

社会開発調査部報告書

社会開発調査部

(社)

社会開発調査部

社会開発調査部

社会開発調査部

社会開発調査部

社会開発調査部

社会開発調査部

社会開発調査部

社会開発調査部

THE REPUBLIC OF INDONESIA

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

FINAL REPORT

VOLUME 1

SUMMARY

JICA LIBRARY



1083005171

21267

MARCH. 1990

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団

21267

INTRODUCTION

INTRODUCTION

This report is a summary of the following two final reports concerning the "Study on the Integrated Radio and Television Servicing Project in the Republic of Indonesia" which was conducted by the Japan International Cooperation Agency (JICA) from April 1989 to March 1990 in accordance with the request of the Government of the Republic of Indonesia:

1. The Study on Integrated Radio and Television Servicing System Project in the Republic of Indonesia (Final Report Volume 2)
2. The Study on Integrated Radio and Television Servicing System Project in the Republic of Indonesia (Final Report Volume 3)

Of the above-mentioned two reports, the former is based on the results of analysis made on the current conditions of broadcasting services in Indonesia as had been clarified through the on-the-spot studies and the studies conducted in Japan. This report is based also on the results of discussions and examinations made with the officials concerned of the Government of Indonesia regarding the improvement and expansion plans for broadcasting facilities. The report has been compiled after the reviewing of the Long Term Plan for the Integrated Development of Radio and Television Broadcasting in The Republic of Indonesia.

The latter report, on the other hand, is the outcome of examinations made on the short-term plan which had been drawn up, in accordance with the result of reviewing of the above-mentioned long-term plan, as a plan to correspond with the Fifth Five-year Development Plan (1989/90-1993/94).

CONTENTS

	Page
INTRODUCTION	
1. BACKGROUND OF THE STUDY	1
2. SUMMARY OF THE STUDY ON INTEGRATED RADIO AND TELEVISION SERVICING SYSTEM PROJECT (FINAL REPORT VOL. 2)	5
2-1 National Development Plan and Broadcasting	5
2-1-1 Present Status	5
2-1-2 Recent Development Projects of RRI and TVRI	6
2-1-3 Development Plans	7
2-1-4 Targets for Development of Broadcasting	9
2-1-5 Demand Forecasts	15
2-2 Review of the Long-term Plan	16
2-2-1 Organization and Management	16
2-2-2 Broadcast Programming Plan	22
2-2-3 Broadcasting Network Plan	23
2-2-4 Facility Plan	26
2-2-5 Programme Transmission Plan	27
2-2-6 Maintenance Plan	28
2-2-7 Measures concerning Broadcast-audience Servicing	30
2-2-8 Staff Plan	31
2-2-9 Implementation Plan	33
2-2-10 Economic and Financial Evaluation	34
2-3 Process Leading to draw up of the Fifth 5-year Development Plan	37
2-3-1 Review of the Targets at the End of the Period of the Development Plan	37
2-3-2 Problems in the Present Status	38
2-3-3 Targets of the Fifth 5-year Development Plan and the Proposed Implementation Plan	39
2-4 Conclusion and Recommendations	43
2-4-1 Conclusion	43
2-4-2 Recommendations	44

3.	SUMMARY OF THE STUDY ON INTEGRATED RADIO AND TELEVISION SERVICING SYSTEM PROJECT (FINAL REPORT VOL. 3)	47
3-1	Policy for the Design of Development Plan	47
3-1-1	Organization and Management	47
3-1-2	Broadcast Programming Plan	50
3-1-3	Maintenance Plan	51
3-1-4	Broadcasting Network Plan	53
3-1-5	Facility Plan	54
3-1-6	Programme Transmission Plan	54
3-1-7	Staff Plan	55
3-2	Outline of the Project	56
3-2-1	Software Project	56
3-2-2	Hardware Project	58
3-3	Implementation Plan	61
3-3-1	Project cost	61
3-3-2	Operation Cost	62
3-3-3	Implementation Plan	62
3-4	Economic and Financial Evaluation	69
3-4-1	Investment Plan	69
3-4-2	Economic and Financial Evaluation	69
3-5	Project Evaluation	71
3-6	Recommendations	73
3-6-1	Recommendations in Software Aspect	73
3-6-2	Recommendations in Hardware Aspect	73

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	Financial Internal Rate of Return	Financial 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

1. BACKGROUND OF THE STUDY

1 BACKGROUND OF THE STUDY

Ever since its independence, the Republic of Indonesia has continuously endeavored to develop and expand its broadcasting services over the years, based on the conviction that, in order to achieve the unification of the nation that consists of multi-racial people living on the spacious territory and to further enhance the nation's educational and cultural levels, the broadcasting media play the most effective and dynamic role as a means of conveying information essential for national development.

Based on the achievements made as a result of implementation of consecutive 5-year development plans starting with the First 5-year Development Plan starting in 1969/70, Indonesia's national development plan has been formulated and it is being implemented as a 25-year long-term plan covering the period up to 1993/94. And in association with this long-term plan, the development plan for the broadcasting sector has also been drawn up and implemented over the years.

With a view to promoting the development of broadcasting in Indonesia, the "25-year long-term development plan for broadcasting" was drawn up in 1975 and the expansion of broadcasting service has been pushed ahead under this plan. In 1984, with cooperation given by JICA, this plan was reviewed in the light of changes that took place during the preceding decade in the nation's economic and social environment and, as a result, "Long Term Plan for the Integrated Development of Radio and Television Broadcasting in the Republic of Indonesia" and "Five Year Plan for the Integrated Development of Radio and Television Broadcasting in the Republic of Indonesia" were established.

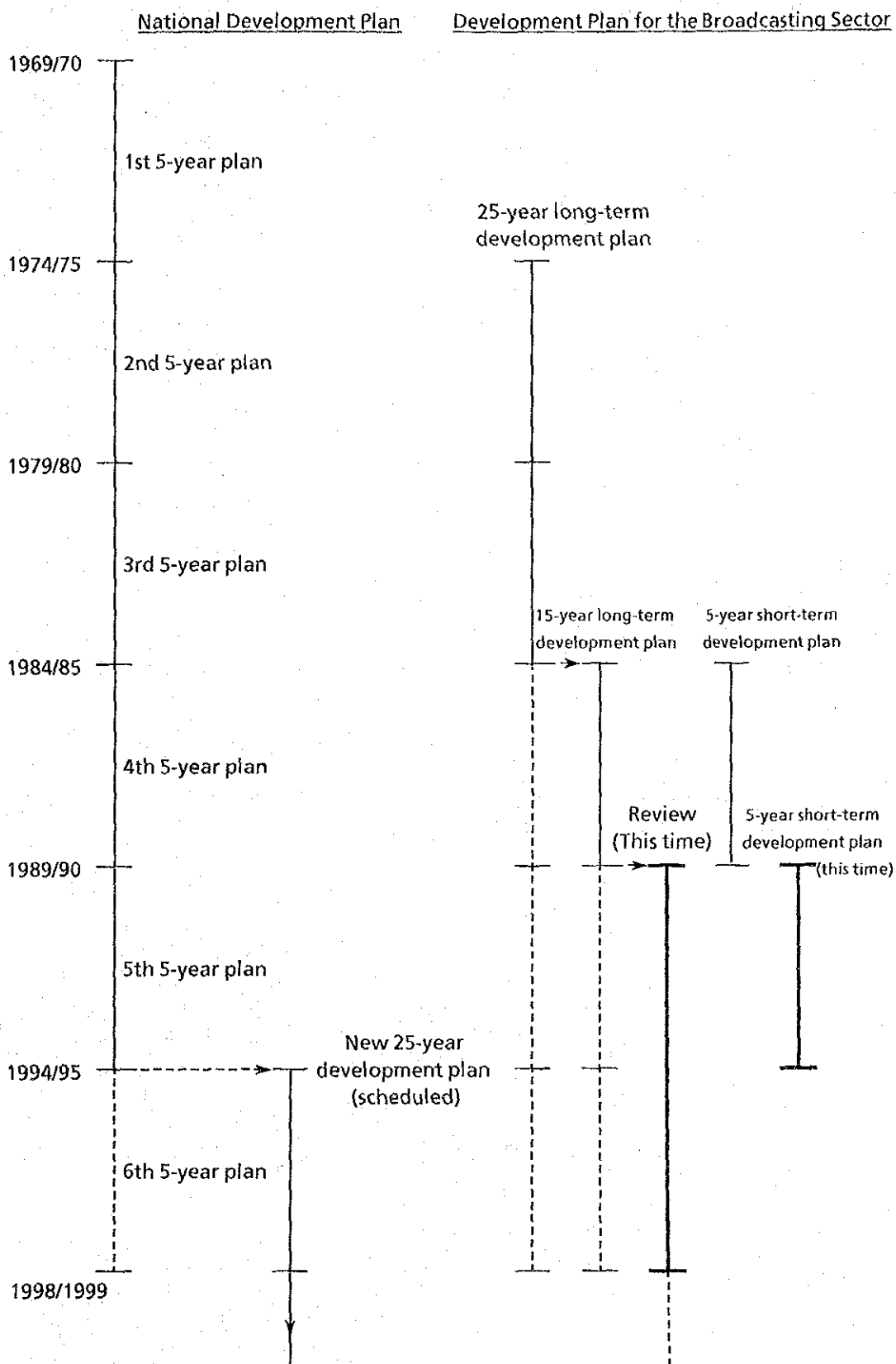
At present, the development project for radio and television broadcasting is in progress in accordance with the above-mentioned plans.

Meanwhile, the Government of Indonesia took note of the fact that there were various problems to be solved in both the management/operation and facilities aspects of broadcasting services resulting from the rapid qualitative expansion of broadcasting facilities and also from the delays in other aspects, such as the development of software. In an effort to cope effectively with this situation, the government of Indonesia, keeping

the progress of the Fifth 5-year Development Plan in mind, requested the Government of Japan to review the long-term plan formulated in 1984 and to conduct a feasibility study for the project to be carried out during the period of the Fifth 5-year Development Plan.

In response to this request from the Government of Indonesia, the Government of Japan in November 1988 sent a preliminary study team to Indonesia and concluded a Scope of Work concerning the study to be conducted.

This study was carried out in two phases. The 1st phase conducted the review of the existing long-term plan (Site Survey was conducted from April to June, 1989) and the 2nd phase conducted the feasibility study for the short-term plan (Site Survey was conducted from September to November, 1989), respectively.



**2. SUMMARY OF THE STUDY ON INTEGRATED
RADIO AND TELEVISION SERVICING SYSTEM
PROJECT (FINAL REPORT VOL. 2)**

2 SUMMARY OF THE STUDY ON INTEGRATED RADIO AND TELEVISION SERVICING SYSTEM PROJECT (FINAL REPORT VOL. 2)

2-1 National Development Plan and Broadcasting

2-1-1 Present Status

(1) Organizations of Radio and Television Broadcasting Services

Broadcasting in Indonesia is conducted by Radio Republik Indonesia (RRI) and Televisi Republik Indonesia (TVRI) on their respective nationwide networks, both of which belong to the Directorate General of Radio, Television and Film (RTF) of the Department of Information (DEPPEN). The total work force of the two organizations is 13,459.

Each of RRI and TVRI is an independent organization. In addition to these two, the Engineering Centre (EC) was established in 1983 as an organization under direct control of DEPPEN. Also, in 1985, the MMTC (Mass Media Training Centre) was established in Yogyakarta.

(2) RRI

In September 1945, this organization went into operation under the name of RRI. At the beginning, RRI's broadcasts were all on shortwave but in 1970 facilities were additionally installed and expanded substantially to enable broadcasting on medium-wave.

RRI operates a total of 48 regional broadcasting stations consisting of Nusantara Stations (5), Regional-I Stations (26) and Regional-II Stations (17) as well as the RRI National Broadcasting Station in Jakarta. With the combined use of medium-wave and shortwave, RRI offers broadcasting services that achieve a total population coverage of about 68%.

As for the programmes, the Jakarta National Station broadcasts two series of programmes and the regional stations, one series. In addition to the domestic services as mentioned above, an overseas service is conducted on shortwave. Besides RRI, there are a total of 619 stations

across the country that are operated by either provincial governments or commercial broadcasting companies.

(3) TVRI

TVRI inaugurated TV broadcasting in Indonesia in 1962, the year the 4th Asian Games were held in Jakarta. In the 1970s, TV broadcasting services began to be expanded to outside the island of Java. From the end of the 1970s to early 80s, colour television was introduced into Indonesia. Meanwhile, with the PALAPA satellite coming into operation, nationwide transmission of TV programmes became feasible and this accelerated the construction of TV broadcasting network in Indonesia.

At present, TVRI produces programmes not only at the Central Broadcasting Station in Jakarta but also at nine Regional Broadcasting Stations (programme-producing stations) and in seven other cities where Mobile Production Stations equipped with small outside-broadcast vans are allocated. As of March 1989, the TV broadcasting network consisted of 244 stations offering services that cover about 68% of Indonesia's total population.

As for the programmes, the Jakarta station broadcasts two series of programmes and the regional stations, one series.

Besides TVRI, RCTI, Indonesia's first commercial TV broadcasting station started offering TV services in Jakarta from March 1989 under a Pay Television System.

2-1-2 Recent Development Projects of RRI and TVRI

With the start of the First 5-year Development Plan, the construction of TV stations began and was pushed vigorously ahead with the assistance offered by Japan and other Western nations, thus resulting in a remarkable development of broadcasting services in Indonesia.

However, after the start of the Fourth 5-year Development Plan, the economic environment of Indonesia underwent some changes which caused the implementation of almost all of the planned projects to be deferred until the period of the Fifth 5-year Development Plan.

During the period of the Fourth 5-year Development Plan, four projects were implemented.

At the start of the Fifth 5-year Development Plan, there were six projects in progress, plus two already committed and two in process of planning.

2-1-3 Development Plans

(1) Transition of Past Development Budgets

- 1) DEPPEN's development budget is only about 0.5% of the entire national development budget.
- 2) RTF's development budget has been hovering within the range of about 0.2-0.4% of the entire national development budget.

(2) Estimation of RTF's Future Development Budget

The following are the results of estimations made on RTF's future development budget, based on the following two different cases:

- 1) Estimation based on the investments
actually made in the past : 522.4 billion Rupiah
- 2) Estimation based on the past ratio
of budget allocation : 715.4 billion Rupiah
(Refer to the following Fig. 2-1-1)

In the 1984 Long-term Plan, RTF's development budget was estimated at 887 billion Rupiah which, if recalculated according to current prices, would be 1,430 billion Rupiah. So, the scale of estimation made this time would be about 50% of that of the 1984 Plan even if the upper limit were to be adopted.

(3) Estimation of Practicable Scale of Investment

Within the practicable scale of total investment, the necessary amount of budget to enable the developments planned this time has been estimated as follows:

- 1) Amount of budget that enables
the entire investment : 522.4-715.4 billion Rupiah

- 2) Total cost of projects to which RTF has decided to invest : 409 billion Rupiah
- 3) Required amount of budget to enable implementation of the present recommendations
 - 1) minus 2) : 113-306 billion rupiah

(4) Proposed Cost of the Project

The total amount of the costs of project, which is being recommended within the range of the budget quota, is 274 billion Rupiah which is an investment scale about 10% lower than the upper limit of the budget.

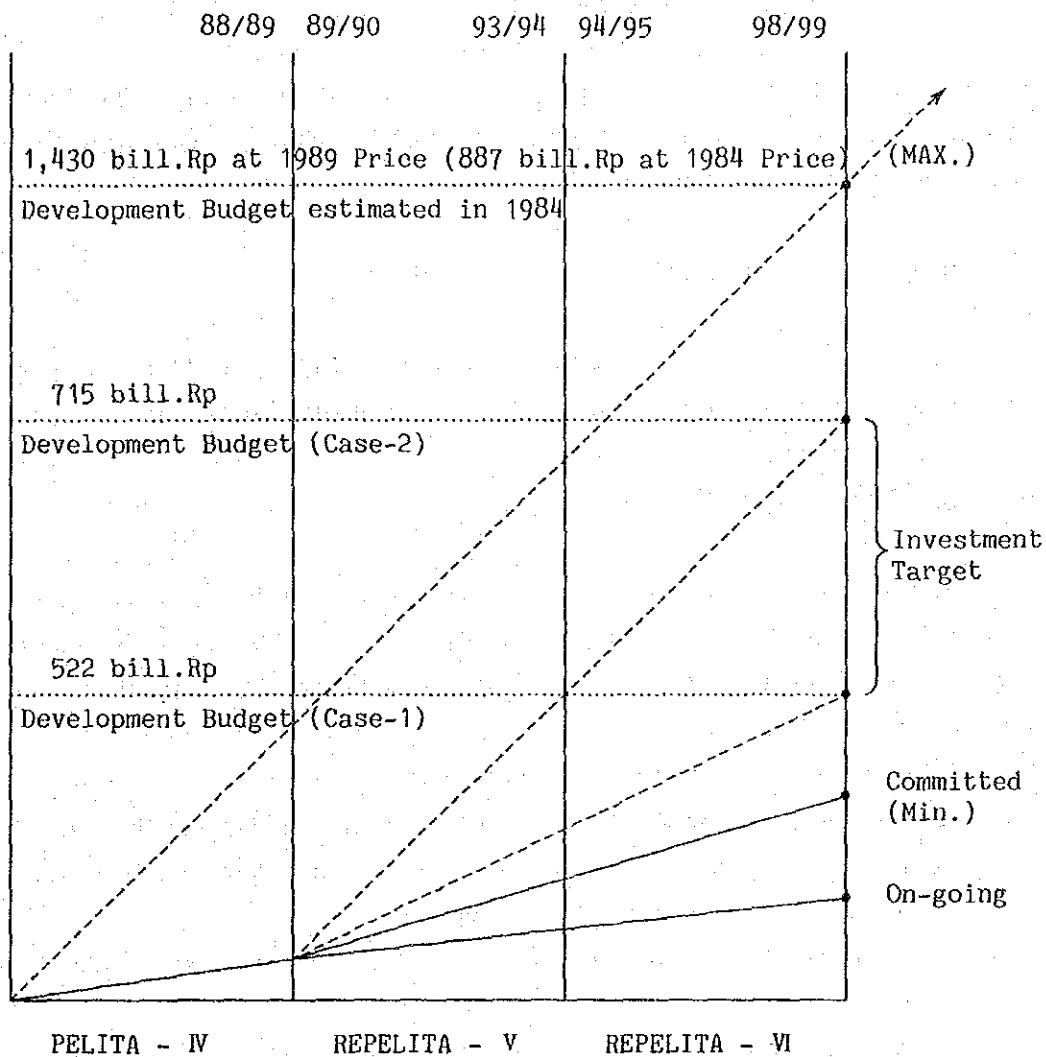


Fig. 2-1-1 Prospect of Development Budget Size

2-1-4 Targets for Development of Broadcasting

(1) Target Heretofore

Keeping the year 2000 in view as the target year, Indonesia in 1984 set up a long-range target for its broadcasting and has since then been doing its best in pursuit of that target. Meanwhile, in 1988, RTF published "A Concept of the Construction and Development of Electronic

Mass Media" and this has been regarded as a guideline to be followed in the development of broadcasting services.

Owing to various reasons including the changes taking place in economic environment, the attainment of this target has been very much delayed. Even so, however, it can still be considered appropriate as an ultimate target to be attained after 2000.

(2) Problems, and Broadcasting as It Should Be

As a result of the rapid development made in the broadcasting services during the past years, various problems have arisen in such aspects as management and operation, programming, and maintenance and upkeep of technical facilities.

In order for a national broadcasting organization to effectively play the role assigned to it and carry out the responsibilities it shoulders, it is necessary to win the trust of audience and to conduct nationwide broadcasting services that are fully supported by the people. For that purpose, it is essential for the national broadcasting organization to adhere to the following basic ideas in conducting its day-to-day services:

- To broadcast programmes that are of rich content and high quality, so as to win the trust of the audience.
- To conduct nationwide broadcasting services that are also of high technical quality.
- To ensure sound management and fair and sure collection of license fee.

(3) Development Targets for the Long-term Plan

A number of different scenarios can be considered for the Long-term Development Plan. But one that best fits the present condition of broadcasting in Indonesia and conforms with the basic policy of the nation's Fifth 5-year Development Plan will no doubt be the long-term plan that attaches primary importance to the restoration of the functions of the broadcasting facilities.

Taking the above into consideration, it is deemed advisable to take the following steps in carrying out the long-term plan established in

1984. In the hardware aspect, new expansion of broadcasting installations should be held down and, instead, emphasis should be placed on the rehabilitation and maintenance of the existing facilities. And in the software aspect, efforts should be made to improve the management and operational system and also to enrich the programme content both in quantity and quality.

The development targets will be set as follows:

- 1) Improvement of Facilities (in the order of priority)
 - a) Rehabilitation of facilities
 - b) Establishment of a maintenance system
 - c) Improvement and expansion of facilities for the purpose of enhancing the quality of programmes
 - d) Expansion of the broadcasting networks

- 2) Improvement of Programmes
 - a) Qualitative and quantitative improvement of programmes as to win the trust of the audience
 - b) Improvement of news and educational programmes

- 3) Improvement of Organization and Management
 - a) Organizational integration
 - b) Enhancement of staff's morale through salary raise
 - c) Stabilization of finance through reinforcement of the TV license fee system

The results of the above are shown in Table 2-1-1.

As for the projects which are already in progress, or have been committed, or are under planning, it is proposed that they shall be carried on as scheduled.

Table 2-1-1 TARGET OF LONG-TERM PLAN

TARGET ITEMS	PRESENT STATUS AS of 1988/89	DETAILED PLAN DURING REPELITA V & VI		TARGET AT THE END OF 1998 / 1999
		ON-GOING & COMMITTED PLAN [() indicates source of finance]	PROPOSED PLAN	
<p>(1) FACILITIES PLAN (Listed according to priority)</p> <p>1. Rehabilitation of Facilities</p> <p>(1) Radio studio</p> <p>(2) Radio Transmitting Station</p> <p>(3) TV Studio</p> <p>(4) TV Transmitting Station</p> <p>2. Establishment of Maintenance System</p> <p>(1) Maintenance System</p> <p>(2) Engineering Communication Network</p> <p>3. Up-grading of Broadcasting Programme</p> <p>(1) ENG and OB Van, etc.</p> <p>(2) Programme Transmission Network</p> <p>4. Improvement of Broadcasting Network</p> <p>(1) Expansion of RN-I Network</p> <p>(2) Introduction of MW Transmitter at SW-only-radio-station</p> <p>(3) Complement of RN-I and Establishment of RN-II</p> <p>(4) Establishment of RN-III</p> <p>(5) Expansion of TVN-I</p> <p>(6) Expansion of Overseas SW Service</p>	<ul style="list-style-type: none"> •Aged equipment with poor function •Aged equipment with poor function •Insufficient color facilities •Aged equipment with poor function •Inadequate maintenance administration and poor maintenance facilities •Only by SSB equipment and telephone communication •Mostly by cinefilm for TV news covering •Aged equipment including B/W •Radio: poor sound quality by telephone line •No provision of Up-link for both Radio and Television •49 stations, population coverage 68% •12 stations •No nationwide network for RN-II •Only Metropolitan Service •244 stations, population coverage 68% •Jakarta and Medan, 	<ul style="list-style-type: none"> •Jakarta (UK), 26 Regional Stations: (Japan & Austria) •Jakarta & Regional Stations: 32 (Japan), •Spare parts (USA) •Regional Stations: 7 (UK, Japan), • Jakarta (W.G) •Regional Stations: 16 (Japan), • Jakarta (Indonesia) •OB Van: 4 units (Japan, UK), • ENG: 16 (Japan) •Dubbing System (Japan) •Regional Station: 2 (Japan) •High power SW transmitter stations at Jakarta and Ujung Pandang for domestic service () •Jakarta and Regional Station: 7 (Japan) •50 TV relay stations (Indonesia) •High power SW transmitter stations at Jakarta, Medan and Biak for overseas service () 	<ul style="list-style-type: none"> •Regional Stations: 22 •Regional Stations: 8 •Regional Stations: 5 •Establishment of maintenance base at Jakarta and 6 Regional Stations. •Installation of communication network between Jakarta and each Regional Station. •Introduction of TV Up-Links at Jakarta and 9 Regional TV Stations. •High quality sound transmission line between Jakarta and 48 stations •Construction of MW stations at 10 sites. •Introduction of MW transmitters at 10 Regional Stations. •Construction of 50 TV relay stations (Indonesia). 	<p>Improvement of programme quality and achievement of stable and efficient broadcasting operation</p> <ul style="list-style-type: none"> - Completion of rehabilitation for all the RRI stations (49 stations) - Recovering transmission service and stable and efficient transmission - Achievement of efficient colour TV production of high quality - Recovering transmission service and stable and efficient transmission - Radical improvement maintenance standard for all the stations - Achievement of smooth and efficient business communication - Improvement of TV programme quality and efficient news gathering - Improvement of sound quality of nationwide programmes for all the RRI networks by using Palapa Satellite - Expansion of a stable transmission service by MW - Achievement of nationwide coverage service for RN-I and RN-II - Extension of FM programme service of high quality to the regions - Extension TVN-I programme service to unserved spots - Improvement of overseas broadcasting service
<p>(2) UP-GRADING OF PROGRAMME CONTENTS</p> <p>(1) Up-grading Quality and Quantity</p> <p>(2) Up-grading of Educational Programme</p>	<ul style="list-style-type: none"> •Unsatisfactory contents of programme •No "Conference System" programme •Short broadcasting hours of TVN-I programme •No systematic programming for education programmes for both radio and TV 		<ul style="list-style-type: none"> •Up-grading of programme contents. •Up-grading of Radio regional broadcast by high-quality programme transmission line. •Live TV broadcast through national network by TV Up-Links. •Systematic production of Radio & TV educational programmes. 	<p>Improvement of quality and quantity of broadcasting programmes to win the trust audience in radio and TV broadcasts.</p> <ul style="list-style-type: none"> - Up-grading of RN-I, TVN-I and overseas service programmes - Establishment of programme compilation for RN-II and RN-III networks.
<p>(3) IMPROVEMENT OF MANAGEMENT</p> <p>(1) Integration of RRI and TVRI Organization</p> <p>(2) Staff Recruiting and Training</p> <p>(3) Financial Sources</p>	<ul style="list-style-type: none"> •Separate organizations under RTF. Only MMTC and EC were established. •Training by RRI-TC, TVRI-TC and MMTC •Insufficient training •RRI: Subsidized by National Finance •TVRI: Operated by TV license fee, Low rate of Collection: about 55% 		<ul style="list-style-type: none"> •Integration of RRI & TVRI organization. •Establishment of maintenance organization. •Establishment of the total system cope with audience affairs. •Development of staff training including OJT •Acquisition and establishment of an appropriate operational financial resources for radio and TV broadcasting activities. 	<p>Achievement of efficient organization and management.</p> <ul style="list-style-type: none"> - Completion of organizational integration - Establishment of maintenance system and audience servicing system - Upleveling staff capability - Establishment of stable financial conditions

2-1-5 Demand Forecasts

(1) Diffusion Level of Television in Indonesia

The result of regression analysis of the correlation between GDP/Capita and TV diffusion rate shows that the estimated average value in Indonesia is 39.7 sets/1,000 persons against analyzed mean value of 13.4 sets/1,000 persons in the world.

(2) Premise of Forecasts

The demand forecast for TV was conducted under the following conditions:

- 1) One TV set is owned by each dwelling.
- 2) Households belonging to the income bracket earning Rp130,000/month or more were counted as households that can afford a TV set.

(3) Result of Forecast

The following table shows the result of estimations made on demands for TV under the above-mentioned premise and based on the forecasts of future population and numbers of households in Indonesia.

Summary of Forecasts

(Unit: thousand)

	1989			1999		
	Urban	Rural	Total	Urban	Rural	Total
Population (Urban and Rural ratio)	51,778 29%	127,358 71%	179,136 100%	83,369 39%	131,793 61%	215,161 100%
Households (Urban and Rural ratio)	11,459 26%	27,726 74%	39,185 100%	18,490 39%	28,549 61%	47,040 100%
Number of Households with express Demand for TV	5,104 54%	4,358 46%	9,461 100%	8,111 60%	5,327 40%	13,439 100%
Ratio of Households with Demand for TV (to total number of households)	45% (1:2)	16% (1:6)	24% (1:4)	44% (1:2)	19% (1:5)	29% (1:3)
Demand for TV (Number of sets per 1,000 persons)	93.2	35.3	48.6	96.0	41.0	56.5

Remarks: Estimation is made by study team.

2-2 Review of the Long-term Plan

2-2-1 Organization and Management

(1) Organizational Integration and Basic Ideas

At present, with a view to further ensuring efficient and effective management, concrete examinations are being made on the possibility of integrating RRI and TVRI, the two independent broadcasting organizations operating under the jurisdiction of the Directorate General of RTF. The JICA Study Team will make concrete recommendations concerning the draft integration plan, including a number of points that require studies at the time of the integration.

The fundamentals of an organization are to be found in the common objectives, the willingness to cooperate and the closeness of communication. Hence, the studies of this subject have been conducted on the basis of the organizational idea premised in the harmony of contributions and inducements.

Furthermore, examinations were made on the possibility of opening up a path to equalization in treatment of personnel.

(2) Present Status and Problems

Refer to Table 2-2-1.

1) Number of Staff Members

The total number of staff members at the Directorate General of RTF is 13,459 of which 8,335 belong to RRI and 5,124 to TVRI. Both RRI and TVRI are reported to be overstaffed.

2) Grade and Level

In the same manner as the case of government employees throughout the country, the staff members of RRI and TVRI are classified according to ① Grade (Golongan) and ② Level (Eselon, particularly those with structural occupation). RRI has higher ratio of upper-grades and level employees than TVRI, and so this point needs to be considered at the time of the integration.

3) Sources of Revenues and Their Flows (General Budget)

- RRI National budget 100%, plus some revenue form broadcasting of commercials.
- TVRI National budget about 10%, the remaining 90% approximately consisting of revenue from TV license fee

Of the two organizations, only the TVRI has the revenue from TV license fee which is collected by POS & GIRO (post office) and then received by Yayasan TV on behalf of TVRI. The collection rate of TV license fee is quite low at around 55% on a national average.

(3) Reorganization toward the Integration

1) Improvement of Staff Education and Training

Steps will be taken to enhance the discipline and morale of staff members and to improve their professional ability.

2) Streamlining of Staff Employment and of the Organization

- (a) At present, selection and assignment of RRI and TVRI staff members are handled by DTK.

It is proposed that such selection and assignment to different workplaces of personnel be undertaken jointly by the DEPPEN and RRI or TVRI. In order to do so, it is necessary to negotiate with DTK so as to secure appropriate personnel.

- (b) Absolute decrease in the number of employees cannot be expected even if such natural decreases as retirements under age-limit were taken into account. It is therefore proposed that the excessive employees resulting form the integration of RRI and TVRI be ① converted to experts or ② transferred to new divisions (broadcast-audience servicing, facility expansion, programme improvement), so that they may contribute to the improvement of the organization's efficiency and to the increase of revenue from TV license fee.

3) Simplification of the Organization and Realignment of Office Regulations

- (a) To ensure harmony of the flow of budgetary allocations with Garis Komando.
- (b) To unify research and training-related organizations. For that purpose, the organization within DEPPEN will be realigned.
- (c) To realign official powers, functions and levels in conformity with Eselon and to thereby adjust the line of command.

(4) Integration and Establishment of a National Enterprise

1) Steps toward the Integration

Repelita V	Repelita VI	2000 and Thereafter
(1) Start of realignment as mentioned above in 1993/94	Although a single enterprise is established, the actual integration will be carried out in stages over the period of 5 years. (Refer to Table 2-2-2)	Alteration of the form of the enterprise will be examined.
(2) Registration as a national enterprise		
(3) De-facto integration of the top managements of RRI and TVRI		
(4) Start of the enterprise		

(a) Realignment

Personnel changes will be conducted to cope with new projects following such steps taken as the establishment of Maintenance Base within EC and the setting up of committees for the audience services.

- (b) Registration On condition that the new enterprise of the enterprise will go into operation next fiscal year (the initial year of Repelita VI), all necessary registrations will be completed.
- (c) RRI and TVRI The integration of the two will be started from that of the top managements.
- (d) Start of the new enterprise With the exception of the integration of the top managements, the broadcasting services will be carried on in the same organizations for a certain period as hitherto, and actual integration will be carried out in stages, beginning with administrative integration.

2) Laws and Form of Enterprise

Refer to the Short-Term Plan

- (a) Yayasan TV will be liquidated.
- (b) The new Presidential Decision will be promulgated, so that the legal foundations for the new enterprise may be confirmed.
- (c) Form of new entity
 The new enterprise shall be of a legal form that enables at least the retaining of profits under the said Presidential Decision. (Refer to the Short-term Plan.)
 The actual integration to be carried out by 2000 will be promoted roughly along the lines proposed by RTF but, as for the legal form, Perum, with existing laws, will be adopted as proposed by DEPPEN.

Table 2-2-1 Ministry of Information (DEPPEN)

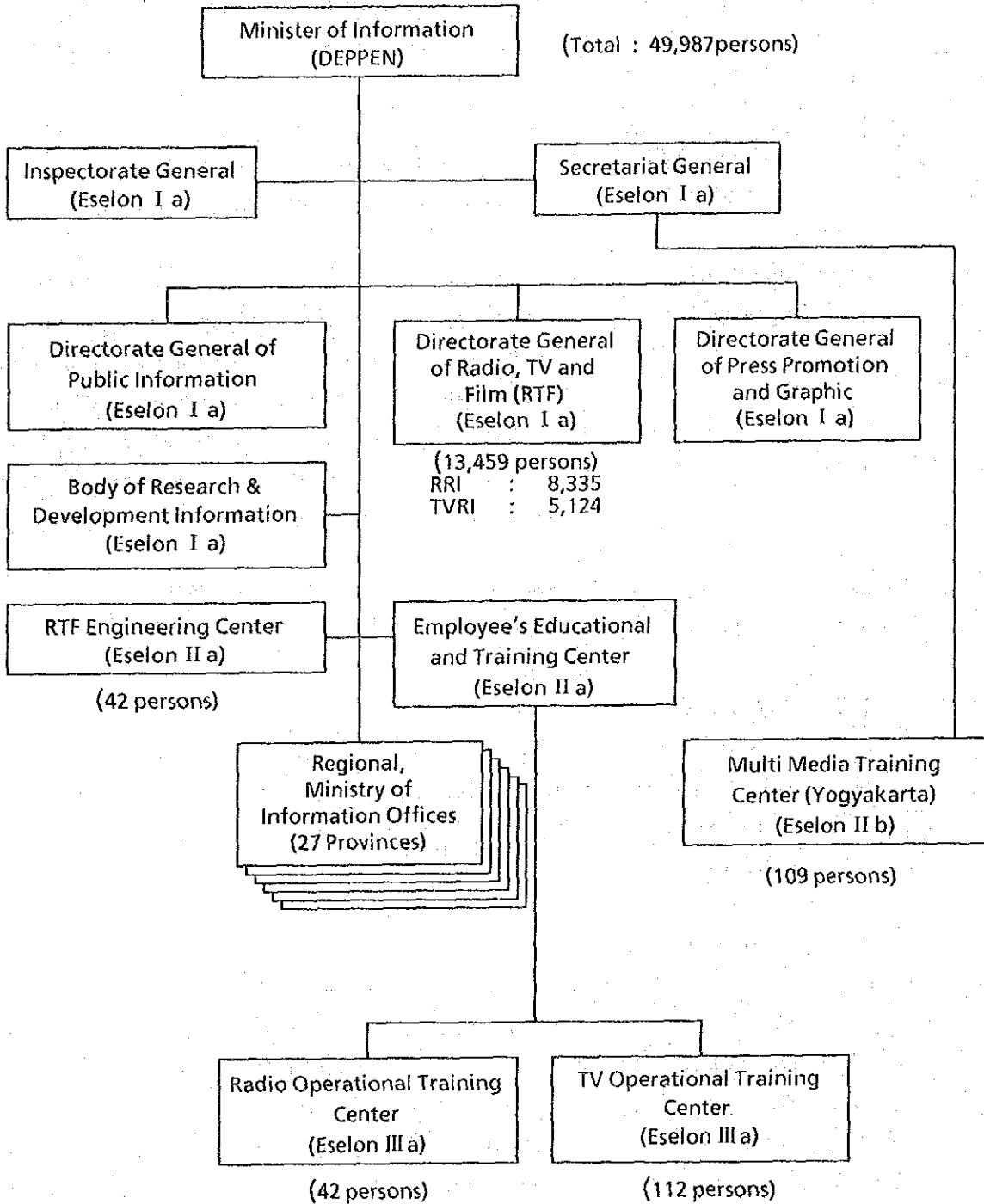


Table 2-2-2 INTEGRATION SCHEDULE IN LONG-TERM PLAN

PELITA	REPELITA V					REPELITA VI					1999/2000
	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	
5th Stage											
Alignment of Regional Stns.											
4th Stage											
Merging TCs with Admi.											
3rd Stage											
1) Amalgamation of all Admis. 2) MB Starting											
2nd Stage											
Shift of R&TV Admis to Sek.											
1st Stage											
1) Separation of RT from Film 2) Ent. approved Subject to start in Repelita VI											
	Document preparation				(a)	(b)	(c)	(d)		(e)	Comprehensive Integration
					Prep. for start	→ Enterprise Starts					

Remarks:

- (a) Documents to completely be approved by all the Authorities concerned subject to practical commencement of the enterprise at the beginning of Repelita VI
- (b) Administration to be shifted to and under one umbrella of Secretariat for RTRI because dealing with Man and Money
- (c) Personnel of Administration to properly be streamlined into one simple organization, and Maintenance Base to practically be arranged for operation in EC to be incorporated with RTRI
- (d) TCs (Diklat) to actually be shifted to and under secretariat for a unified operation
- (e) Regional working units like stations etc., to be examined for a joint working from a viewpoint of their location

(For Reference)	(Preparation)	(Operation)
Schedule on Indonesia Side	All documentations for Integration to be prepared and approved by all authorities concerned	Upon establishment of an enterprise, commencement of its operation to the full at the beginning of Repelita VI
	REPELITA V	REPELITA VI

2-2-2 Broadcast Programming Plan

(1) RRI

- 1) As to RN-I (MW, FM, SW), all of its 49 stations will broadcast 24 hours a day.

The quality of the programmes will be enhanced through the improvement of production facilities and programme transmission lines. Of the programmes to be broadcasted by the regional stations, 40% will be produced independently by themselves and the remaining 60% will be relayed from the central station in Jakarta. And the good-quality programmes originating in Jakarta will be broadcasted on the nationwide network.

- 2) RN-II (SW) will conduct daily broadcasts of 9 hours of educational and cultural programmes produced in Jakarta.

- 3) RN-III (FM) will in principle be of the same content as RN-I, and Metropolitan programme which is broadcasted in Jakarta. As for FM stereophonic programmes, six regional stations will install the FM transmitting facilities so as to be able to transmit them.

- 4) Overseas service (SW) will conduct 24-hour daily broadcasts in 15 languages.

(2) TVRI

- 1) TVN-I will gradually extend its daily broadcasting time until it eventually reaches 16 hours. As to the empty hours in the morning and in the afternoon, they will be filled by extending the broadcast hours of news, educational and cultural programmes. For the nighttime, the entertainment, news and the Indonesian versions of foreign programmes will be further enriched.

- 2) The Metropolitan programme will gradually shift to programming centering on educational programmes, aiming at daily broadcasts of more than six hours.

3) Preparations for the start of TVN-II will be made for the year 2000 and onwards.

- (3) In order to reinforce educational programming and news gathering, a "liaison coordination committee" will be newly established respectively between TVRI, RRI and the affiliated organizations. This committee, upon integration of the two organizations, shall be consolidated into a "Division" and its functions shall be reinforced. Furthermore, for the purpose of promoting audience services in programming aspects, a committee consisting jointly of those concerned with RRI and TVRI will be organized.

2-2-3 Broadcasting Network Plan

(1) Radio Broadcasting Network

1) Basic Policies

RRI, which conducts broadcasting from 49 stations at present, has attained a population coverage of 68%. However, the actual status of those stations is that many of their facilities have already lost their original functions owing to superannuation of equipment and inadequate maintenance, with the result that the coverage area, has dropped considerably. For that reason, what is most important for RRI now is to restore the decreased coverage back to the original level, rather than expanding the broadcasting network by constructing small-scale stations.

As to the radiowave currently used for radio broadcasting, RRI is using the medium-wave and shortwave selectively according to the time of the day but, in the case of shortwave, because of its characteristics, the fluctuations are so intense both seasonally and according to hours of the day that it is practically impossible to expect stable, high-quality reception of broadcasts. So, it is proposed that, from now on in Indonesia, the sound broadcasting network be gradually shifted to one consisting mainly of medium-wave and that shortwave broadcasts be used so as to supplement the medium-wave services by making effective use of shortwave's characteristics.

2) Expansion and Consolidation Plans for Broadcasting Network

In accordance with the basic policies as outlined above, the Long-term Plan formulated in 1984 will be reviewed and modified as follows:

(a) Expansion of the Medium-wave Broadcasting Network

As for the areas which very strongly desire construction of new stations and which are placed in special circumstances, a total of about ten stations will be planned to be constructed during the latter half of the period of the Long-Term Plan, at the rate of about two stations a year.

(b) Additional Construction of Medium-wave Broadcast Facilities at shortwave-only Stations

At twelve of the existing 49 broadcasting stations of RRI, there has been no transmitting facilities for medium-wave ever since their establishment, and broadcasting from these 12 stations has over the years been conducted on shortwave only. So, as a part of the improvement of the facilities at the existing stations, transmitting facilities for medium-wave will be additionally constructed at those 12 stations. Incidentally, since some of those stations have not yet been registered with IFRB, there is the need of obtaining, prior to the construction, the approval of the countries concerned through the IFRB.

(c) Establishment of High-power Shortwave Broadcasting Stations

For the purpose of supplementing the RN-I broadcasting network and also of establishing the RN-II broadcasting network, there is a plan of constructing a high-power shortwave transmitting station at each of Jakarta and Ujung Pandang.

(d) Establishment of the RN-III Broadcasting Network (FM)

In view of the mountain of urgent plans waiting to be implemented, it is planned that the number of stations should be kept to the minimum at seven in Jakarta and other locations.

(2) Television Broadcasting Network

Since the start of TV broadcasting in Indonesia in 1962, the expansion of TV broadcasting network has been pushed ahead vigorously every year. Today, the broadcasting service is conducted from 244 stations and the population coverage has now reached 68%. Thus, there is the need of promoting construction of new stations so as to serve the remaining 32% of the population. However, the technical facilities at the existing TV stations have now superannuated to a considerable extent and, consequently, there is a fear of the broadcasting network facing a breakdown if things were left as they are. For that reason, it is imperative that a priority should be given to the improvement of the existing stations. The followings will give an outline of plans to be undertaken during the period of the present project, as well as that of the studies to be made on the measures to solve the poor-reception problem with the future using new technologies.

(a) Construction Plan for Relay Stations (TVN-I)

Since there are a mountain of urgent plans that need to be tackled, the number of stations to be constructed will be kept to the necessary minimum. About ten stations will be constructed each year so that a total of about 100 may be completed in ten years.

(b) TVN-II (Educational TV) Broadcasting Network

Even though the chance has been ripening for the start of construction of the TVN-II (Educational TV) broadcasting network, it must be noted that there still are a considerable number of people living in areas where even TVN-I cannot be viewed.

Furthermore, the existing stations are operating with superannuated facilities and equipment, and it is obvious that a stoppage of transmission may occur any moment, if nothing were done to remedy the situation. Therefore, it is proposed that a priority be given to more urgent plans and that the plan to establish the TVN-II network be considered in the long-range perspective. And for the time being, it is proposed that the strengthening of educational programming be carried out within

the framework of TVN-I through measures taken with regard to programme compilation and scheduling.

2-2-4 Facility Plan

It is considered more important to maintain stable and high-quality broadcasting services for those areas currently being served, rather than to promote an expansion plan. So, based on this judgment, it is proposed that the following facility plan be implemented by the end of the Sixth 5-year Development Plan:

(1) Planned Renewals

It is proposed that the life of broadcasting equipment be considered roughly as 15 years so that superannuated equipment may be renewed accordingly.

(2) Discarding of Unnecessary Equipment

It is proposed that the shortwave transmitters, excepting those at some of the stations, the superannuated equipments which are past 30 years after installation and the film processors be discarded.

(3) Unification of System and Technical Specifications

It is proposed that the system of a transmitting station, especially at the radio station, be simplified and that the Engineering Centre should prepare unified technical specifications.

(4) Introduction of Newly Developed Equipment

Broadcasting equipment are making a spectacular progress day by day. So, it is proposed that, when introducing equipment of professional use into broadcasting operation, every effort be made to select effective types of equipment, taking into account their reliability, the ease of operation and maintenance, uniformity and safety.

So, the facility plan proposed places emphasis on the recovery of the lost functions and on the nurturing of basic physical strength such as organizational power, operational power and maintenance capability that enables healthy broadcasting operation. It has been so planned as to prepare the broadcasting facilities for the development plans to be implemented during the period of the Seventh 5-year Development Plan and thereafter.

2-2-5 Programme Transmission Plan

The programme transmission lines to have been established by the end of the period of the Sixth 5-year Development Plan are as follows:

(1) Radio Programme Transmission Line

Considering the present condition of operation and facilities of radio broadcasting in RRI, and in order to ensure that the development smoothly leads to further developments under the Seventh 5-year Development Plan and thereafter, improvement and expansion of transmission lines to transmit the various series of programmes from Jakarta to each regional station in high quality which constitute the basis of Indonesia's radio broadcasting will be conducted.

(2) TV Programme Transmission Line

At present, in the case of the TV programme transmission network currently used for broadcast, the lines originating from Jakarta are fairly well established for the time being.

However, the lines coming up from the provinces to Jakarta are totally unestablished as yet.

So with a view to enhancing the quality of TVN-I programmes by taking in the programmes produced in the regional stations, mobile-type TV up-link equipment will be introduced into nine stations which are equipped with local programme-production facilities.

(3) Engineering Communication Network

In order to ensure smooth running of the broadcasting services, an exclusive engineering communication network will be established.

Such a network will consist of lines linking Jakarta headquarters with regional stations, the lines used most frequently, as follows:

- 1) RRI Jakarta - 48 regional stations
- 2) TVRI Jakarta - 100 regional stations

The lines, which will be multiplexed with radio programme transmission lines, shall be of efficient composition. Furthermore, facsimile facilities will be installed at each station so as to enable communication by "spoken and written words."

2-2-6 Maintenance Plan

(1) Correction of Concept of Equipment Maintenance

The conventional concept of equipment maintenance has consisted mainly of repairing done by the station concerned to cope with the failure occurred to any of the equipment. But this time, it is proposed that this concept be corrected so as to place emphasis on preventive maintenance, that is, to prevent failures and to prolong the life of equipment through such measures as the conducting of periodic check-ups and maintenance (including overhaul) and planned procurement of spare parts.

(2) Engineering Centre (Jakarta HQ)

The equipment-maintenance work is closely related with all of the facility-planning, construction and financial fields. From that point of view, the position of the Engineering Centre within the RTF has been made clear as an overall technical management organ for the entire Radio and TV facilities, and according to this positioning, it is proposed that all such types of work as mentioned above -- which hitherto have been in the charge of RRI and TVRI, respectively -- be absorbed into EC so that the work and personnel may be placed under EC's sole management.

(3) Establishment of a Maintenance Division

The section in charge of maintenance shall abolish its name of "Maintenance Centre" and shall become a section within EC to be called the "Maintenance Division." The work of the Maintenance Division shall consist mainly of nationwide management of maintenance work and, using the maintenance-base facilities to be mentioned later, shall conduct the maintenance work within the area under HQ's direct jurisdiction.

(4) Regional Engineering Centres

Regional ECs will be established so that they may conduct various kinds of work on behalf of Jakarta HQ and, at the same time, carry out the maintenance work in the areas under their respective jurisdictions, using the maintenance-base facilities. A total of six Regional ECs are planned to be established but, owing to various factors such as the securing of staff, two Centres, one each in Medan and Ujung Pandang, will be constructed under the Fifth 5-year Development Plan, the remaining four Centres being scheduled to be constructed under the Sixth 5-year Development Plan.

(5) Maintenance-base Facilities

A Maintenance Base will be established within each EC as well as the HQ. Each Maintenance Base will be supplied with such equipment as high-precision measuring instruments, substitutive equipment and working vehicles, and will conduct such work as assisting the engineering staff at each station within the area under jurisdiction in their maintenance work, and carrying out detailed patrol check-ups.

(6) Budget

EC Jakarta HQ will directly receive budget allocation from DEPPEN for expenses relating to technical facilities (including maintenance). Such a budget will consist of two parts, the long-term budget and the annual budget, and without specifying its use, for radio or for TV. A budget in foreign currency will also be secured for use in procuring spare parts and in ordering maintenance to be done outside the organization.

2-2-7 Measures concerning Broadcast-audience Servicing

In order to attain the objectives of broadcasting and to win the trust of the audience, adequate audience-servicing is most essential. In view of the fact that the TV license fee will become the major source of revenue after the organizational integration, it is necessary to conduct positive and extensive audience-servicing activities.

(1) Broadcast-audience Servicing Work

1) Public-relations Activities

These include ① publicizing programmes, ② responding to audience's inquiries and desire, ③ conducting opinion polls and ④ dealing with the activities of audience groups.

2) Work relating to Reception Techniques

This includes having an accurate grasp of receiving conditions of radio and TV broadcasts and working out a way of improvement. This also includes organizing, by electric appliance stores, of a system to promote local audience servicing.

3) Collection of License Fee

This includes the planning and implementing, in cooperation with the Post Office (POS & GIRO), of campaigns to improve collection of license fee and to gain better understanding of the audience about the license fee.

(2) Systematization of Audience-servicing

In order to conduct the work as outlined above, there is the need of establishing a division in charge. For the time being, the audience-servicing work will be handled within the existing organizations for radio and TV and, during the period of the Fifth 5-year Development Plan, the coordination of the work will be done by a committee. During the period of the Sixth 5-year Development Plan, a specialized organ will be established to deal with each category of work, viz., the work concerning public relations, broadcast-reception techniques and license-fee collection.

2-2-8 Staff Plan

(1) Redeployment of Personnel for Integration of RRI and TVRI

1) Present Status

RTF consists of 13,459 persons comprising 8,335 persons for RRI excluding Honorer (temporary employees) and 5,124 persons for TVRI including Honorer, even though a number of the employees are slightly various by datum.

2) Shift of Personnel for Integration

Superfluous personnel are scheduled to transfer to such new jobs as Maintenance Base, Audience-Service Working Units in the process of preparation for the integration and/or the integration itself, since RRI and TVRI have been overstaffed.

3) Measures for Slimming and Countermeasure for Recruits

1,211 persons are expected to reach their age limit until the year 2000 and, further, some will be decreased by passing away and so forth. So, an absolute increase of personnel is forecast to be approximately 2,200 persons towards the year 2,000.

RRI and TVRI had better pay every effort to also DTK for their own selection of recruits in order to cope with the increase of personnel and to realize a substantial slimming for working effectiveness under the existing situations.

4) Allocation of Personnel to New Projects

It is planned that 596 employees will be transferred to various projects to be carried out during the coming ten years and that the total work force will thus be increased by 1,270. For the purpose of achieving the streamlining of the broadcasting operation aimed at the enhancement of efficiency, a plan is hereby proposed to establish three audience-servicing sections and to allocate the surplus staff members to those sections (taking the numbers and quality of the staff members into account).

(2) Measures to Enhance the Quality of Staff

1) Selection at the Time of Employment

It is proposed that, instead of simply accepting the personnel allocated by the Department of Labour, the organization employing the new staff should make sure that such allocation from the Department of Labour is confined to the 'number' so that selection of the individual members to be employed may be done by the employing organization itself.

2) Rotation

It is proposed that a rotation plan be established and implemented as much as possible, even if this may be feasible only within the limited range, although such a rotation plan may be difficult to bring to reality for budgetary reasons at the present stage.

3) Training Plan

Due considerations are given to ensure integration of training institutes in stages. Hereby proposed are training plans that suit the schedules and capacities of such existing training institutes as the Radio Training Centre (R-TC), Television Training Centre (TV-TC) and Multi Media Training Centre (MMTC), as well as the possible classification of training courses, the methods of conducting the courses and the concepts of curriculums. Recommendations will also be made on such training plans as on-the-job training and seminars/workshops.

2-2-9 Implementation Plan

The following table shows the schedules of various projects which are planned to be implemented by the end of the sixth 5-year Development Plan.

MAJOR ITEM	1989/90	REPELITA V	1994/95	REPELITA VI	1999/2000
1. Implementation Schedule of Project					
1) On-going project					
2) Committed Project					
3) Project under Planning					
- SW (Overseas & Domestic)					
4) Proposed Project					
- JICA Study (Short-term)					
- JICA Study (Long-term)					
		(107.5 bill Rp)		(167.1 bill Rp)	
2. Organization Toward 2000					
1) Main Schedule					
- 5th Stage Alignment of Regional Stns.					
- 4th Stage Merging TCs with Admi.					
- 3th Stage Amalgamation of all Admi.					
- 2th Stage Shift of R & TV Admi to Sek.					
- 1st Stage Separation of RT from Film Approval of Enterprise.					
2) Other Schedule					
- Educational programme (Committee)					
- News Gathering (Committee)					
- Audience Service (Committee)					
- Maintenance Base (Setup of Organization in EC)					
3. Staff Plan					
- Shift and Increase for new projects					
- Shift		407		189	
- Increase		819		451	
- Present & Future Number of Staff	13,459		14,278		14,729
4. Financial Plan					
- RTF (a total of RRI, TVRI & EC)		bill Rp		bill Rp	
- Expense		128		273	
- Income		213		297	
- Balance		85		24	

(1) Financial analysis

1) Income

The income is assumed on the following conditions:

- (a) License fee would be doubled (200%) in average.
- (b) Collection rate would be improved from 54.5% to (63%-88%).
- (c) Government subsidy will still be necessary for the following preconditions:
 - RRI: Assumed expenditure for each year would be fully covered by government subsidy. After integration it will be "0".
 - TVRI: A subsidy would be obtained at the same increase rate as in the past on the basis of that in 1988. After integration it will be "0".
 - EC: As in the case of RRI, the assumed expenditure would be covered by government subsidy. After integration it will be "0".

2) Expenditure

The expenditure is assumed on the following conditions:

- (a) An inflation rate of 7% is taken into consideration based on the past data. Personnel expense increase rate is assumed to be 10%.
- (b) Personnel expense is assumed by 10% of increasing rate.
- (c) Operational expense is assumed by 7% of increasing rate.
- (d) RRI and EC, whose depreciation cost has not been counted, will be summed up after integration.

(e) Interest rate and the principal are excluded from the expenditure but are presented as reference.

3) Pending issue

RRI expenditure would be increased by some 8~10% but the operation cost is to increase by as much as 20% because the newly installed facilities of on-going project will start its operation in 1990. Effort shall be made by RTF to secure the necessary budget.

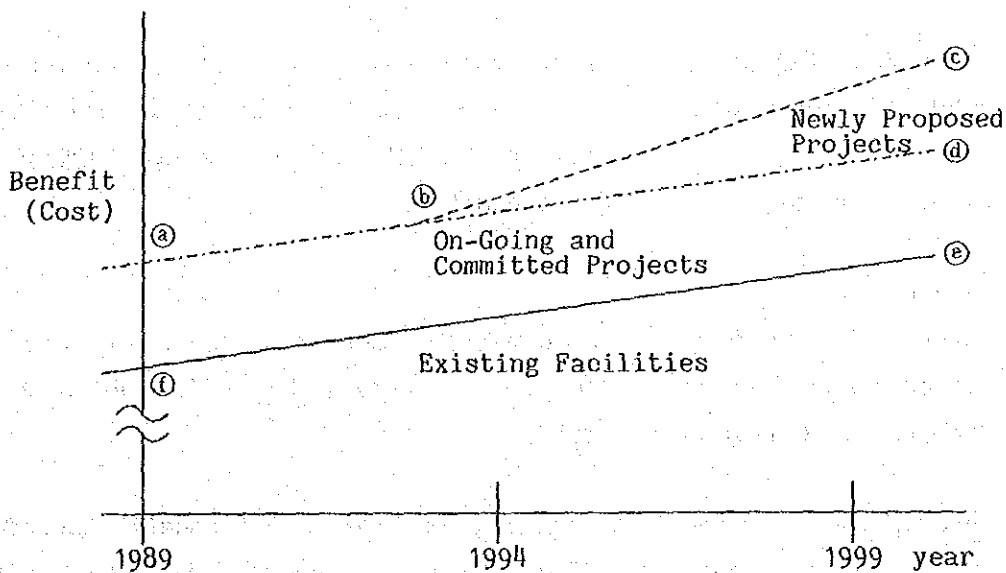
(2) Evaluation method and scope of analysis

The method of evaluation and the scope of analysis are as follows:

1) Method of evaluation : Incremental benefit-cost analysis

2) Scope of analysis:

Financial and economic evaluations are made not only for newly proposed projects (Area surrounded by ②, ③, ④ shown in the following Figure) but also for the combination of the on-going and committed projects decided by RTF and the newly proposed projects (Area surrounded by ①, ②, ③, ④, ⑤, ⑥ in the same).



Incremental Benefit-Cost Analysis

(3) Economic analysis

IRR is calculated in the following manner:

1) Assumption of economic benefits:

It is difficult to assume the amount intended by consumers willingly to pay, therefore, a method is adopted in which private broadcasting is made an alternative and the difference of license fee between TVRI and private broadcasting is regarded as economic benefit.

2) Assumption of economic costs:

The financial cost has been converted into economic cost.

(4) Evaluation

1) Results of analysis:

	<u>FIRR</u>	<u>EIRR</u>
(a) Combination of the projects decided by RTF and the newly proposed projects :	6.5%	16.2%
(b) Newly proposed projects :	2.3%	12.1%

EIRR and EIRR of (b) is lower than (a), because its investment of TVRI is lower than (a). The result of FIRR shows that this project is a low profitability but EIRR of (b) is over 12% which is an opportunity cost of the capital.

2) Evaluation

Since the broadcast is a public service, EIRR of Project investment shall be given higher priority than FIRR which shows the profitability of projects.

Assumption of above EIRR does not include social benefit therefore much larger investment effects will be supposed, if such benefit is taking into account. Therefore, from social and economic view points, those projects shall be invested.

2-3 Process Leading to draw up of the Fifth 5-year Development Plan

2-3-1 Review of the Targets at the End of the Period of the Development Plan

The major restrictive conditions affecting the setting of targets to be attained at the end of the long-term plan are the scale of the development budget and the national development policy. As to the development budget, its actual scale would be about one third of the original scale, because of the fact that the four development projects, which had been scheduled to be implemented under the Fourth 5-year Development Plan, were deferred for implementation under the Fifth 5-year Development Plan.

As a result, the development targets to be attained at the end of the Sixth 5-year Development Plan also inevitably need to be set considerably lower than what had been planned at the outset. Meanwhile, in the policy aspect, effective use of the existing facilities have been advocated, and it is desirable that, in parallel with the expansion projects, the rehabilitation project for maintenance of functions of technical facilities is carried out as planned.

For reasons mentioned above, in carrying on the projects under the present Long-term Plan, it is proposed that, as compared with the long-term plan drawn up in 1984, the expansion of projects should on the whole be held down as much as possible and, instead, every effort should be made to recover and maintain the functions of the existing facilities. It is also proposed that, at the same time, the projects be implemented with the aim set on the targets of the Plan as mentioned in 2-3-3, placing emphasis on the need of improving the programmes both in quality and quantity and also of improving and realigning the operational system.

2-3-2 Problems in the Present Status

The following is a summary of the main problems faced at present by Indonesia's broadcasting.

(1) Management and Operation

Despite the rapid expansion of broadcasting facilities, it appears that, in Indonesia's broadcasting, there is a lack of necessary funds for activities in such fields as programme production, maintenance of technical facilities and operational management.

Furthermore, with regard to the securing of financial sources, the collection rate of TV license fee has been hovering at the level of about 55% and the need is felt of improving this situation.

Meanwhile, there is the urgent need of securing high quality of personnel, especially a high leadership capability of managers. Yet, the training to enhance the quality of such personnel is not conducted appropriately.

As for management of the organization, examinations have been made on the possibility of integrating RRI and TVRI with a view to operating the two organizations more effectively and economically. However, with many a problem remaining to be solved, such effort has not been producing much results.

(2) Degradation of the Functions of Broadcasting Facilities, and the Maintenance System

The maintenance work, the need for which increases along with the expansion of broadcasting facilities, has not been conducted adequately. It appeared that problems exist in the skills of the staff, allocation of maintenance instruments and spare parts, and the nationwide maintenance and management system.

(3) Quality Control of Broadcasting

Among the regional stations, a number of cases have been noticed where broadcasting has been continued without necessary measures taken to improve the degraded sound and picture quality. It also has been noticed the problems exist also in the operational management system, including the problems relating to the skills of personnel and to technical facilities.

Furthermore, work is apparently not conducted systematically with regard to such aspects as the confirmation and improvement of reception conditions of the regional stations' own broadcast signals.

(4) Improvement of Quality of Broadcast Programmes

Because of such inadequacies as mentioned above on the part of the broadcasting stations, a strong desire has been expressed by the audience to further improve the RRI and TVRI programmes into those with richer variety and of greater interest by carrying out overall improvements both in quality and quantity.

It must also be pointed out that, while broadcasting is an extremely effective means of educating the people, neither RRI nor TVRI has been conducting systematic production of educational programmes.

2-3-3. Targets of the Fifth 5-year Development Plan and the Proposed Implementation Plan

As mentioned above, the targets to be attained during the period of the Fifth 5-year Development Plan will first be set according to the order of priority, following the targets and the proposed implementation plan for the long-term plan and taking into account the restrictions of the budget that can be spent during the period of the Fifth 5-year Development Plan.

Regarding the improvement and construction of facilities, the on-going projects which are due to be implemented during this short-term plan or those which have already been committed will in principle be carried on and their targets will be set within the practicable range.

As to the improvement of the software portion of programming and the improvement of the operational system, such improvements will be made in stages along with the progress of the implementation of the facility plan.

Based on the results of examination made on the foregoing, three alternative plans have been drawn up as shown in Table 2-3-1.

The Alternative 1 is to place emphasis on the recovery of the functions of broadcasting facilities and, at the same time, to improve the quality of the broadcasting services even a little better than now so as to bring the status of broadcasting as close as possible to the world's average level, while considering the priorities of the rehabilitation of facilities, establishment of the maintenance system, measures to improve the quality of programmes, and expansion and improvement of broadcasting networks. This Alternative 1 proposes to restrict the number of stations to be improved according to improvement targets set and to continue such improvements further during the period of the Sixth 5-year Development Plan.

The Alternative 3 proposes a plan to carry out minimum necessary rehabilitations of facilities and improvement of the maintenance system, taking the budgetary restrictions into account, with the remaining projects to be further continued during the period of the Sixth 5-year Development Plan.

The Alternative 2 is one that comes in between the two foregoing Alternatives and is basically the same as the Alternative 1, excepting that "expansion and improvement of broadcasting networks" have been excluded as objectives.

Of the above-mentioned three Alternatives, the Alternative 1 was selected as the Fifth 5-Year Development Plan on consultation with the Indonesian side.

Table 2-3-1 IMPLEMENTATION OF PROPOSED PLAN IN REPELITA V AND REPELITA VI

TARGET ITEMS	ON-GOING & COMMITTED PROJECT (REPELITA V)	Alternative 1		Alternative 2		Alternative 3	
		REPELITA V	REPELITA VI	REPELITA V	REPELITA VI	REPELITA V	REPELITA VI
1. REHABILITATION OF FACILITIES							
• Radio Studio	JKT (UK), 26 Regional Stations (JPN, AUS)	4 Regional Stations	18 Regional Stations	—	22 Regional Stations	—	22 Regional Stations
• Radio TX	32 Regional Stations (JPN), Spare Parts (USA)	8 HP Stations	—	8 HP Stations	—	8 HP Stations	—
• TV Studio	16 Regional Stations (JPN), JKT (INS)	—	—	—	—	—	—
• TV TX	7 Regional Stations (JPN, UK), JKT (WG)	5 Regional Stations	—	5 Regional Stations	—	5 Regional Stations	—
2. ESTABLISHMENT OF MAINTENANCE SYSTEM							
• Establishment of Maintenance Base		JKT + 2 Regional Bases	4 Regional Bases	JKT + 2 Regional Bases	4 Regional Bases	JKT + 2 Regional Bases	4 Regional Bases
• Engineering Communication Network		JKT ~ All Region	—	JKT ~ All Region	—	JKT ~ All Region	—
3. UP-GRADING OF BROADCASTING PROGRAMME							
• Introduction of TV UP-LINKS		2 Regional Stations	7 Regional Stations	2 Regional Stations	7 Regional Stations	—	9 Regional Stations
• Up-grading of Radio Programme Line		JKT ~ 48 Reg. Stations	—	JKT ~ 48 Reg. Stations	—	—	JKT ~ 48 Reg. Stations
• Increase of ENG and OB Van	4 OB Vans (JPN, UK), 16 ENGs (JPN) Dubbing Facilities (JPN)	—	—	—	—	—	—
4. IMPROVEMENT OF BROADCASTING NETWORK							
• Expansion of RN-I Network		—	10 Stations	—	10 Stations	—	10 Stations
• Introduction of MW TX to SW only Station	2 Regional Stations (JPN)	5 Stations	5 Stations	—	10 Stations	—	10 Stations
• Complement for RN-I Network (SW)	JAKARTA, UJUNG PANDANG ()	—	—	—	—	—	—
• Establishment of RN-II Network (SW)	JAKARTA, UJUNG PANDANG ()	—	—	—	—	—	—
• Establishment of RN-III Network (FM)	7 Regional Stations (JPN)	—	—	—	—	—	—
• Expansion of Overseas Service (SW)	JAKARTA, MEDAN, BIAK ()	—	—	—	—	—	—
• Expansion of TVN-I Network	51 Stations (INS)	—	50 Stations	—	50 Stations	—	50 Stations

HP : High Power
Reg. : Regional

2-4 Conclusion and Recommendations

2-4-1 Conclusion

In Indonesia, the development plan for radio and TV broadcasting networks plays an extremely important role in promoting Indonesia's national development plan. In fact, tremendous expectations are placed by the Government and people of the Republic of Indonesia on the role that this Project plays in promoting the enhancement of people's educational levels and their literacy rate, and also in encouraging industrial education.

In this long-term plan, various hardware and software plans have been drawn up, setting such main targets as the restoration and maintenance of broadcasting functions, qualitative and quantitative improvement and enrichment of broadcast programmes, and attainment of efficient operational management and financial stability of the organization in which radio and TV are integrated. Once these plans are smoothly implemented, the following objectives will have been achieved:

- (1) Enhancement of the broadcasting services through the recovery and stabilization of broadcasting functions and establishment of the maintenance system.
- (2) Gradual expansion of the broadcasting coverage in response to the desire of regional residents.
- (3) Improvement of the broadcasting services through improvement of programmes.
- (4) Improvement of the organization and management.

Thus, the foundation of the organization as the national broadcasting service will be established, enabling it to carry out the role and responsibility assigned to it and to win the trust and support of the nationwide audience. And through such improvements and expansion, it is expected that the system capable of conducting stable and ample broadcasting services may be established. It is further expected that, on

the strength of the achievements thus made, the broadcasting in Indonesia will take another big stride toward the ultimate goals to be attained in the year 2000 and onwards.

In view of the tight financial condition in which the Government of Indonesia is currently placed, it would be difficult for the Government to be solely responsible for the acquisition of necessary funds to carry out this Project. And it goes without saying that it is necessary for the Government of Indonesia to obtain assistance and cooperation from the industrialized nations in such aspects as broadcast engineering, programme production, organizational integration and staff education and training. However, as to the operation and management after completion of this Project, it is considered absolutely feasible for the Republic of Indonesia to carry on all on its own without any hitch.

It is earnestly hoped that this Project will be carried out at the earliest possible date, in view of the benefits — both tangible and intangible — to be obtained by the Indonesian people and the stimulus given to Indonesia's national development as a result of execution of this Project.

2-4-2 Recommendations

This review of the long-term plan sums up the plan that extends over a period of ten years comprising the periods of the Fifth and the Sixth Five-year Plans. In order to ensure smooth realization of this long-term plan, there is the need of overcoming numerous difficulties that are expected to be faced. Hence, the following recommendations are made:

1) Recommendations from the Aspect of Development Plan

- a) Establishment of a broadcasting service system through the securing and improvement of the broadcasting services.
- b) Securing of the development budget.
- c) Necessity of reviewing the plan in order to cope with unpredictable changes occurring in the future in social environment, technical development, etc.

2) Recommendations from the Aspect of Organization and Management

- a) Attaching importance to the proposed integration of RRI and TVRI.
- b) Reviewing of the relationship with POS & GIRO.
- c) Improving the quality of staff.
- d) Securing of income from TV license fee, and the studying of ways to increase income from other sources.
- e) Appropriate allocation of budget.
- f) Setting up of a depreciation reserve.

3) Recommendations from the Aspect of Broadcast Programming and Facility Operation

- a) Qualitative and quantitative improvement of programmes.
- b) Establishment of an appropriate maintenance system.
- c) Securing and enhancing of quality of broadcasts.
- d) Thoroughgoing consultations with PERUMTEL concerning the lease of programme transmission lines.

3. SUMMARY OF THE STUDY ON INTEGRATED RADIO AND TELEVISION SERVICING SYSTEM PROJECT (FINAL REPORT VOL. 3)

3 SUMMARY OF THE STUDY ON INTEGRATED RADIO AND TELEVISION SERVICING SYSTEM PROJECT (FINAL REPORT VOL. 3)

3-1 Policy for the Design of Development Plan

3-1-1 Organization and Management

(1) Plans Proposed by the Indonesia Side

1) Two Proposals

Drafting Authority	Type of Enterprise	Organization Structure
(1) DEPPEN	PERUM	Total Reform of the Existing Organization
(2) RTF	Another Entity	Respective Reforms of RRI and TVRI except Technique & Administration

2) Comments Made by the Study Team

(a) Type of Enterprise

Perum, for which the governing law exists, is considered appropriate. (Proposal from DEPPEN)

(b) Organization Structure

As regards the subject, it is desirable that RRI and TVRI should be continued in operation for a certain period, as they have been operated, even in the entity of LPN-RTRI to avert disorder, and then be integrated at stages.

(Similar in a sense to Proposal from RTF)

(2) Preparation for Integration of RRI and TVRI

Recommendations are made as follows:

1) Review on the Number of Personnel Employed by the Existing Organization in Preparation for the Integration

(a) Reshuffle/Cut of Supernumeraries

After checking up on the present conditions, surplus personnel including some capable employees selected only for the reason why new jobs are created had better boldly be transferred to new jobs, regardless of individual reasons, but taking into consideration of Golongan and Eselon as well.

(b) "Experts" had better be appointed as a part of the measures to promote rationalization of the organizations.

2) Improvement in Treatment of RRI Staff Members

The RRI excess personnel once shifted to a working unit under TVRI domain should be well treated enough to enjoy a gradual increase in pecuniary benefits toward the level for TVRI personnel.

3) Office Regulations

Based on the system of "Sure Penalty and Certain Reward", office regulations should be reviewed and arranged afresh for rationalization of the existing organizations.

4) Laws of TV License Fee

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

(3) Legal Provisions

1) Presidential Decision No. 215/1963

(a) Liquidation of Yayasan TV

Yayasan TV will be liquidated based on Chapter X Article 22 of the said Decision.

(b) Assets of Yayasan TV

The assets shall be transferred to and come into the possession of TVRI, that is, LPN-RTRI when established in exchange for the abolition of Yayasan TV.

2) New Presidential Decision

A new Presidential Decision is essential for the establishment of LPN-RTRI enterprise.

3) Comparison of Perjan, Perum and Persero

A comparative study on the existing State-Owned Enterprises is required.

4) An Entity of RTRI State-Owned Enterprise

An entity is at least entitled to reserve a revenue from its activities by adopting not ICW but IBW which is not contrary to the provisions of Perum and to receive governmental subsidies under the provisions of a new Presidential Decision.

(4) 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 a type as proposed by DEPPEN since its provisions exist in force.

(b) Organization

The organization formed for the Fourth Stage in the Long-Term Plan, which is similar in a sense to that in the proposal of RTF proposal, is recommended as an organization for the application of LPN-RTRI to the Authorities concerned since it is deemed to be practical in light of the existing conditions.

2) Time Schedule

(a) Declaration of the establishment

One year before the Sixth 5-year Development Plan the establishment will be declared and all the documentations will be ready to be approved subject to the commencement in operation at the beginning of the Sixth 5-year Development Plan.

(b) Actual operation

The new enterprise will start its operation in the initial year of the Sixth 5-year Development Plan.

3-1-2 Broadcast Programming Plan

- (1) 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, 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.
- (2) TVRI will newly start news, educational and cultural programming by extending the broadcasting hours in the morning and in the afternoon of TVN-I and the Metropolitan programme.
- (3) In order to enrich the contents of news and educational programmes, a Liaison Coordination Committee will be established between each of TVRI, RRI and affiliated organizations for the purpose of conducting systematic news-gathering and production and broadcasting of Programmes.
- (4) Public-service advertising will be reinforced with the aim of replenishing the programming budget for further improvement of programme quality.

3-1-3 Maintenance Plan

(1) Policy for Establishment of the Maintenance Plan

The implementation policy for an overall maintenance system will be as follows:

- 1) It is proposed that the concept of equipment maintenance be corrected from one that centers on repairing of failures to one centering on preventive maintenance including periodical check-ups and planned procurement of spare parts.
- 2) In order to implement 1) above, the functions of Engineering Centres will be expanded and reinforced so that an overall management system including equipment maintenance may be established.
- 3) Regional ECs will be newly established so that the management and maintenance capacities of technical facilities across the country may be reinforced.
- 4) A maintenance base will be set up at each of the Jakarta HQ and regional ECs so that detailed patrol check-ups of the technical facilities may be conducted at different stations in the areas under the respective jurisdictions and that, at the same time, the maintenance work at each regional station may be given assistance and support by those maintenance bases.
- 5) Measures will be taken to allocate necessary measuring instruments for routine maintenance purposes to the regional stations and also to keep those stations fully supplied with spare parts for main items of equipment.

(2) Organization and Work of Engineering Centres

- 1) The Jakarta HQ will consist of six divisions including the newly-formed Maintenance Division. With the Planning division as the core, the six divisions, handling such work as facilities

planning, construction and improvement, maintenance and administration and finance, will coordinate the technical management of radio and TV broadcasting facilities throughout the country. It must be noted that the entire range of work handled is closely related with equipment maintenance.

2) Regional ECs

Each Regional EC shall consist of a single division which has the functions of management and maintenance. In addition to acting as an intermediary for, or on behalf of, Jakarta HQ in the latter's management work, each Regional EC will support the maintenance work of broadcasting stations in the area under its jurisdiction and will also conduct other maintenance work. Under the Fifth 5-year Development Plan, two ECs will be established in Medan and Ujung Pandang.

3) Technical Information

In conducting the maintenance work, dissemination of accurate technical information and appropriate processing of such information are the factors that are extremely important. However, heretofore, the actual status in these aspects has been totally inadequate. So, under the present plan, systematic dissemination of information will be promoted and, at the same time, high-performance personal computers of the identical standard will be allocated to Jakarta HQ and the Regional ECs, so as to rationalize such works as assembling and processing of technical information and exchanging of large volume of information.

(3) Contents of Implementation of the Maintenance Plan

1) Installations at the Maintenance Base

A Maintenance Base shall be composed of a repair workshop, maintenance equipment, spare-parts storeroom, work-vehicle garage and office-rooms, and shall be equipped with such implements as the measuring instruments, substitute equipment, spare parts for equipment currently used in the area under jurisdiction, the repair tools and other instruments.

2) Allocation of Measuring Instruments and Substitute Equipment

A large variety of high-precision measuring instruments will be allocated to the maintenance Bases at Jakarta HQ and the Regional ECs, so that such instruments may be used for detailed patrol check-ups of broadcasting facilities at the stations in the areas under jurisdiction and for the support of maintenance work at the regional broadcasting stations. Also allocated to the Maintenance Bases are the substitute equipment for use at such times as equipment failures or facility construction.

Furthermore, measuring instruments for routine check-up use will be allocated to the regional stations of RRI and TVRI so as to fill their needs.

3) Filling the Needs for Spare Parts

For such main items of equipment as high-power transmitting tubes, image pick-up tubes and VTR repairing parts, the fulfillment of needs for high-priced parts and foreign-made parts will be planned and carried out.

3-1-4 Broadcasting Network Plan

With a history of 44 years behind it since its establishment in 1945, RRI today has achieved a 68% population coverage with its broadcasts conducted through 49 stations. However, as a result of superannuation of equipment in use since the start of broadcasting and also owing to inadequate maintenance, a large number of equipment have already lost their original functions.

Hence, what is urgently required today is to restore the functions of the existing facilities and to maintain such functions, as otherwise there is a fear of the broadcasting network suffering a breakdown. But since there are a mountain of various plans waiting to be implemented, it is proposed that, during the period of the short-term plan, medium-wave transmitting facilities be additionally installed at only five IFRB-registered stations among the shortwave-only broadcasting stations.

3-1-5 Facility Plan

After a review of the long-term plan, the order of priority with regard to the improvement and expansion plans has been decided on as follows:

- 1st priority : Rehabilitation of Facilities
- 2nd priority : Establishment of a Maintenance System
- 3rd priority : Up-grade of Broadcasting Programmes
- 4th priority : Improvement of Broadcasting Network

According to the order of priority, projects which are highly urgent and from which great effects can be expected have been selected and planned. And instead of resorting to an easy approach of simply making additional purchases of equipment, consideration has been made in such a way as to produce maximum effects with the limited amount of budget allocated. As to the systems planned, the same types as the existing ones have in principle been chosen but those that are considered to be low reliability have been planned to be improved.

3-1-6 Programme Transmission Plan

(1) Introduction of TV Up-links

Considering the construction cost, operation cost and mobility, the mobile-type TV up-links, which can be judged as matching the current condition, will be introduced. As to the allocation of TV up-links, it is considered effective to allocate them to Java and Sumatera, taking the infrastructure into account. Hence, it has been decided that the TV up-links should be introduced to Medan and Surabaya which are both most populous large cities on the two islands.

(2) Establishment of Radio Programme Transmission Lines and Engineering Communication Network

From among various methods that can be considered at present, one has been selected that makes exclusive use of a transponder on 3MHz aboard the PALAPA satellite and transmits four series of radio programmes by

multiplexing them on communication lines for liaison use (4 both-way lines). This method has been adopted because it is considered most efficient from the points of view of construction cost, leasing cost, reliability, composition of stereophonic lines and future adaptability.

3-1-7 Staff Plan

(1) Staff Plan for New Projects

A plan will be made for the necessary staffing of each project to be carried out during the coming five years, taking into account also the possibility of transferring some of the current employees to those new projects.

(2) Effective Use of Surplus Personnel

It is recommended that such surplus personnel be used effectively at maintenance bases and the committees of the three audience-servicing divisions.

3-2 Outline of the Project

3-2-1 Software Project

(1) Organization Management

Following the proposal advocated by the Indonesian side to integrate RRI and TVRI into a national enterprise, it is proposed that, during the period of the Fifth 5-year Development Plan, necessary steps be taken to prepare for, and carry out, the establishment of the new organization. The following are the proposals made concerning its establishment:

- 1) Its form shall be PERUM (proposed by DEPPEN) and, as for the actual form, the type proposed by RTF is recommended.
- 2) As regards the implementation plan;
 - a) The declaration of integration shall be made one year before the start of the Sixth 5-year Development Plan.
 - b) The establishment of the integrated organization shall be effective from the initial year of the Sixth 5-year Development Plan.

(2) Staff Plan and Training

The estimated number of staff members required in carrying out the various kinds of new projects scheduled for the period of the Fifth 5-year Development Plan is 1,226 including the requirements of all the three divisions, viz., news/programming, engineering and administration. Of these 1,226, it is estimated that the number of staff members that can be shifted from among those engaged in the present work will be 407 and those that need to be newly employed, 819.

As to the newly employed staff, they should be given a short-term vocational training making effective use of the facilities at MMTC, R-TC and TV-TC, and, at the same time, be given systematic On-the-Job Training at each workplace.

(3) Broadcast Programmes

- 1) The 24-hour-a-day broadcasting system of RN-I shall be established at all of the RRI stations. Through the improvement of lines, the quality of the programmes shall be enhanced. The programmes of regional stations shall consist of those produced on their own (40%) and those produced by Jakarta station (60%). The high-quality programmes originating in Jakarta shall be relayed for nationwide broadcast.
- 2) Overseas broadcasting hours shall be increased, using high-power shortwave transmitters.
- 3) Broadcasting hours of TVN-I and metropolitan programmes shall be expanded. As for TVN-I, the broadcasts during the morning and afternoon shall be gradually extended by filling the empty hours so that the total daily broadcast time may reach about 16 hours, enriching news, educational and cultural programmes. The Jakarta metropolitan programmes shall gradually be extended to 6 hours in daily broadcast, centering on educational programmes.
- 4) In order to further enrich news and educational programming in both radio and TV, a "Liaison Coordination Committee" shall be established jointly by RRI, TVRI and affiliated organizations.

(4) Audience-servicing Measures

With regard to such audience-servicing work as programme publicity, reception techniques and license-fee collection, they shall be handled in a positive manner after the integration by setting up specialized sections. For that purpose, during the period of the Fifth 5-year Development Plan, a system will be set up enabling promotion of such work as mentioned above in stages by establishing a committee which coordinates the work handled by various divisions concerned within the RTF.

3-2-2 Hardware Project

(1) Contents of the Project

1) Rehabilitation of Eight (8) High-power Radio Stations

The overhauling to recover the functions will be conducted on the transmitters, antenna system and power-source system at the eight medium-wave radio transmitting stations installed under J-10 and M-2 projects in Jakarta, Medan, Banjarmasin, Ujung Pandang, Pekanbaru, Palembang, Surabaya and Semarang.

2) Rehabilitation of five (5) TV Transmitting Stations

At the five stations in Bandarbaru (Medan), Ujung Pandang, G. Muncung, G. Mangkol and G. Tajam, the superannuated transmitters will be renewed and, at the same time, overhauling will be conducted on the power-source and antenna systems.

3) Establishment of Maintenance System (Jakarta and the two regional bases)

In order to conduct thoroughgoing management of facilities, computers will be introduced into the EC in Jakarta. Workshops will also be set up and measuring instruments, substitute equipment and spare parts will be supplied to these workshops. Then, as the first step, a Regional EC which also functions as a maintenance base will be set up each in Medan and Ujung Pandang, both provided with necessary facilities.

4) Construction of TV Up-links (at two regional stations)

In order to transmit the programmes produced by regional stations to Jakarta, a mobile TV up-link will be constructed at the stations in Medan and Surabaya.

5) Improvement of Radio Programme Transmission Lines and Engineering Communication Network

(a) Improvement of Radio Programme Transmission Lines

The down-stream programme transmission lines from Jakarta for RN-I will be improved into those of 10kHz in frequency

band. Also, the down-stream lines of 5kHz in frequency band 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.

Furthermore, as RN-III programme transmission line, a stereophonic line will be established between Jakarta and such other cities as Medan, Surabaya, Semarang, Banjarmasin, Bandung and Yogyakarta.

(b) Establishment of Engineering Communication Network

(between Jakarta and all regional radio and 50 TV stations)

An exclusive engineering communication network will be established.

a) Two duplex-type engineering communication lines among Jakarta and 48 RRI regional stations with facsimile equipment.

b) Two duplex-type engineering communication lines among Jakarta and 50 TVRI regional stations with facsimile equipment.

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

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

7) Rehabilitation of Studios at Regional Radio Studios (4 stations)

Studio equipment, master control equipment and FM transmitters/receivers, used also for STL, will be installed at four of the above-mentioned five stations (excepting Palangkaraya).

(2) Effects

1) It is estimated that, with the total rated output of 760kW of the eight high-power radio stations, the broadcasts will be capable of covering 492,000 km² in total transmission area and about 45% (about 78 million people) of the entire population of Indonesia.

Stable offering of broadcasting services to all this large number of people definitely produces enormous effects. On the other hand, if things were left as they are, this would mean a loss of such a huge service area as described above.

- 2) The estimated population coverage of the five TV stations that require rehabilitation is considered to have exceeded five million people. And the stable offering of broadcasting services to all these people is considered as being enormously effective.
- 3) The rehabilitation will improve the unstable broadcasting services, such as stoppage of broadcast resulting from breakdown of equipment, and will enable stable reception of broadcasts.
- 4) The conducting of preventive maintenance, smooth flow of spare parts, speedy repairing of equipment failures, and other positive maintenance measures will be facilitated and favorable effects will be brought to the ensuring of stable broadcasting services.
- 5) The transmissions of programmes to or from the provinces will be enhanced in technical quality and will be made smoother, which, in turn, will favorably affect the enhancement of quality of programmes and securing of instantaneity of broadcasting.
- 6) The medium-wave broadcasting network will be widened and the basic system of radio broadcasting will be established, resulting in effective promotion of stable broadcasting services. (The medium-wave stations, all combined, are estimated to be serving about 800,000 people.)

3-3 Implementation Plan

3-3-1 Project Cost

As to the Software Project, no specific calculation will be made here, since it is supposed to be implemented with the budget covering the operational expenses. The following is an estimation of costs of implementing the hardware Project:

	Units: (Foreign Currency (F.C.) in Thousand Yen Local Currency (L.C.) in Thousand Rupiah)	
(1) Rehabilitation of High-power Radio Stations (8 stations)	(F.C.)	1,795,000
	(L.C.)	144,000
(2) Rehabilitation of TV Transmitting Stations (5 stations)	(F.C.)	330,000
	(L.C.)	91,000
(3) Establishment of a Maintenance Systems (Jakarta + 2 bases)	(F.C.)	1,681,000
	(L.C.)	1,295,000
(4) Introduction of TV Up-links, and Improvement of Programme Transmission Lines and Engineering Communication Networks	(F.C.)	1,200,400
	(L.C.)	292,000
(5) Additional Construction of medium-wave Facilities at Shortwave-only Stations (5 stations)	(F.C.)	2,014,000
	(L.C.)	5,503,000
(6) Rehabilitation of Studios at Regional Radio Stations (4 stations)	(F.C.)	615,000
	(L.C.)	472,000
Sub Total	(F.C.)	7,635,400
	(L.C.)	7,797,000
(7) Consultant Fee	(F.C.)	407,000
<hr/>		
Total	(F.C.)	8,042,400
	(L.C.)	7,797,000

1 yen=12.4 Rupiah

107,522,760 (1,000 Rupiah)

3-3-2 Operation Cost

Major items of increment of annual operational cost at the end of this Project are estimated as follows:

	(in million Rupiah)
(1) Programme Production Cost	1,300
(2) Maintenance and Repair Cost	782
(3) Operational Cost of Maintenance Bases	2,830
(4) Leasing Fee for Programme Transmission Line	30
(5) Electric Power Charges	1,000
(6) Personnel Wages	244
<hr/>	
Total:	6,186 million Rupiah

3-3-3 Implementation Plan

As regards the Software Project, the typical implementation schedule is shown in Table 3-3-1.

And for the Hardware Project, the budget allocations are shown in Table 3-3-2 and the typical construction schedules in Table 3-3-3.

Table 3-3-1 Typical Implementation Schedule of Software Project

Item	Repelita	Repelita V					Repelita VI	
	Year	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Implementation Schedule of Software Project								
1) Integration of RRI and TVRI								
- Preparation								
- Declaration & Approval of Documentation								
- Commencement in Operation							Enterprise Starts	
- Further Alignment								
2) Other Schedule								
- Educational Programme (Committee)							Raise To Division	
- News Gathering (Committee)							Raise To Division	
- Audience Service (Committee)								Raise To Division
- Maintenance Base (Set up of Maintenance Division in EC)				Maintenance Division Starts in EC				Maintenance Base Starts
3) Improvement of Broadcasting Programme								
- RN- I			All RRI Stations Start 24 H Service					Alignment of Compiling Regional Programmes
- RN-III				Improvement of RN- I Programmes			Regional FM Stations Start	
- Overseas Service				Improvement of Overseas Programmes			24H Overseas Broadcasting	
- TVN- I								
- Metropolitan Service (Jakarta)								
(Reference)								
Implementation Schedule of Hardware Project								
1) On-going, Committed project and project under Planning by RTF								
2) Proposed Project by This Study					1st Year	2nd Year	3rd Year	

Table 3-3-2 Budgetary Schedule

(F.C. Th. ¥
L.C. Th. Rp)

	1st Year	2nd Year	3rd Year
① Rehabilitation of 8 HP Radio Stations	Jakarta (F.C. 438,000 L.C. 18,000)	Medan (F.C. 202,000 L.C. 18,000)	Pekanbaru (F.C. 192,000 L.C. 18,000)
	Semarang (F.C. 172,000 L.C. 18,000)	Surabaya (F.C. 203,000 L.C. 18,000)	Palembang (F.C. 193,000 L.C. 18,000)
		U. Pandang (F.C. 203,000 L.C. 18,000)	Banjarmasin (F.C. 192,000 L.C. 18,000)
② Rehabilitation of TV Transmitting Stations	Medan (F.C. 63,000 L.C. 18,000)	U. Pandang (F.C. 48,000 L.C. 18,000)	Gn. Mengkol (F.C. 80,000 L.C. 18,000)
			Gn. Tajam (F.C. 57,000 L.C. 19,000)
			Gn. Muncung (F.C. 82,000 L.C. 18,000)
③ Construction of Maintenance System	Jakarta (F.C. 921,000 L.C. 1,060,000)	Medan (F.C. 180,000 L.C. 190,000)	RRI 18 Station (F.C. 98,000 L.C. 0)
		U. Pandang (F.C. 180,000 L.C. 45,000)	TVRI 17 Station (F.C. 273,000 L.C. 0)
			TVRI 9 Station (F.C. 29,000 L.C. 0)
④ Improvement of Programme Transmission Line, Engineering Communication Network and TV UP-LINKS	One set (F.C. 835,800 L.C. 288,000)	TVRI Medan (F.C. 182,300 L.C. 2,000)	TVRI Surabaya (TV UP-LINK) (F.C. 182,300 L.C. 2,000)
⑤ Additional Construction for MW Facilities at SW-only Stations	Palangkaraya (F.C. 396,000 L.C. 1,137,000)	Bukittinggi (F.C. 383,000 L.C. 1,236,000)	Fak-Fak (F.C. 420,000 L.C. 1,319,000)
		Ternate (F.C. 396,000 L.C. 600,000)	Sorong (F.C. 419,000 L.C. 1,211,000)
⑥ Rehabilitation of Studios at Regional Radio Station		Bukittinggi (F.C. 157,000 L.C. 118,000)	Fak-Fak (F.C. 138,000 L.C. 118,000)
		Ternate (F.C. 157,000 L.C. 118,000)	Sorong (F.C. 163,000 L.C. 118,000)
Sub-Total	(F.C. 2,825,800 L.C. 2,539,000)	(F.C. 2,291,300 L.C. 2,381,000)	(F.C. 2,518,300 L.C. 2,877,000)
Consultant Fee	(F.C. 141,000)	(F.C. 94,000)	(F.C. 172,000)
Total (Thousand Rupiah)	39,327,320	31,958,720	36,236,720
Ground Total	107,522,760 (Thousand Rupiah)		

Table 3-3-3 Typical Construction Schedule

Item	Year & Month	1st Year												2nd Year												3rd Year											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Consultant Contract		[Gantt bar from month 1 to 15]																																			
Detailed Survey		[Gantt bar from month 1 to 4]																																			
Detailed Design & Preparation of Tender Documents		[Gantt bar from month 5 to 10]																																			
Tender & Evaluation		[Gantt bar from month 10 to 15]																																			
Construction Contract		[Gantt bar from month 16 to 24]																																			
Manufacturing		[Gantt bar from month 16 to 24]																																			
Transportation		[Gantt bar from month 25 to 27]																																			
Installation Work		[Gantt bar from month 28 to 36]																																			
(1) Rehabilitation of High Power Radio Stations		[Gantt bars for: Jakarta (28-30), Pekanbaru (30-31), Palembang (31-32), Banjarmasin (32-33), Medan (33-34), Surabaya (34-35), U. Pandang (35-36), Semarang (36-37)]																																			
(2) Rehabilitation of TV Transmitting Stations		[Gantt bars for: Medan (28-29), U. Pandang (29-30), Gr. Mengkol (30-31), Gn. Tajam (31-32), Gn. Muncung (32-33)]																																			
(3) Establishment of Maintenance System		[Gantt bars for: Jakarta (28-29), Medan (29-30), U. Pandang (30-31)]																																			
(4) Construction TV Up-link and Improvement of Radio Programme Transmission Line and Engineering Communication Network		[Gantt bar for: all sites (28-29)]																																			
(5) Additional Construction of MW Facilities at SW-only Stations		[Gantt bars for: Ternate (28-29), Sorong (29-30), Fak-fak (30-31), Bukittinggi (31-32), Palangkaraya (32-33)]																																			
(6) Rehabilitation of Studios at Regional Radio Station		[Gantt bars for: Ternate (28-29), Sorong (29-30), Fak-fak (30-31), Bukittinggi (31-32)]																																			

3-4 Economic and Financial Evaluation

3-4-1 Investment plan

(1) The Fifth 5-year Development Plan

There is a gap between the budget decided through the Fifth 5-year Development Plan and that planned by RTF as follows:

- 1) Development budget by REPELITA V - RP.252.6 Billion
- 2) Proposed cost of On-going and Committed Projects
- RP. 515.9 Billion

(2) Pending issue

- 1) RTF plan is an over-budgeted investment plan by some 200% against BAPPENAS proposition as above.
- 2) About three-quarter (3/4) of the investment plan for 10 years is concentrated on the Fifth 5-year Development Plan. It is important therefore RTF should make an effort on securing the budget for implementation of proposed projects.

3-4-2 Economic and financial evaluation

(1) Index of evaluation

Broadcasting service can obtain income only after the total system is established. Distribution of income for partial improvement of the system is difficult. Evaluation is only for EIRR but not for FIRR.

(2) Preconditions of evaluation

- 1) For economic benefit, only those part for which quantitative grasp is possible will be assumed and evaluated.

- 2) Evaluation will be implemented for each project group of each system. The project cost ratio proposed this time is about 23% if RTF-decided projects are included.
 - 3) Economic benefit for radio is not assumed.
 - 4) Benefit distribution ratio to Maintenance Base is the investment cost ratio (5% of total short-term plan).
 - 5) Benefit distribution ratio to radio will be decided based upon the current fee, that is, 25% for radio and 75% for television.
- (3) Results of analysis

The results of analysis for each project group are as follows:

	<u>EIRR</u>
1) Rehabilitation of 8 HP Radio Station	40.6%
2) Rehabilitation of 5 TV Stations	38.4%
3) Maintenance Base	9.2%
4) Engineering Communication Network	16.8%
5) TV Up-Link	7.3%
6) Radio Programme Line	7.9%
7) MW TX to SW Station	(-) 47.9%
8) Rehabilitation of Radio Studio	(-) 2.7%

Total Proposed Projects in Short-term : 11.7%

(4) Evaluation

Evaluation has been made only for projects proposed in the short-term plan. But importance should be attached to EIRR (12.1%) as calculated in the long-term plan because the project will have a long life. It is also noteworthy that even projects with minus EIRR can be worth implementing in terms of social benefit of broadcasting.

3-5 Project Evaluation

The mass communication media have been performing the basic functions in various ways indispensable to national development, such as, "conveying of knowledge to the people", "promotion of mutual understanding among the people", "nurturing of people's consciousness of national identity", "promotion of understanding among different races within the country" and "promotion of international understanding". In this respect, Indonesia, of course, is no exception.

However, in Indonesia, given the vast territory and various restrictive conditions including the current literacy (62%) and limited means of distribution, the conveying of information in print, such as news paper (89 papers with a total circulation of 750,000) and magazines, is not quite enough to satisfy the need of the large population. Considering its high efficiency, broadcasting can be regarded as the most effective of all the mass communication media.

In the face of the difficult environment, "one nation and one language" has always been the national theme of the Republic of Indonesia ever since its independence. In the nation's effort to unify the people living on a wide territory extending over an area of some 1.92 million square kilometers with the single national language of Indonesian, broadcasting has been contributing greatly to the spreading of the language across the country.

In the field of adult education, such as promotion of school education and agriculture, forestry and fisheries, spreading of concepts of health and hygiene, promotion of family planning and the migration policy, too, efforts are continued in making effective use of broadcasting as a means of supplementing the shortage of necessary facilities and teachers.

The main targets of this Project are to restore the degraded broadcasting functions in Indonesia, to establish the system to maintain those functions, to enhance the quality of broadcast programmes, to extend stable medium-wave broadcasting network and eventually to attain a stable broadcasting management centering on audience-servicing.

The population that is to be benefited directly by this Project is estimated at about 84 million (about a half of the total population of Indonesia). In fact, the beneficial effect of this Project will be something that covers the entire population, if all the Software Projects, such as establishing of programme transmission lines and the maintenance system, integration of radio and TV organization, improvement of quality of programmes and reinforcement of audience-servicing measures, were taken into account.

The total investments to be made into the entire project to ensure its successful accomplishment is estimated at about 107.5 billion Rupiah. Since there are a total of about 39.19 million households in Indonesia, the above-mentioned investment would mean for each household to bear a sum of about 2,743 Rupiah. However, if that investment would eventually enable the entire nation to enjoy broadcasting services of high quality, then, this investment would not seem to be too expensive.

This Project, which consists mainly of rehabilitation of existing facilities, can be considered as one that enables saving of expenses required in producing the same effect as that which can be produced by implementing a new project. Furthermore, the Project takes into account the effectiveness of investing into what are most necessary by making effective use of the facilities into which investments were made in the past, instead of resorting to the easygoing approach of additionally purchasing equipment to fill the needs.

The implementation of this Project is strongly hoped, since, as explained above, it is considered to contribute greatly to the improvement of Indonesia's broadcasting in the aspects of operation and management.

3-6 Recommendations

3-6-1 Recommendations in Software Aspect

- (1) Since three-fourths of the entire investment budget are to be devoted to the Fifth 5-year Plan, it is necessary to secure the budget so that the implementation of the project may not be delayed.
- (2) In order to ensure smooth integration of RRI and TVRI into a new organization, appropriate measures should be taken in relation to laws and regulations.
- (3) In order to double the amount of the TV license fee, a committee should be set up, with RTF and TVRI playing the central role in the establishment and running of the committee.
- (4) RRI should accomplish the establishment of 24-hours-a-day broadcasting at all of the 49 stations of RN-1 and should, at the same time, set up a joint news coverage committee with TVRI.
- (5) In order to further enrich news and educational programming in both radio and TV, a "Liaison Coordination Committee" shall be established jointly by RRI, TVRI and affiliated organizations.
- (6) Both RRI and TVRI will broadcast public-service advertisements. TVRI, in particular, shall reinforce and promote production of Indonesian-language versions of imported TV programmes.

3-6-2 Recommendations in Hardware Aspect

- (1) To set up a task force in the Engineering Centre in order to draw up technical standards.
- (2) To make studies on service area by means of questionnaires and field intensity check in order to confirm the conditions of listening and watching on radio and TV, and make service area maps.
- (3) To execute the active on-the-job training at each post.

- (4) To study the good communication way between Jakarta Headquarters and each local station.
- (5) To establish clear-cut lines of authority and responsibility on the technical matters.
- (6) To study the studio occupation factor on programme production in order to come in useful for designing.
- (7) To study the problems on propagation (interference, fading etc.), which happened recently.
- (8) To seize the conditions of facilities suitably and pigeonhole those data.

那