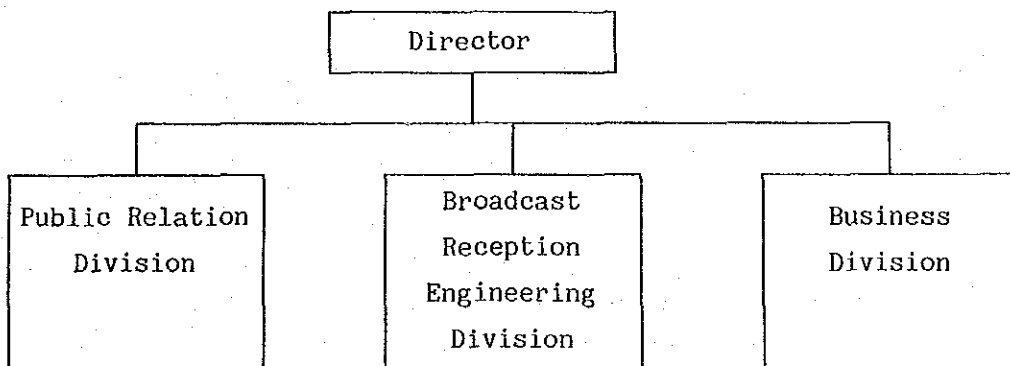
- 1) Drawing up of work operation plans
- 2) Drawing up of organizational expansion plans
- 3) Personnel plans
- 4) Training of personnel plans
- 5) Selection of regional stations
- 6) Budget plan
- 7) Others

(3) Establishment of Organizational Structure and Work Operations

Upon the completion of preparation, it is suggested to establish a Audience Service Centre (tentative title) by RTF, and to start operations. This Centre starts with a small organization in the initial stage while personnel assistance from the other department is needed to carry out the work. Such personnel are to be gradually absorbed and the organizational structure to be expanded. The structure should be completed at the time of the integration of RRI and TVRI.

The chart of Organization is shown below.

Fig 1-4-1 The Organization of Audience Service Centre



1-4-5 Results

The establishing of a Broadcast Audience Servicing system and improved Reception Engineering Service along with strengthening of publicity activities, listeners and viewers will come to regard the broadcasting organization with more familiarity and trust. The result will be a rise in the number of audience which will effect the collecting of TV licence fee favorably. Also, it can be expected that the number of radio listeners will drastically increase which will amount for increased advertising income.