

Chapter 3

Implementation Plan

Chapter 3 Implementation Plan

3-1 Implementation Plan

3-1-1 Implementation Concept

Based on the basic doctrine of the Grant Aid System of the Government of Japan, the consultant shall carry out all implementation and supervision work from the detailed design to the handing over.

The implementation concept of the Project is presented in the following paragraphs.

(1) Basic Concept

Sri Lanka Rupavahini Corporation (SLRC), the implementing agency for the Project, is required to establish an implementation schedule to ensure the smooth and timely implementation of the Project, and coordinate its various departments to ensure that there is no confusion over areas of responsibility. Consequently, prior to the start of project SLRC should select the Project Manager and his staff members who play a role of counterparts to work with the consultant. The consultant and the counterparts shall promote the smooth execution of the Project through studying and reviewing items of a work bar chart and technical specifications, maintaining close communications with each other, and providing pertinent and timely guidance and advice to the contractor.

The broadcasting equipment to be renewed under the Project shall be installed with following consideration shown below in order to maintain the functions of state broadcasting.

1) Observance of Implementation Schedule and Arrangement by SLRC and the Contractor

As the Project implementation schedule is limited in that it must conform to the requirements of Japan's grant aid scheme, some of the equipment installation work will need to be carried out during the period of constructor work by SLRC. Any delays in the facilities construction works to be conducted by SLRC would seriously affect subsequent installation work, thus it is vital that the works schedule of the both parties be closely adhered to. In consideration of this, the consultant and SLRC should cooperate

in conducting schedule control for both the equipment installation and facilities construction works. In particular, SLRC should at all times maintain close communications with the facilities contractors and should be prepared to provide sufficient information to and conduct close schedule coordination with the consultants with respect to the site entry of equipment and materials, installation periods and trial operation periods, etc.

2) Securing of Space for Installation of the Project Equipment and Provisional Operation by Existing Equipment

The broadcasting equipment to be renewed under the Project shall be installed without causing any suspension to broadcast services. As well as securing the necessary space prior to the installation works, SLRC must transfer the existing equipment and operate it provisionally in order to ensure a continuous broadcasts till the new installation becomes operative.

3) Interface between New and Existing Equipment

As the Project only involves partially renewal of the existing equipment, the overall broadcasting system will consist of a mix of Project equipment and existing equipment after Project implementation. As the manufacturers of equipment composing the system may differ according to the selected equipment specifications. It is essential that careful examination and coordination will be carried out after the start of work with regard to such details as mounting frame size of equipment, connection cable types, connector types, distribution signal levels, and equipment location, etc. Thus, it will be necessary for the consultant to maintain a close contact with the contractor about the interface problem throughout the installation period.

4) Necessity of SLRC Staff for Equipment Installation

After inspection in Japan, the Project equipment will be disassembled as necessary for transportation to Sri Lanka, it will be necessary to reassemble and readjust the equipment after completion of installation. The equipment installation work will provide an ideal opportunity to carry out on-the-job training for the local staff in that it will involve explanations of Operation and maintenance of the equipment. Moreover, the handing over

procedure will include inventory of the equipment. It is, therefore, requested that SLRC engineers take part in the installation work and assist of engineers dispatched from Japan.

In consideration of the scale of equipment, the works period and the local conditions, six teams of engineers shall be dispatched from Japan to install and adjust the equipment. In addition, one more engineer shall be dispatched to supervise the overall system installation and adjustment.

5) Ensuring of Security

Military exchanges are continuing in the north and east of Sri Lanka between government forces and Anti-government extremist (the LTTE).

There is a particular concern that broadcasting stations may become the target for terrorist attacks.

In consideration of the above situation, the consultant requests the SLRC side to provide proper security for the Project equipment and officials concerned with implementation, and shall prepare an emergency communications setup through maintaining links with the Embassy of Japan in Sri Lanka, the JICA office in Colombo, the Government of Sri Lanka and the implementing agency.

3-1-2 Implementation Conditions

The carrying in and unpacking of equipment will require a lot of space and, moreover, care will have to be taken to ensure that existing buildings and equipment are not damaged during the work. In advance of the construction work (ex: the building and the tower for the Transposer Station) borne by Sri Lanka, it is necessary to make an application to the authorities concerned under the U.D.A. Planning and Building Regulation.

SLRC shall make a schedule for the construction work including one month for this procedure. Thus, the consultant will have to supervise the work while maintaining close communications with the SLRC staff in charge of facilities.

Regarding the installation of antennas and feeders at transmitting stations, this work will be performed at high place, great care will need to be taken with regard to footholds and natural conditions (rain, lightning, winds), etc. For this reason, workers operating at high place shall be made to wear safety belts, and further measures such as the use of

tools bags and safety nets shall be taken to ensure that there no accidents caused by falling machinery, tools or parts, etc.

3-1-3 Scope of Works and Obligation of Sri Lanka Country

The scope of work to be carried out by the Japan side and Sri Lanka side respectively in the case where the Project is implemented through grant aid is indicated in Table 3-1-1.

Table 3-1-1 Scope of Work

Item	Japan Side	Sri Lanka Side
Colombo Broadcasting Center	<ul style="list-style-type: none"> - Manufacture, transportation, installation and adjustment of Project equipment and technical transfer for equipment operation 	<ul style="list-style-type: none"> - Moving and provisional operation of existing equipment (transferable types), and securing of space - Securing of access lines for carrying in equipment
Pidurutalagala Main Transmitting Station	<ul style="list-style-type: none"> - Manufacture, transportation, installation and adjustment of Project equipment and technical transfer for equipment operation - Installation of new intake and exhaust ducts for the new TV transmitter 	<ul style="list-style-type: none"> - Provision of wall penetrate of new duct for the new TV transmitter - Securing of access road for carrying in equipment
Primrose Hill Transposer Station	<ul style="list-style-type: none"> - Manufacture, transportation, installation and adjustment of Project equipment and technical transfer for equipment operation - Removal of existing antenna and feeder 	<ul style="list-style-type: none"> - Securing of access road for carrying in equipment - Disposal of removed equipment
Hantana Transposer Station	<ul style="list-style-type: none"> - Manufacture, transportation, installation and adjustment of Project equipment*1 and technical transfer for equipment operation *1 TV translator, transmitting antenna and feeder, Power receiving & distribution panel, engine generator etc. - Manufacture and installation of service tank for engine fuel 	<ul style="list-style-type: none"> - Acquisition of land and construction of a transmitting station building - Installation of service power line to the transmitting station - Installation of water supply facilities - Installation of telephone facilities - Calculation of Telecom tower load and tower reinforcement work - Manufacture and installation of a large capacity tank (480ℓ) for engine fuel - Securing of access road for carrying in equipment

In addition to the items shown in Table 3-1-1, the Sri Lanka side carries out the following items at its own expense:

- to submit data and information required for the detailed design and study
- to acquire any authorization or permission needed for Project implementation
- to ensure prompt unloading and customs clearance at ports of disembarkation in Sri Lanka and internal transportation therein of the products purchased under the Grant.
- to exempt any tariffs, taxes or other financial levies that may otherwise be levied on the Project equipment or work based on the authorized contracts
- to ensure security for the implementation of the Project
- to train the Sri Lankan installation staff employed by the implementing agency
- to accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into Sri Lanka and stay therein for the performance of their work.
- to bear the following commissions to the Japanese foreign exchange bank for the banking services based upon B/A (Banking Arrangement)
- to procure all other equipment and materials and undertake all other works not covered by the bounds of the Grant Aid
- to maintain and use properly and effectively the facilities provided under the Grant.
- Advising commission of Authorization to Pay (A/P)
- Payment commission (0.1% of the total project amount)

3-1-4 Consultant Supervision

(1) Consultant Supervision Concept

The consultants must form a Project Team to carry out the detailed design and consultant supervision, and the team must coordinate with the related agencies and officials and ensure that the Project is realized based on the basic design. The concept of the consultant supervision is given in the following paragraphs.

- 1) The consultant shall coordinate closely with the related officers to ensure that no misunderstandings arise concerning the contents of the construction works to be borne by the Sri Lanka side and the Project equipment installation works, and both sides shall do their utmost to ensure that all the work finishes on time.
- 2) The both sides shall maintain close communications and discussions with the related agencies in both countries and provide pertinent and timely guidance and advice to the contractor to ensure the smooth progress of the works.
- 3) The consultant shall strive to transfer technology in the areas of installation and operation, etc. in order to enable the SLRC side fully benefit from the grant aid.

(2) Contents of Consultant Supervision

The contents of the supervision work to be carried out by the consultant are described in the following paragraphs.

1) Detailed Design

The consultant shall design a system of appropriate scale and equipment composition based on the basic design concept, and shall prepare specifications and documents for the tender.

2) Works Contracts

Based on the above-mentioned detailed design, the consultant shall carry out the advance review of contractor qualifications, inviting the tender, evaluating a tender Proposal, selecting the successful contractor, preparing contract documents and witness the signing of the contracts, etc.

3) Review of Materials Presented by Contractor

The consultant shall review and approve the fabrication drawings, fabricated equipment and samples, etc. that are presented by equipment manufacturers.

4) Site Supervision of Work

The consultant shall advise the contractor based on review of the

works plan and schedule bar diagram, and shall regularly report on the state of works progress to SLRC.

5) Issue of Consultant's Certificate of Works Completion

The consultant shall issue a certificate of works completion and assist in any other procedures required for the payment of contract price after the completion of works.

6) Witnessing of Inspections

The consultants shall witness and approve all testing and inspections conducted during the course of the works; submit reports to related officials in the Government of Japan on the state of works progress, payment procedures, handing over and other necessary items; confirm the completion of the works, and witness the handing over of facilities to SLRC.

(3) Consultant Staffing Plan

The equipment installation and adjustment shall simultaneously take place over a short time period (approximately one month half) at the four Project sites such as Colombo Broadcasting Center, Pidurutalagala Main Transmitting Station, Primrose Hill Transposer Station and Hantana Transposer Station. Care will especially need to be taken to ensure that work is carried out efficiently and that broadcasting functions are not affected in the case of Colombo Broadcasting Center, because provisional broadcasting with existing equipment will be carried out during the new equipment installation. Also, it will be necessary to plan execution and provide continued advice and guidance to contractor period, the Sri Lanka government and implementing agencies during the of the work.

A total of seven consultant staff shall be dispatched to Sri Lanka to supervise the works from the detailed design to completion. The responsible work areas of the consultants are as follows:

- Leader 1
- Studio equipment 3
- Transmitting equipment 3
- Cost estimation 1
(work in Japan)

Total 8

One of the consultant staff in charge of studio equipment shall be stationed in Colombo during installation period and shall provide practical guidance on schedule control and the prevention of interruption in broadcasting service. One each of the three consultants in charge of transmitting equipment shall be stationed at each of the three transmitting stations targeted by the Project, and the leader shall fly to Sri Lanka at the time of start and completion of works to ensure smooth progress and the successful conclusion of the Project. The criteria for selection of the consultants shall be abundant experience and technical know-how, a broad viewpoint and the ability to coordinate things.

3-1-5 Procurement Plan

(1) Procurement Plan

When procuring the equipment, it will be necessary to take into consideration the quality of the products, the reliability of the suppliers, the level of maintenance services provided by suppliers following delivery, and the compatibility with existing equipment (in terms of association with local agents, parts supply channels, equipment handling, operation and maintenance). However, because Japanese products are preferred and used in large quantities at SLRC, it is thought that little difficulty should be encountered in procuring compatible items.

Products designed and manufactured in third countries may be adopted in cases of individual parts and items of equipment, however, these shall be used under the responsibility of the contractor. The ability of makers to respond to customer requirements in terms of equipment stability, performance, spare parts supply, servicing and maintenance, etc. must be taken into account when compiling the procurement plan.

(2) Transportation Plan

Equipment procured in Japan shall be transported by sea to Colombo Port, from where it shall be carried by truck or trailer overland to the respective Project sites. Main roads to the Project sites are in a fair condition.

The access road to Pidurutalagala Main Transmitting Station is paved but also narrow, bumpy and very curved, meaning that it will be difficult to transport equipment by large truck and trailer. Moreover,

land next to the station is the site of radar and other military facilities and the passage of non-authorized personnel at the lookout post on the entrance to the access road is prohibited. It will thus be necessary for the equipment-related personnel to register with the military and obtain passes prior to the carrying in of equipment.

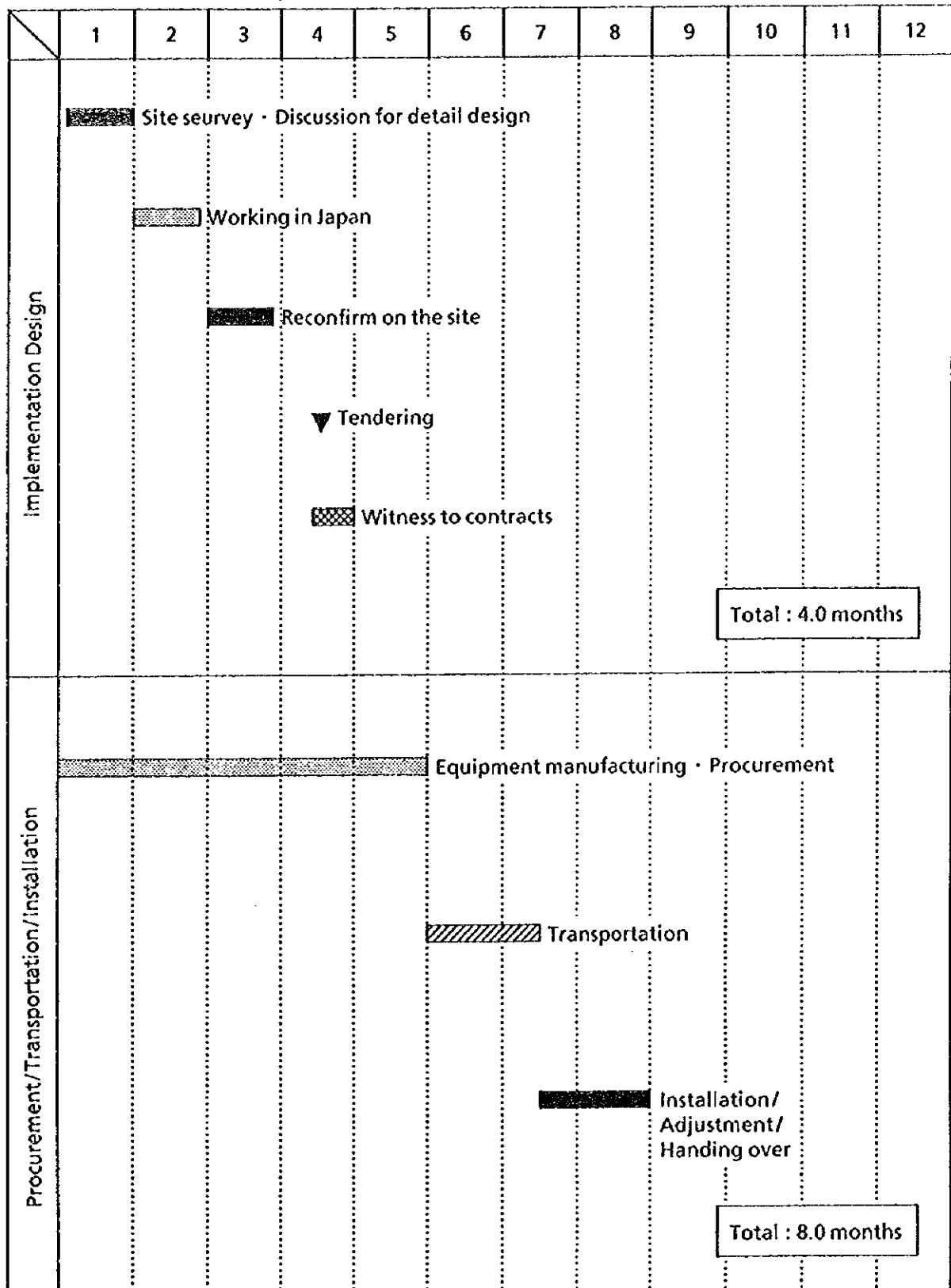
In the case of Primrose Hill Transposer Station, the surrounding area is a residential one and vehicles must pass along the narrow roads (city roads) that the local residents use for everyday purposes. It is not be desirable to transport equipment by means of trailers and large trucks because this would block these narrow roads and block resident's passage, thus it will be necessary to reload the equipment onto small trucks.

Hantana, where the new transposer station is to be constructed, is a designated nature preservation area and there is a road leading to the top of Mt. Hantana which is a popular destination for mountaineers because of the fine view it affords of Kandy and its environs. The road leading to the top of Mt. Hantana is mountain path about 4 km from the foot of mountain, but it is also narrow and curved, which means that it will be difficult to transport equipment by large truck and trailer. Moreover, vehicles cannot use the final 4 km of the mountain path to the summit, it will be necessary to carry equipment to the summit by manual labor or some other means along the mountain road. Care will also need to be taken to avoid any accidents involving mountaineers. Furthermore, space is limited at the top of Mt. Hantana because it is also the site of a telephone-related base station and private TV transposer station. As a result, it will be necessary to rent space within one of these facilities in order to secure enough room to temporarily unload the equipment. In this case, care will need to be taken to ensure that the functions of the other transposer station are not disturbed.

As can be seen from the above, problems exist with the transportation of equipment by trailer and large truck to each of the transmitting stations. For sites where equipment cannot be transported by large truck, etc., it will be necessary to select the method of transportation upon first examining various alternatives, including the possibility of packing the equipment in smaller containers to make reloading from large to small trucks possible.

3-1-6 Implementation Schedule

Implementation schedule on this Project is shown below.



3-2 Operation and Maintenance

(1) Plan of Personnel Increase

In the case where Sinhala/Tamil language simultaneous broadcasting is carried out, personnel expenses will rise in line with the staffing increase plan put forward by SLRC (see Table 3-2-1: New Recruitment Personnel Expenses).

SLRC has a plan to employ the announcers needed to perform multi-language broadcasting as contract employees from outside the corporation. Thus, when one considers that SLRC will only employ less than 25 regular employees following Project implementation, this will not be a great increase and it will be possible to carry out operation and maintenance on an "as is" basis.

Table 3-2-1 New Recruitment Personnel Costs

Work Position	New Recruits		Monthly Salary (Rs)	Total Monthly Salary (Rs)
	Number	Grade		
A. Program Planning Department (expansion)				
1. Director	1	III	8,045	8,045
2. Assistant Director to monitor of Sinhala/Tamil language programs	1	III B	6,595	6,595
3. Sinhala and Tamil program officer	2	IV B	6,020	12,040
4. Program script writers	2	V B	4,370	8,740
5. Sinhala and Tamil translators	2	V B	4,370	8,740
B. Dubbing Division in General Program Department (newly established)				
1. Director	1	III	8,045	8,045
2. Sinhala/English language assistant director	1	III B	6,595	6,595
3. Sinhala/English language producers	2	IV B	6,020	12,040
4. Sinhala/English language program assistants	5	V B	4,370	21,850
5. Tamil program assistant director	1	III B	6,595	6,595
6. Tamil program producers	2	IV B	6,020	12,040
7. Tamil program program assistants	5	V B	4,370	21,850
C. Contract announcers	20		2,000	40,000
Total	45 (25 regular employees)			173,175
(Note) Total personnel expense following new recruitment (per year): 2,078,100 Rs				

(2) Program Production Costs

SLRC does not intend to increase broadcasting hours or increase the ratio of own station program production following implementation of the Project. Consequently, there will be no increase in program production costs.

(3) Operational Cost

On the implementing of the Project, it will not entail any major increase in the scale of facilities for program production, there will be no major change in the operational cost due to new program production equipment. Moreover, the only special equipment that will be newly installed for the multi-language broadcasting system are two NICAM encoder & modulator and two stereo transient limiters. The power consumption of these equipment are so small that it can more or less be ignored. However, the items of equipment that have the biggest affecting on the electricity charge are television transmitters. Because the other equipment involves power consumption that is almost the same as that of existing equipment, this shall be omitted from the review. Regarding transmitters, replacement of vacuum tube transmitters with full solid state transmitters will be lead to greater stability, however, it will result in higher power consumption. The increases to expect in power consumption vs annual electricity charge as a introduction of the new television transmitters are shown in Table 3-2-2.

Table 3-2-2 Increases in Power Consumption & Annual Electricity Charge
as a Introduction of New Television Transmitters

Item \ Transmitting Station	Pidurutalagala Main Transmitting Station	Hantana Transposer Station	Primrose Hill Transposer Station
A. Existing transmitter output	20,000W (tube type)	—	50W
B. Transmitter output after Project implementation	20,000W (full solid state)	200W	5W
C. Existing transmitter power consumption	47,000W	—	450W
D. Transmitter power consumption after Project implementation	60,000W	1,150W	120W
E. Rise or fall in monthly power consumption	7,020kW · h	621kW · h	▲178kW · h
F. Rise or fall in annual electricity charge	270,000Rs	26,400Rs	▲6,930Rs

Calculation of the electricity charge was based on the standard assumption that the charge will be 648 Rs in the case where 200 kW of power (city high voltage reception) is used for one hour. As for calculation of the monthly electricity charge, the charge converted from the power consumption of each transmitter based on the above standard assumption was calculated for the case where broadcasting takes place for 18 hours a day, 30 days per month, and a basic charge was added on to this.

It works out that SLRC will face an additional electricity charge of 290,000 Rs per year following completion of the Project.

(4) Cost of Spare Parts and Expendable Supplies

Regarding spare parts for the replaced equipment, quantities able to utilize for five years shall be provided, in consideration of important equipment and easily expendable supplies. The equipment maintenance cost at SLRC will not rise but rather fall in the first few years following the Project. However, regarding the small cooling fan for the television transmitter power amplifier at Pidurutalagala Main Transmitting Station, this is a rotating fan instrument and only has a short useful life, consequently it will be necessary to regularly replace it every two years.

Regarding heads and belts in audio tape recorders, cathode ray tubes in

monitors, light bulbs, indicating lamps and fuse etc. as expendable supplies regular replacement will be necessary, it will be necessary to secure a budget for these expenditures as usual.

Considering the fact that the VTR equipment to be provided under the Project is the 1/2 inch type, it will be necessary to change VTR tape from the 2-inch and 1-inch types to the 1/2 inch type. Consequently, the unit price of VTR heads, which require regular replacement, and the cost of expendable VTR tape will go down.

(5) Past Equipment Maintenance Cost

SLRC includes the equipment maintenance cost within its annual budget, and the cost of maintenance in 1995 was approximately 9 million Rs. Generally speaking, the annual maintenance cost is said to be at a sound level if it amounts to approximately 3% of the equipment purchase cost. Compared to the cost of equipment provided in the past (approximately 1,000 million Rs), the above-mentioned maintenance cost amounts to 0.9%. Also, compared to the total amount of main expenditure items, the maintenance cost accounts for approximately 2.6-4.5%. These figures can be considered to be values that represent the utmost effort of SLRC, which is still not fully matured in financial terms.

Incidentally, as the Project will entail the renewal of obsolete existing equipment, it can be expected that the equipment maintenance cost will be reduced from its present level.

Table 3-2-1 Annual Equipment Maintenance Cost

Item \ Year	1993	1994
Total expenditure(Million Rs)	248.108	346.198
Equipment maintenance cost(Million Rs)	11.898	8.976
Ratio(%)	4.5	2.6

(6) Depreciation Cost

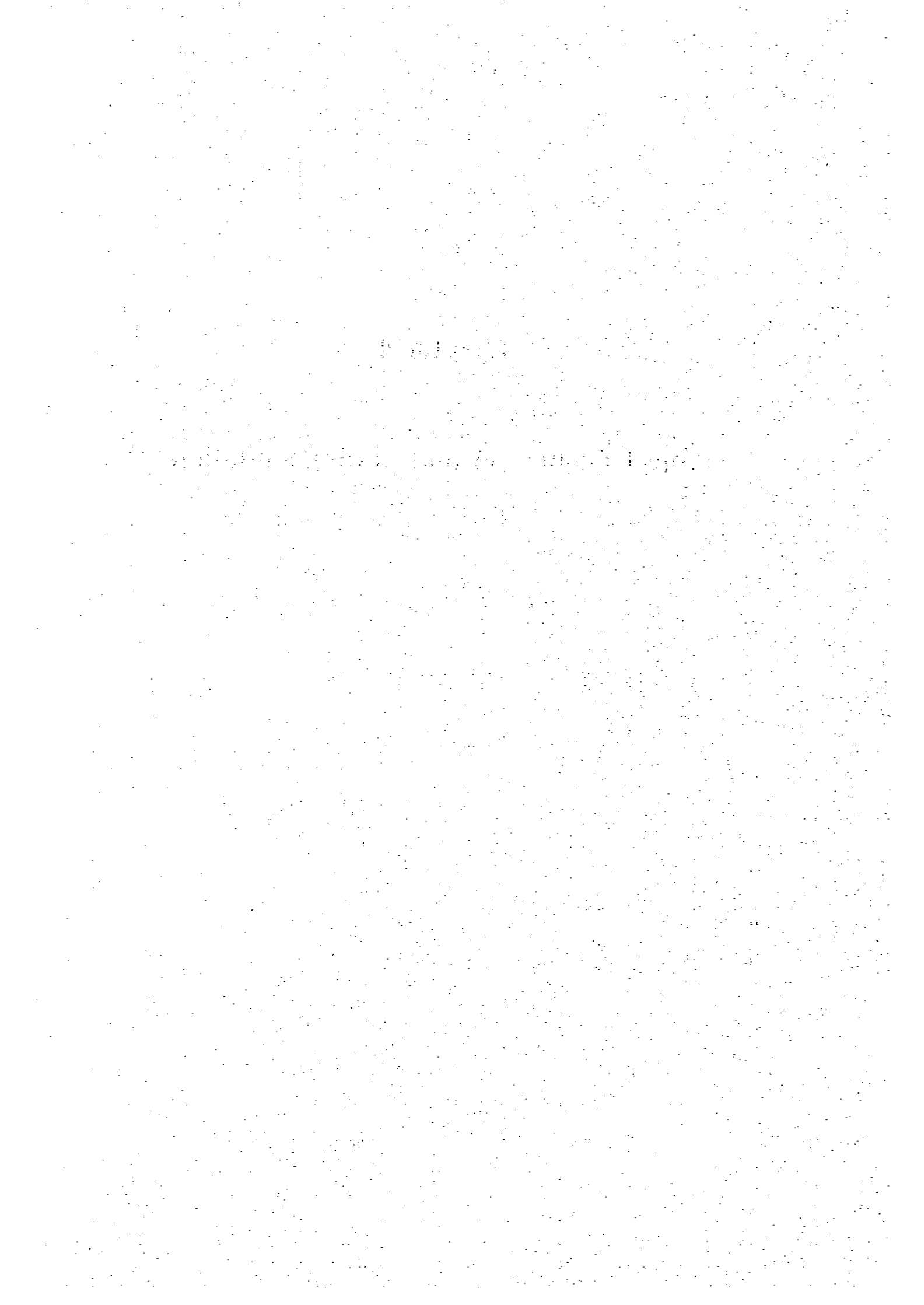
Assuming a useful life of 10 years, no capital investment in the intervening period and a scrap value of 10%, the annual depreciation cost was estimated by the fixed installment method to be approximately 56 million Rs. The depreciation rate is 9%.

As was mentioned earlier, SLRC has been run in sound fashion. SLRC has been paying depreciation costs ever since the first provision of

equipment under the grant aid scheme, and its depreciation cost expenditure in 1995 was 56.94 million Rs. Therefore, the depreciation cost calculated by the study team is almost the same as the expenditure in 1995, it is judged that SLRC will have no trouble in covering the depreciation cost that arises following completion of the Project.

Chapter 4

Project Evaluation and Recommendation



Chapter 4 Project Evaluation and recommendation

4-1 Project Effect

SLRC is steadily raising its broadcasting technical capacity, however, it still lacks the ability to design and execute broadcasting systems on a major scale, and the request made by the Sri Lanka side is intended to supplement the areas that are currently lacking.

The main objectives of the Project are the renewal of deteriorated equipment and the enhancement of program contents. The following table summarizes the problems that were verified in the site survey, the Project measures to deal with them, and the effect and degree of improvement that can be expected from the measures.

Table 4-1-1 Current Problems, Countermeasures and Effects

	Current Problems	Project Countermeasures	Project Effect and Improvement
Main transmitting station	<p>The transmitter is badly deteriorated and breakdowns are growing more and more frequent every year. Also, the transmitter is a vacuum tube type, but vacuum tubes are no longer in production and cannot be procured.</p> <ul style="list-style-type: none"> • Mean time between failure (MTBF): 5,200 hours 	<p>Replace the vacuum tube-type transmitter with one that uses IC and transistors instead.</p>	<p>As well as maintaining stable transmitting functions, breakdowns will be reduced, thus allowing operation and maintenance costs and maintenance personnel expenses to be cut.</p> <ul style="list-style-type: none"> • MTBF: 12,000 hours

	Current Problems	Project Countermeasures	Project Effect and Improvement
Master control room	Because most of the sending-out equipment in the Broadcasting Center master control room is outdated, there are frequent breakdowns and it is impossible to achieve stable sending-out.	Renew the master switcher and routing switcher, etc. Replace 1 inch VTR with 1/2 inch VTR.	It will become possible to carry out stable and trouble-free sending-out without breakdowns.
	Program contents have become complex in recent times, however, because engineers send programs out by manual operation, human mistakes are a common occurrence.	Introduce a program automatic sending-out system that uses a personal computer.	Because program resources will automatically be sent out by computer control according to program lists, human mistakes will be removed.
	Because many recent broadcasting equipment and facilities are computer-controlled, power cuts can make it impossible to control equipment and can thus lead to the interruption of services.	Add uninterrupted power supply (UPS) equipment to the master control room.	In the event of power cuts, because the UPS equipment will supply electricity during the period required for the engine generator to attain normal power supply voltage, broadcasts can be continued without interruption.

	Current Problems	Project Countermeasures	Project Effect and Improvement
Transposer stations	Because Primrose Hill Transposer Station is at a low altitude and Kandy City is located in a mountainous region, the service area is small and reception on the whole is poor.	Build a new transmitting station at Hantana where transmitting conditions are better in order to enlarge the service area and resolve the problem of poor reception.	Improved reception can be expected in approximately 1,000,000 households in the Kandy area. Also, because the transmission point will be the same as that used by private broadcasting stations, viewers will be able to receive good quality broadcasts by orienting their antennas in the same direction.
Multi-language broadcasts	In order to cater to the needs of different races, news programs of the same content have to be broadcast three times in succession - once in Sinhala, one in Tamil and one in English. Thus, news programs cannot be broadcast in a manner that is fair to all races.	Introduce a NICAM multi-language broadcasting system to make it possible to provide Sinhala/Tamil language simultaneous broadcasts.	Viewers can hear the latest news in their own language providing that they use an adapter or television set able to receive multi-language broadcasts. Also, the advantages offered by the broadcasting media can be exploited to encourage mutual understanding and harmonization between the Sinhalese and Tamil races.

	Current Problems	Project Countermeasures	Project Effect and Improvement
Master control room	When exchanging programs by satellite with foreign countries, because there is no accurate clock system, the sending-out of programs on time is impossible.	Introduce a high-precision clock system that utilizes GPS (global positioning system).	Accurate time control will become possible and satellite program exchanges with foreign countries will be made easier.
No.1 and No.2 Studios	The pickup tube studio cameras are electrically unstable and break down often. Moreover, the purchase of spare parts for repair is difficult.	Replace the existing pickup tube type studio cameras with semiconductor (CCD) cameras.	Cameras will become electrically stable and the periodic renewal of pickup tubes will no longer be necessary. As a result, stable, high-quality program production will become possible.
	Due to the severe deterioration of studio sub-control room facilities, stable program production is impossible.	Renew program production equipment in the studio sub-control rooms.	Replacing the program production equipment will make it possible to carry out stable, high-quality program production.

	Current Problems	Project Countermeasures	Project Effect and Improvement
Editing room	Editing work is greatly hindered by the deterioration and obsolescence of equipment in the editing room.	Renew the deteriorated and obsolescent editing equipment.	Renewal of the editing equipment will enhance the contents of editing work and make it possible to produce programs more efficiently.
OB van	The punishing working environment means that the OB van provided in the post is no longer in operating condition.	Carry out the full renewal of the OB van.	Provision of a new OB van will make it possible to broadcast programs that the public wants to see the most, i.e. reports from emergency and disaster sites, presidential speeches, viewer-participation programs, sports broadcasts, and soon.

	Current Problems	Project Countermeasures	Project Effect and Improvement
Post production	<p>Post production equipment was not provided under the post grant aid projects. Due to recent advances in broadcasting technology, more attractive programs that utilize complicated program production techniques are demanded. However, the functions of equipment that SLRC has procured through self-help are insufficient to enable it to fully respond to the needs of viewers.</p>	<p>Install a computer graphics (CG) system that makes it possible to use complex techniques in program production, and introduce digital VTR that enable dubbing to be carried out around 10 times without adversely affecting picture quality.</p>	<p>Program production that utilizes various visual effects will become possible, and this will be particularly useful in the production of education programs.</p>

4-2 Recommendation

4-2-1 Contents of the Request and Result of Examination

(1) Increased Income from Reception Charges

Areas where racial clashes are still continuing cannot be entered, and reception charges are currently being collected from only 46% of television owners. Television ownership in the areas of continued fighting accounts for 23% of the total, and a further 31% of television sets in other districts are not contracted. Judging from this situation, there is still ample room for SLRC to increase its income from reception charge collection. SLRC currently relies on income from commercials for most of its budget income, however, it needs to reduce its reliance on commercial income as much as possible and reform its business standing to one that relies mainly on income from reception charges, is healthy and enables SLRC to properly fulfill its role as the national broadcaster.

(2) Early Establishment of the Broadcasting Network in Areas of Racial Conflict

The 20 kW television transmitting station at Kokaville, which was constructed 17 years' ago during the initial phase of Grant Aid, was bombed by Tamil extremists in 1988 and is still not operating today. In the event where the racial conflict is brought to an early conclusion, it will be necessary for the Government of Sri Lanka to advance construction of the Broadcasting network to serve areas that are currently unable to receive broadcasts.

(3) Domestic Production of Adapters for NICAM Receivers

Adapters for multi-language broadcasting (NTSC) were retailed in Japan in the past, but these have today been replaced by television receiver sets able to receive multi-language broadcasts.

The same situation was also found to exist in Singapore located close to Sri Lanka.

Consequently, the following measures will have to be taken in order to achieve the early dissemination of multi-language broadcasts in Sri Lanka:

① Manufacture of adapters at a subsidiary company

Manufacture adapters at a subsidiary company of SLRC, and introduce a system of SLRC subsidiaries to enable the adapters to be retailed at a low price. The Government of Sri Lanka will also need to exempt or reduce tariffs and taxes placed on imported component parts.

② Exemption of tariffs and taxes on NICAM television receivers

Imports of antennas and receivers were exempted of tariffs and taxes in the past when UHF broadcasts were being disseminated, and it is desirable that similar special measures be taken with respect to the Project, too.

(4) Increased Live Broadcasts from the Field

almost all news programs consist of recorded news resources that have been gathered in the field by means of small-scale ENG (electronic news gathering) instruments. In order for SLRC to fulfill its duties, it is essential for it to carry out live broadcasts from scenes of disasters or major events. Following implementation of the Project, it will be necessary to increase live broadcasts within news programs.

(5) Necessity of Equipment Renewal at SLTTI (Sri Lanka Television Training Institute)

SLTTI is strongly related to SLRC in that it is responsible for developing the human resources that are needed by broadcasting stations. Japanese-made items of training equipment were provided to SLTTI at the time of its establishment, partly due to the request of SLRC (in order to standardize specifications with its own equipment). Although SLTTI only offers basic training contents, in consideration of the state of deterioration of its existing equipment and the need to preserve compatibility with Project equipment at the broadcasting stations, it will also be necessary to renew equipment at SLTTI in the future.

(6) Necessity of Acquiring Digital Technology

Technical developments in broadcasting equipment are unceasing, and the advances being made by digital technology are particularly striking. Broadcasting stations all over the world are changing over from conventional analog systems to digital systems. In the Project, too,

some digital instruments are to be introduced, and it is expected that SLRC will need to carry out the full digitalization of all its broadcasting systems in the future.

Because digital technology differs greatly in nature from the conventional analog technology, it is necessary to learn in from the basics and much time needs to be devoted to its study. Consequently, SLRC should now start to approach the training that is necessary in order to secure engineers who will be able to be handle the onset of digitalization in the future. SLTTI will also need to play an important role in this training. Moreover, SLRC will need to learn digital technology through inviting specialists and taking part in JICA training and third country trainin.

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1. Member List of Survey Team

1. Member List of Survey Team

(1) The Basic Design Study Team

<u>Name</u>	<u>Assignment</u>	<u>Present Post</u>
Mr. Masao YOSHIDA	Leader	Development Specialist, JICA
Mr. Masafumi NAGAISHI	Project Coordinator	Second Project Study Division, Grant Aid Project Study Department, JICA
Mr. Hiroshi SONODA	Technical Adviser	Chief of Planning Section, Broadcasting Technology Policy Division, Broadcasting Bureau, Ministry of Post and Telecommunication
Mr. Yasuhiro GOTO	Chief Consultant	NHK Integrated Technology
Mr. Hideo HIROBA	Transmission Planner	NHK Integrated Technology
Mr. Seichi UEDA	Broadcasting Facilities Planner	NHK Integrated Technology
Mr. Kazuhisa NARITA	Procurement Planner and Cost Estimation	NHK Integrated Technology

(2) The Draft Report Explanation Team

<u>Name</u>	<u>Assignment</u>	<u>Present Post</u>
Mr. Masao YOSHIDA	Leader	Development Specialist, JICA
Mr. Tatsuya IMAI	Project Coordinator	Second Project Study Division, Grant Aid Project Study Department, JICA
Mr. Yasuhiro GOTO	Chief Consultant	NHK Integrated Technology
Mr. Hideo HIROBA	Transmission Planner	NHK Integrated Technology

2. Survey Schedule

2. Survey Schedule

(1) The Basic Design Study Team

	Date (1996)	Activities																																																						
		Official Members			Consultant Members																																																			
		Yoshida	Nagaishi	Sonoda	Goto	Hiroba	Ueda	Narita																																																
1	Nov.12 (Tue)	Narita(SQ997)12:00→Singapore 17:45, Singapore(SQ402)21:30→Colombo																																																						
2	13(Wed)	Courtesy call on Embassy of Japan; JICA Office: Ministry of Media, Tourism & Aviation: SPC and SLRC																																																						
3	14 (Thu)	Discussion with relevant agent, Discussion about I/R																																																						
4	15 (Fri)	Discussion with SLRC/Site Survey																																																						
5	16 (Sat)	Discussion with SLRC/Site Survey																																																						
6	17 (Sun)	Colombo→Kandy On-the-spot survey (Kandy)		Data analyzing	Colombo→Kandy On-the-spot Survey(Kandy)		Data analyzing																																																	
7	18(Mon)	Survey at Primrose Hill station Survey at Hantana area		Discussion with SLRC	Survey at Primrose Hill sta. Survey at hantana area		Discussion with SLRC																																																	
8	19 (Tue)	Kandy→Colombo		Survey at pidurutala- gala station	Discussion with SLRC	Survey at pidurutala- gala station		Discussion with SLRC																																																
9	20(Wed)	Discussion with SLRC		Survey at Primrose Hill Kandy→Colo mbo	Discussion with SLRC	Survey at Primrose Hill Kandy→Colombo		Discussion with SLRC																																																
10	21 (Thu)	Discussion with SLRC on Minutes of Discussion(M/D)																																																						
11	22 (Fri)	Signing of M/D Reporting to Embassy of Japan and JICA																																																						
12	23 (Sat)	Colombo(TG308)02:10→Bankok 06:10 Bankok(TG640)10:45→Narita 19:00		Visiting to other TV stations and SLTTI (Sri Lanka Television Training Institution) Market Research on TV receiver																																																				
13	24 (Sun)	/						Meeting with Study Team member/ Collecting and analyzing data																																																
14	25(Mon)							/						Discussion with SLRC/ on-the-spot Survey																																										
15	26 (Tue)													/						Discussion with SLRC/ on-the-spot Survey																																				
16	27(Wed)																			/						Discussion with SLRC/ on-the-spot Survey																														
17	28 (Thu)																									/						Discussion with SLRC/ on-the-spot Survey																								
18	29 (Fri)																															/						Reporting to Embassy of Japan and JICA																		
19	30 (Sat)																																					/						Collecting and analyzing data												
20	Dec. 1 (Sun)																																											/						Colombo(SQ401)00:55→Singapore 06:15 Singapore(SQ012)09:45→ Narita 17:35						
21	2(Mon)																																																	/						Survey of procurement from the third country
22	3 (Tue)																																																							/
23	4(Wed)	/																																																						
24	5 (Thu)							/																																																

3. List of Party Concerned in the Recipient Country

(2) Draft Report Discussion Team

	Date (1997)	Activities			
		Official Members		Consultant Members	
		Yoshida	Imai	Goto	Hiroba
1	Jan. 29(Wed)	/	Narita(SQ997)12:00→Singapore 18:20 Singapore(SQ402)21:30→Colombo 22:35		
2	30 (Thu)		Courtesy call on Embassy of Japan: JICA Office		
3	31 (Fri)		Courtesy call on SLRC Discussion about DF/R		
4	1 (Sat)	Jakarta(TG414)17:55 →Singapore 19:55 Singapore(SQ402)21:00 →Colombo 22:40	Discussion about DF/R		
5	2 (Sun)	Meeting with Team member			
6	3(Mon)	Courtesy call on Ministry of Media, Tourism & Aviation: SPC and Discussion about DF/R			
7	4 (Tue)	Discussion with SLRC on Minutes of Discussion (M/D)			
8	5(Wed)	Signing of M/D Reporting to Embassy of Japan and JICA			
9	6 (Thu)	Colombo(EK076)10:40→Singapore 16:25			
10	7 (Fri)	Singapore(JL712)→Narita 15:50			

3. List of Party Concerned in the Recipient Country

(including Singaporean interviewees)

Ministry of Finance & Planning

Ms. A. S. M. S. ATTANAYAKE	Deputy Director (External Resources Department)
Mr. B. H. PASSAPERUMA	Deputy Director (Resources Department)
Ms. N. MADANAYAKE	Director (External Resources Department)
Ms. SETANAYKE	Assistant Director (Resources Department)
Mr. N. PATHMANATHAN	Additional Director General (National Planning Department)
Mr. K. SIVALINGAM	Director (National Planning Department)
Mr. B. H. (BUDDHI) PASSAPERRUMA	Deputy Director (External Resources)

Ministry of Media, Tourism and Aviation

Mr. W. P. S. JAYAWARDENE	Secretary
Mr. J. ABEYWICKRAMA	Additional Secretary

Sri Lanka Television Training Institute (SLTTI)

Mr. AMAL G. PUNCHIHAWA	Director
------------------------	----------

Sri Lanka Repavahini Corporation (SLRC)

Mr. W. P. S. JAYAWARDENE	Chairman
Mr. W. D. JAYASINGHE	Director General
Mr. D. D. J. KUDALIGAMA	Deputy Director General (Research & Planning)
Mr. UPALI ARAMBEWALE	Deputy Director General (Engineering)
Mr. SRIMAL PUNCHIHAWA	Director Engineering (Transmitters)
Mr. SUPUN FERNANDO	Director Engineering (Research & Planning)
Mr. M. GUNADASA	Director Engineering (Studios)
Mr. W. A. D. PERERA	Director Engineering (Maintenance)
Mr. LASANTHA SAMARANAYAKE	Engineer (Projects & Transmitters)
Ms. JAYANTHI DE SILVA	Secretary
Mr. R. P. RATNASINGHE	Deputy Director General (Education Programmes)
Mr. A. ROHAN S. PERERA	Senior Technical Officer
Mr. L. V. ABEYSINGHE	Senior Technical Officer

Mr. S. J. R. DIAS	Senior Technical Officer
Mr. VINCY PERERA	Senior Technical officer (Lighting Director)
Mr. T. S. DASA	Technical Officer
Mr. N. G. VIJITHA	Technical Officer
Mr. D. N. I. LIYAMAGE	Technical Officer
Mr. K. A. W. A. KURUPPU	Technical Officer
Mr. D. C. DISSANAYAKE	Chief Cameraman
Mr. T. M. WEERARATNE	Electrician
Mr. YOSHITAKA SEMBON	JICA Expert

Kandy Kachheri (Kandy Office of the Government Agent)

Ms. W. M. K. K. KARUNARATHNA	Assistant Divisional Governmentary Gangawata Korale Division
Mr. CYRIL HERATH	Statistical Division

DYNAVISION BROADCASTING COMPANY (PTE) LTD.

Mr. A. P. SAMARAKOON V. S. V.	Chief Executive (Director)
Mr. UOOSOOF MOHIDEEN	Managing Director
Mr. CRISTY PERERA	Engineer

MTV Channel (Private) Ltd.

Mr. NIMAL P. GOONERATNE	Director (Broadcast Engineering Services)
-------------------------	---

Embassy of Japan in Sri Lanka

Mr. Yasuo NOGUCHI	Ambassador Extraordinary and Plenipotentiary
Mr. Kaname KANAI	First Secretary
Mr. Takashi NIINUMA	Second Secretary

JICA Sri Lanka Office

Mr. Yoshiaki KARINO	Resident Representative
Mr. Hideyuki SUZUKI	Dputy Resident Representative
Mr. Shinji YOSHIURA	Assistant Resident Representative
Ms. Junko FUJIWARA	Assistant Resident Representative
Mr. Tetsu TOMISAKI	JICA Expert

SINGAPORE TELEVISION TWELVE PTE LTD

Mr. HAJIJAH KOMING	Senior Programming Executive
Mr. GOH KIM SOON	Assistant Manager (Transmission Operations)

TELEVISION CORPORATION OF SINGAPORE

Mr. LOH SIU YIN	Assistant Vice-President
Mr. LIM SHO SHIAW	Higher Executive Engineer

SIM COMMUNICATIONS PTE LTD

Mr. TAN SAI YOON	Assistant Vice-President (Broadcast Transmission)
------------------	--

ODETICS ASIA PACIFIC PTE LTD

Mr. STEVEN Y. T. TAN	Broadcast Sales Manager
Mr. KAN TUN-YEE	Product Support Engineer

DUET BROADCAST SYSTEMS PTE LTD

Mr. JIMMY CHAI	Sales Manager
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4. Minutes of Discussions

4. Minutes of Discussions

(1) Basic Design Study

MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY ON THE PROJECT
FOR
IMPROVEMENT OF RUPAVAHINI NATIONAL CHANNEL
IN
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

In response to a request from the Government of Democratic Socialist Republic of Sri Lanka (hereinafter referred to as "Sri Lanka",) the Government of Japan decided to conduct a Basic Design Study on the Project for Improvement of Rupavahini National Channel (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency(hereinafter referred to as "JICA".)

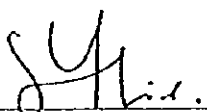
JICA sent a study team to Sri Lanka, which is headed by Mr. Masao YOSHIDA, Development Specialist, JICA, and is scheduled to stay in the country from 12th of November to 30th of November, 1996.

The team held a series of discussions with the relevant officials of Sri Lanka and conducted a site survey at the study area.

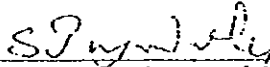
As a result of discussions and site survey, both sides have confirmed the main items described in the attached sheets.

The team will proceed to further works and prepare the Basic Design Study Report.

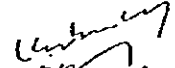
Colombo, 22nd of November 1996



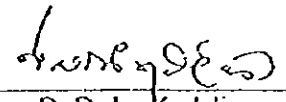
Mr. Masao YOSHIDA
Leader
Basic Design Study Team
JICA



Mr. W. P. S. Jayawardene
Secretary
Ministry of Media, Tourism and
Aviation



Mr. D. E. W. Gurasekera
Chairman
Sri Lanka Rupavahini Corporation

Witnessed by 

Mrs. D. D. J. Kudaligama
Additional Director General
Department of External Resources

ATTACHEMENT

1. OBJECTIVE

The objective of the project is to improve the Rupavahini National Channel in Sri Lanka by rehabilitating of transmitter equipment and television studio equipment.

2. PROJECT SITE

The following sites for improving equipment are shown in ANNEX-I.

- (1) Studio Complex at Colombo
- (2) Pidurutalagala Transmitting Station
- (3) Hantana Transposer Station
- (4) Primrose Hill Transposer Station

3. EXECUTING AGENCY

Sri Lanka Rupavahini Corporation is responsible for the administration and execution of the Project.

4. ITEMS REQUESTED BY THE GOVERNMENT OF SRI LANKA

As a result of the series of discussions, the following items were finally requested with priority by Sri Lanka.

(I) Transmitter System

- 1) Replacement of 20kW transmitter at Mt. Pidurutalagala
- 2) New installation of Hantana Transmitting Station excluding the tower and the building
(Common usage of Hantana Telecom tower should be ensured by Sri Lanka Rupavahini Corporation because there is no space for an additional tower)
- 3) Replacement of transposer at Primrose Hill Station
- 4) Replacement of STL between Colombo and Mt. Pidurutalagala

(II) Provision of dual language transmitting system

The system of dual language is NICAM.

Transmitter, STL, equipment for Master Control Room and Studio-2 shall be designed for NICAM System.

(III) Replacement of equipment for Master Control Room

(IV) Replacement of Outside Broadcasting Van

- (V) Replacement of cameras and VTRs for Studio-1 and equipment for Studio-2
- (VI) Replacement of equipment for Post-Production Room and Editing Booths
Every item includes necessary measuring equipment and spare parts.
The schematic diagram of the Project is shown in ANNEX-II.
However, the final components of the Project will be decided after further studies.

5. JAPAN'S GRANT AID SYSTEM

The Government of Sri Lanka has understood the system of Japan's Grant Aid explained in ANNEX-III.

6. NECESSARY MEASURES TO BE TAKEN BY SRI LANKA

The Government of Sri Lanka will take necessary measures described in ANNEX-IV for smooth implementation of the Project on condition that the Grant Aid by the Government of Japan is extended to the Project.

7. THE SCHEDULE OF THE STUDY

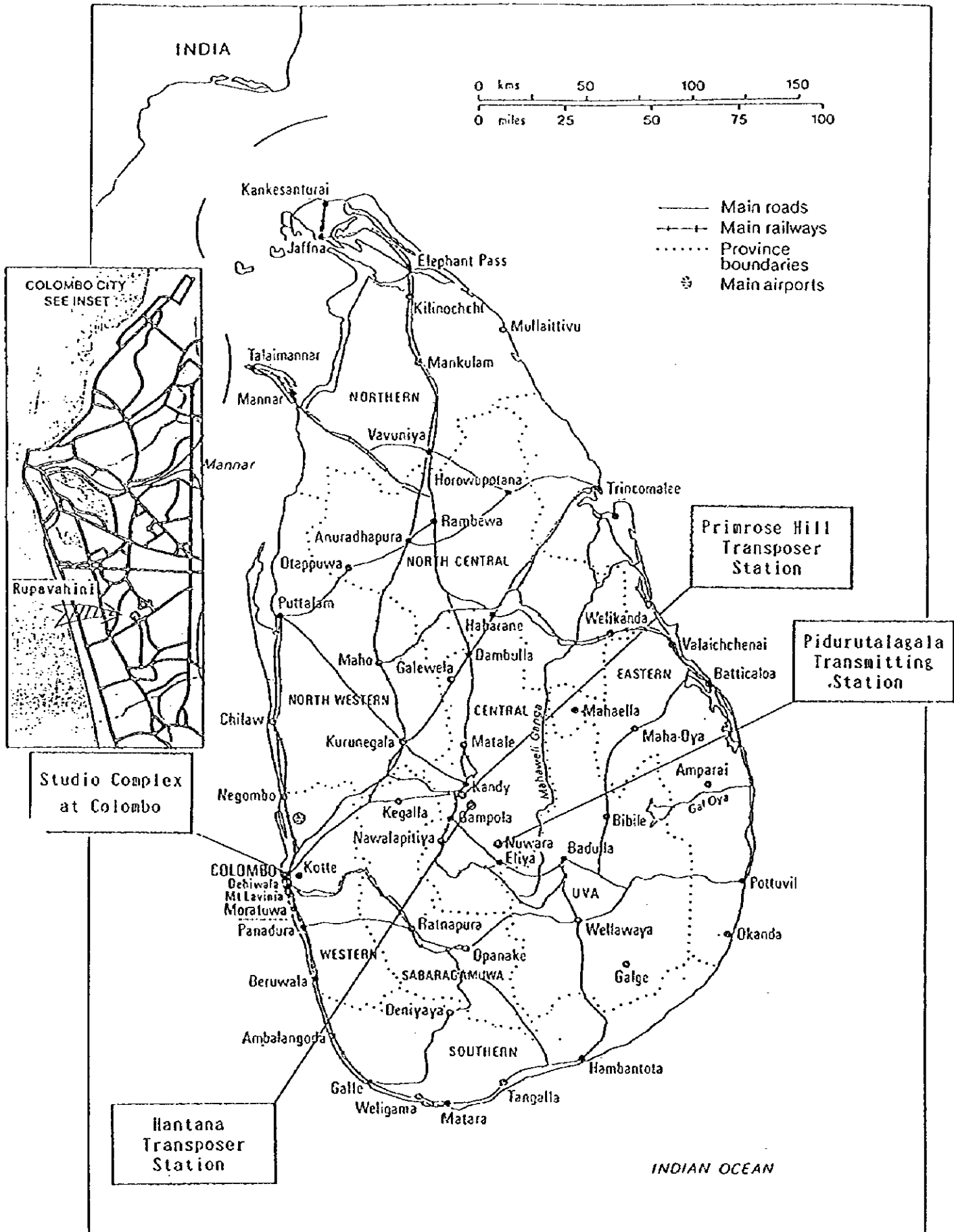
- (1) The consultants will proceed to further studies in Sri Lanka until 30th of November, 1996.
- (2) Based on the results, JICA will prepare the Draft Basic Design Report in English and dispatch a team in the middle of January 1997 in order to explain and confirm the contents.
- (3) In case that the contents of the report are accepted in principle by the Government of Sri Lanka, JICA will complete the Basic Design Report and forward it to Sri Lanka by the end of March 1997.

8. OTHER RELEVANT ISSUES

- (1) The Government of Sri Lanka shall provide all necessary information and data in case that Basic Design Team requests.
- (2) Sri Lanka shall take all possible measures to secure the safety of the team during the site survey.
- (3) Sri Lanka shall make efforts for the dissemination of dual sound receivers.
- (4) Sri Lanka shall consult JICA Sri Lanka Office in advance when the equipment donated by the previous Japan's Grant Aid would be used for different objectives from the initials ones.

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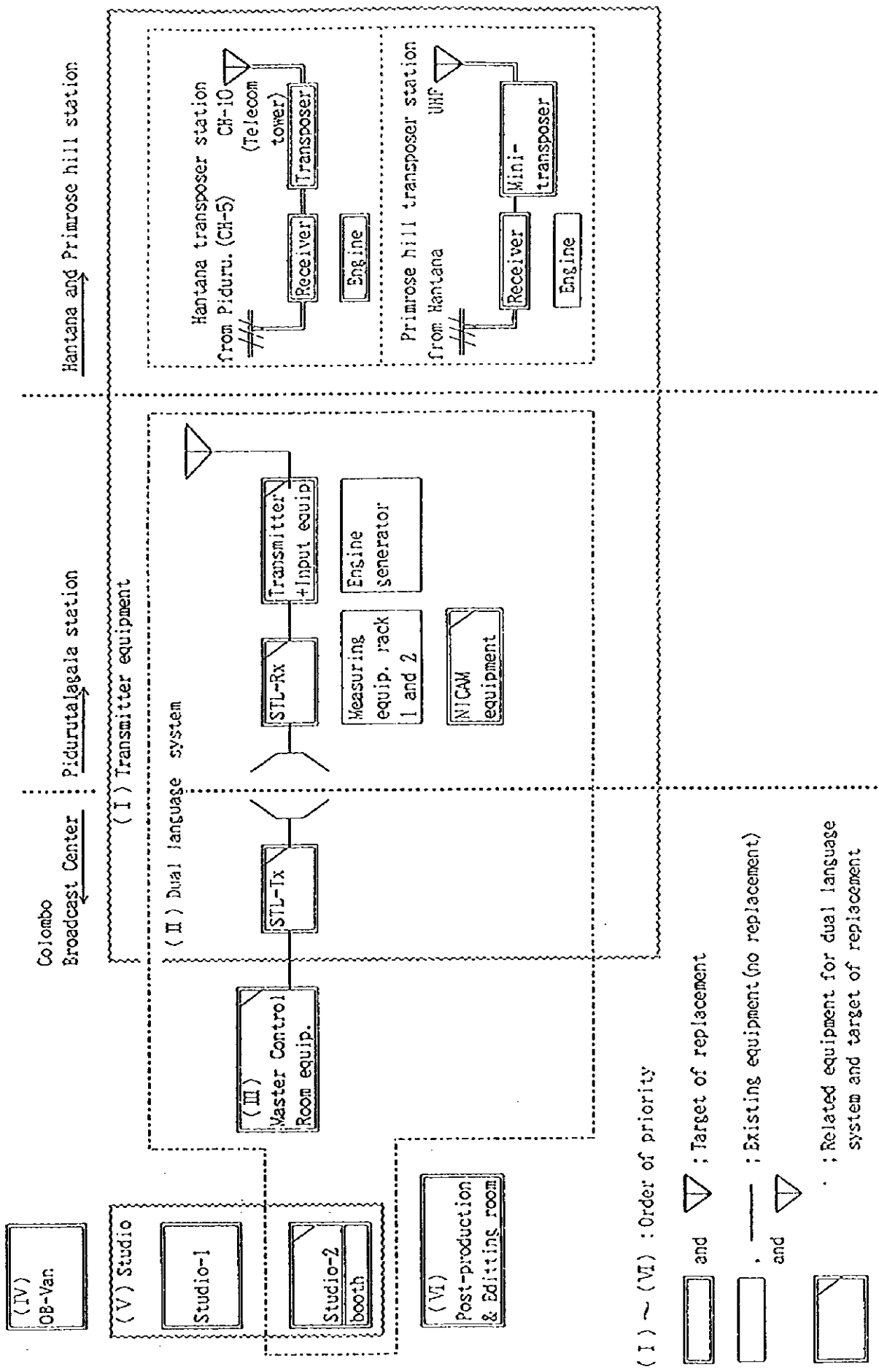
SITE MAP OF THE PROJECT

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SCHEMATIC DIAGRAMME OF THE PROJECT

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(I) ~ (VI) : Order of priority

- and : Target of replacement
- and : Existing equipment (no replacement)
- : Related equipment for dual language system and target of replacement

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Japan's Grant Aid Scheme

Grant Aid Procedure

- (1) Japan's Grant Aid Programme is executed through the following procedures.

Application (request made by a recipient country)

Study (Basic Design Study conducted by JICA)

Appraisal & Approval (Appraisal by the Government of Japan and Approval by Cabinet)

Determination of Implementation (The Notes exchanged between the Government of Japan and the recipient country)

- (2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firms(s).

Thirdly, the Government of Japan appraises the Project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the Project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

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Finally, for the implementation of the Project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

Basic Design Study

(1) Contents of the Study

The aim of the Basic Design Study (hereafter referred to as "the Study"), conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

- (a) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation
- (b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view
- (c) Confirmation of items agreed on by both parties concerning the basic concept of the Project
- (d) Preparation of a basic design of the Project
- (e) Estimation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of

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the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA select (a) firms(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be repeated.

Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Programme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the county under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(3) "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding

contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation or construction due to unforeseen factors such as whether, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

- (4) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

- (5) Necessity of "Verification"

The Government of recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

- (6) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid project, the recipient country is required to undertake such necessary measures as the following:

- (a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.

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- (b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- (c) To secure buildings prior to the procurement in case the installation of the equipment.
- (d) to ensure prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
- (e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
- (f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.
- (g) "Proper Use"
The recipient county is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.
- (h) "Re-export"
The products purchased under the Grant Aid should not be re-exported from the recipient country.

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(i) Banking Arrangements (B/A)

(i-1) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank of Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

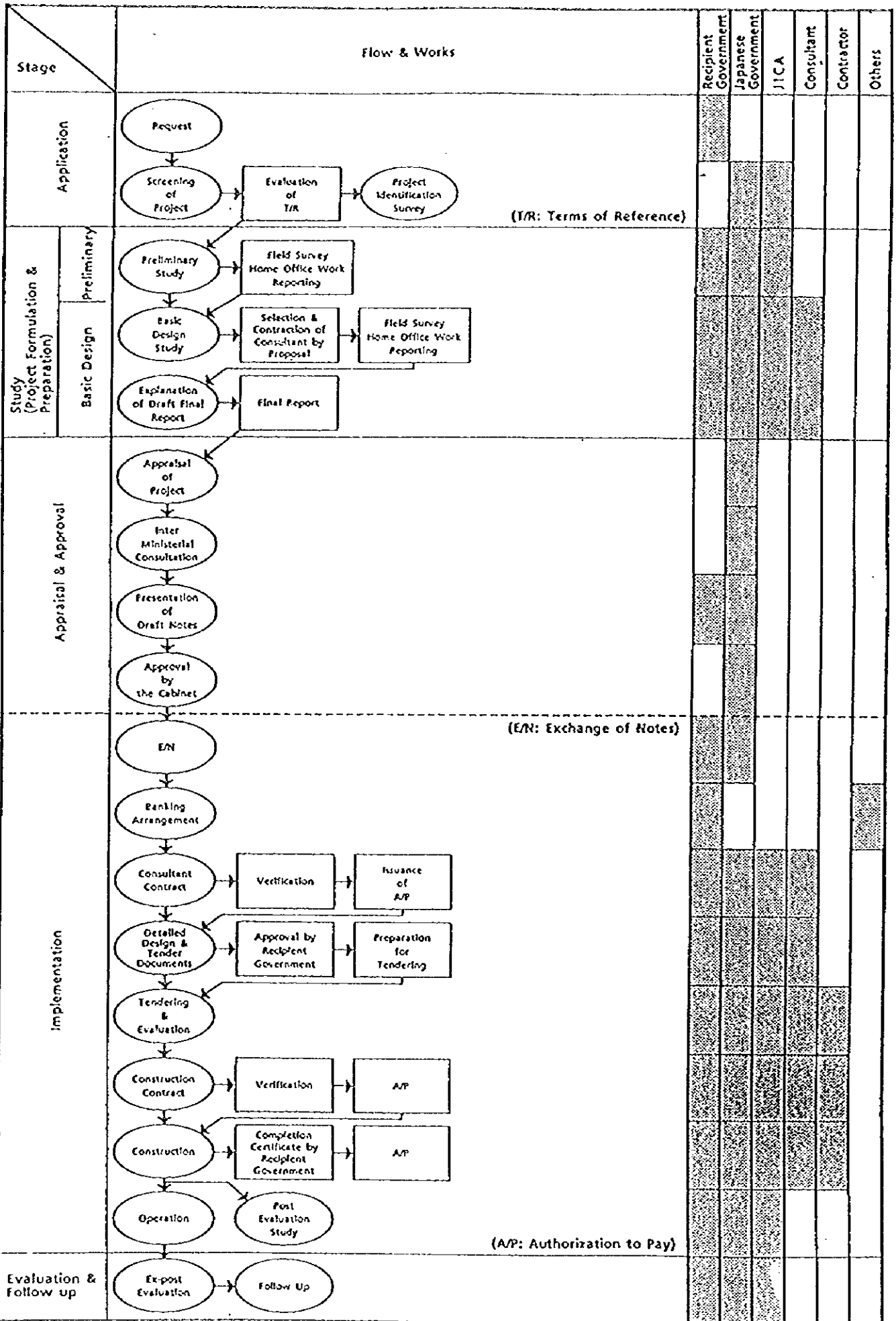
(i-2) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

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Flow Chart of Japan's Grant Aid Procedures



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(1) to secure the land for Hantana Station

(2) to widen the portion of access road close to the Pidurutalagala transmitter station enabling transportation of transmitter equipment.

(3) to secure the space for storing TV transmitter equipment

(4) to obtain the agreement for common use of Hantana Telecom tower for installing television transmission antenna and feeder

(5) to confirm strength of the Hantana Telecom tower for installing television transmission antenna and feeder

The reinforcement of the tower shall be carried out by Sri Lanka Rupavahini Corporation, if necessary.

(6) to decide a suitable transmission channel and output power for Hantana Station

(7) to bear commissions to the Japanese foreign exchange bank for the banking services based upon Banking Arrangement

(8) to exempt taxes and to take necessary measures for customs clearance of the materials and equipment brought for the project at the port of disembarkation

(9) to accord Japanese nations whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into Sri Lanka and stay therein for the performance of their work

(10) to exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in Sri Lanka with respect to the supply of the products and services under the verified contracts

(11) to maintain and use properly and effectively the facilities constructed and equipment purchased under the Grant

(12) to bear all the expenses other than those to be borne by the Grant, necessary for construction of the facilities.

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(2) Explanation of Draft Basic Design

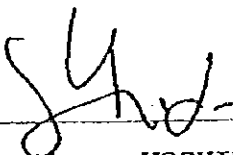
MINUTES OF DISCUSSIONS
ON
BASIC DESIGN STUDY ON THE PROJECT
FOR
IMPROVEMENT OF RUPAVAHINI NATIONAL CHANNEL
IN
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
(EXPLANATION OF DRAFT BASIC DESIGN STUDY REPORT)

In November 1996, Japan International Cooperation Agency (hereinafter referred to as "JICA") despatched a Basic Design Study team on the Project for Improvement of Rupavahini National Channel (hereinafter referred to as "the Project") to Democratic Socialist Republic of Sri Lanka, and through discussion, site survey, and technical examination of the results in Japan, has prepared the draft report of the study.

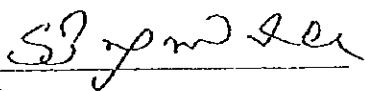
In order to explain and to consult the Government of Democratic Socialist Republic of Sri Lanka on the component of the draft report, JICA sent to Sri Lanka a study team, which is headed by Mr. Masao YOSHIDA, Development Specialist, JICA, and is scheduled to stay in the country from 30th of January to 5th of February, 1997.

As a result of discussions, both sides have confirmed the main items described in the attached sheets.

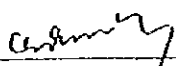
Colombo, 5th of February, 1997



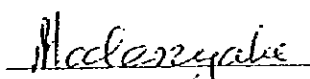
Mr. Masao YOSHIDA
Leader
Basic Design Study Team
JICA



Mr. W. P. S. JAYAWARDENE
Secretary
Ministry of Media, Tourism and
Aviation



Mr. D. E. W. GUNASEKERA
Chairman
Sri Lanka Rupavahini Corporation

Witnessed by 

Ms. N. MADANAYAKE
Director
Department of External Resources
Ministry of Finance

A T T A C H M E N T

1. NECESSARY MEASURES TO BE TAKEN BY THE GOVERNMENT OF SRI LANKA

The Government of Sri Lanka (hereinafter referred to as "Sri Lanka") shall take necessary measures described in ANNEX-I for smooth implementation of the Project on condition that the Grant Aid by the Government of Japan extended to the Project.

2. COMPONENTS OF DRAFT REPORT

The Government of Sri Lanka has agreed and accepted in principle the components of the Draft Report proposed by the Study Team. However, after series of discussions, the following changes to the list of equipment were agreed upon by both sides. The revised equipment list is attached in Annex-II.

3. JAPAN'S GRANT AID SYSTEM

Sri Lanka has understood the system of Japan's Grant Aid explained by the Team.

4. FURTHER SCHEDULE

The Study Team shall make the Final Report in accordance with the confirmed items, and send it to Sri Lanka by the end of April 1997.

5. OTHER RELEVANT ISSUES

Sri Lanka shall consult JICA Sri Lanka Office, in advance, when the equipment would be used for different objectives from the initial ones donated by the previous Japan's Grant Aid.

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Necessary measures to be taken by Sri Lanka in case Japan's Grant Aid is extended.

1. To provide the following facilities by the end of October 1997

A. Colombo Studio Center

- 1) Establishment of a temporary Master Control Room and a Studio for news. Both to be in operation by 15th November 1997
- 2) Establishment of an Announcer's Booth in the Studio NO. 2 for broadcasting by dual languages
- 3) Removal of equipment to be renewed and unnecessary cables before the commencement of installation
- 4) Complete Block Diagram Drawings, with modifications, of the existing equipment

B. Hantana Transposer Station

- 1) Submission of document confirming the acquisition of the land at Hantana before the end of February 1997
- 2) A contractual agreement between Sri Lanka Rupavahini Corporation (SLRC) and Sri Lanka Telecom (SLT) before the end of February 1997 for;
 - a) the lease of space on the SLT tower at Hantana
 - b) the space in the vertical feeder ladder
 - c) the construction of horizontal cable ladder between proposed SLRC transposer building and the SLT tower.
- 3) The construction of building and horizontal feeder ladder by the end of October 1997 (including the approval of the construction of building by Kandy Kachheri = Office of the Government Agent)

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- 4) An effort to build a cable-way from the foot of mountain for the common use of plural enterprises (The cable-way is to be used for the transportation of fuel for the engine generator and the equipment for the project.)
- 5) Installation of city power line to the site and indoor distribution
- 6) Installation of water supply system on the site and indoor distribution
- 7) Installation of an air conditioner with adequate capacity in the transmitter room

C. Pidurutalagala Main Transmitting Station

- 1) The existing dummy load to be shared with the new transmitter
- 2) An emergency feeder to be connected to the existing transmitter with the dummy load for operation testing
- 3) A space for the blower for the new transmitter in the storage room. (The initial plan was to install the new blowers in the existing blower room.)

To promote decoders by way of;

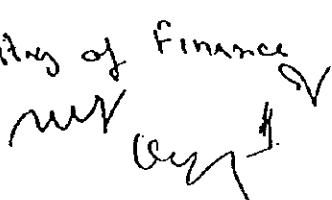
- 1) Establishment of an SLRC subsidiary to assemble NICAM decoders and make available to the public at a concessionary price
- 2) Arranging a scheme to donate NICAM TV sets to community centers throughout Sri Lanka
- 3) Producing programs with multi-languages by SLRC as many as possible

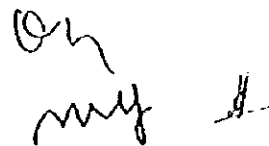
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3. The followings are to be satisfied to implement the project effectively;
 - 1) To ensure prompt unloading, to exempt from taxes and to take necessary measures for clearance, at ports of disembarkation in Sri Lanka and internal transportation therein of the materials and equipment provided under the Grant
 - 2) To bear the following commissions to the Japanese foreign exchange bank for the banking services based upon B/A (Banking Arrangement)
 - a) Advising commission of Authorization to Pay(A/P)
 - b) Payment commission(about 0.1% of the total Project amount)
 - 3) To ^{*}accord Japanese nationals whose services may be required in connection with supply of the products and the services under the verified contract such as facilities as may be necessary for their entry into Sri Lanka and stay therein for the performance of their works
 - 4) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in Sri Lanka with respect to the supply of the products and services under the verified contract
 - 5) To maintain and use properly and effectively the equipment provided under the Grant
 - 6) To bear all the expenses other than those to be borne by the Grant necessary for the implementation of the Project
 - 7) To prepare data and information necessary for the detailed design.

* Subject to the approval of the Ministry of Finance


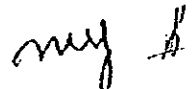




EQUIPMENT LIST

ANNEX-II

ITEM	DESCRIPTION	Q'TY	UNIT
1.	TV TRANSMITTER (Mt. Pidurutalagala station)		
1)	VHF 20 kW TV Transmitter (ch-5) (with NICAM characteristics) (with 2 exciters and 1 non-mounted exciter)	1	set
2)	Coaxial output equipment (a) U-link panel (7-port) (b) CIN Diplexer (with NICAM characteristics) (c) Power divider	1	set
3)	Program input and monitor equipment	1	set
4)	NICAM encoder & modulator	2	sets
5)	Stereo transient limiter	2	sets
6)	NICAM demodulator	1	set
7)	TV demodulator	1	set
8)	Dehydrator	1	set
9)	Air monitor(NICAM)	1	set
2.	TV TRANSPOSER (Primrose Hill Station)		
1)	UHF 5 W TV Transposer (ch-39) (stand-by system) (with NICAM characteristics)	1	set
2)	Air monitor (NICAM)	1	set
3)	Transmitting antenna (4-dipole antenna, 1 stage, 1 face) (10D-2V main feeder 40 m)	1	set
4)	Receiving antenna (5-element yagi antenna, ch-10) (10D-2V feeder 30 m)	1	set
5)	Spectrum analyzer (1 GHz with tracking analyzer)	1	set
3.	TV TRANSPOSER (Hantana Station)		
1)	VHF 200 W TV Transposer (ch-10) (stand-by system) (with NICAM characteristics)	1	set

2) Air monitor (NICAM)	1	set
3) Transmitting antenna (4-dipole antenna, 1 stage, 4 faces) (39D main feeder 140m)	1	set
4) Receiving antenna (5-element yagi antenna, ch-5) (10D-2V feeder 30 m)	1	set
5) Output coaxial switcher	1	set
6) Dummy load (200 W)	1	set
7) Engine generator (10 kVA) (with fuel tank 300 litter)	1	set
8) Power receiving & distribution unit	1	set
4. 7 GHz STL SYSTEM		
1) 7 GHz STL Transmitter (10 W (=5W x 2 PA), 6,620 MHz) (1 W Transmitter stand-by system) (with NICAM and mode signal transmission)	1	set
2) 7 GHz STL Receiver (stand-by system) (with NICAM and mode signal receiving function)	1	set
5. MASTER CONTROL SWITCHER		
1) Master switcher (NICAM with mode selection)	1	set
(a) Master switcher (local) with analog 16 input		
(b) Master switcher (satellite) with analog 16 input		
2) Auto programming control system (with NICAM mode selection)	1	set
3) Routing switcher	1	set
(a) 32 x 32 Video routing switcher		
(b) 32 x 32 Audio routing switcher		
(c) Control unit		
(d) Remote control panel	(3 sets)	
(e) Emergency video switcher	(2 sets)	
(f) Emergency audio switcher	(2 sets)	
(g) 2:1 A/V switcher		
4) Video equipment	1	set
(a) Time generator (Local)		
(b) Time generator (Satellite)		
(c) Logo generator		
(d) Caption scanner		
(e) 1/2-inch Digital VTR player & Recorder	(2 sets)	
(f) Frame synchronizer	(2 sets)	

(g) Video distribution amplifier			
(h) Video processor	(2 sets)		
(i) Video jack panel			
(j) System rack	(1 set)		
(k) Video console			
5) Audio equipment		1	set
(a) Digital audio tape recorder (DAT)			
(b) Compact disk player (CD)			
(c) Audio distribution amplifier			
(d) Audio limiter	(2 sets)		
(e) Audio jack panel			
6) Monitoring equipment			
(a) VE monitor (14-inch)	(2 sets)		
(b) Waveform monitor	(2 sets)		
(c) Vector Scope	(2 sets)		
(d) 9-inch input color monitor	(18 sets)		
(e) 21-inch color monitor	(2 sets)		
(f) Air monitor (NICAM)	(2 sets)		
(g) On-air tally logic	(2 sets)		
(h) Audio speaker with amplifier	(2 sets)		
7) Sync. signal equipment		1	set
(a) Sync. signal generator	(2 sets)		
(b) Auto changeover unit			
(c) Video distribution amplifier			
(d) Test signal generator			
8) Intercom system (10 terminals)		1	set
9) Clock system (GPS)		1	set
10) UPS (30 kVA)		1	set
6. STUDIO-1			
1) Color camera chain		1	set
(a) CCD camera with 7-inch viewfinder & triaxial camera adapter	(4 sets)		
(b) Zoom lens (20 times)	(4 sets)		
(c) Pedestal			
(d) Camera console			
2) Video equipment		1	set
(a) 1/2-inch Analog VTR (play)			
(b) 1/2-inch Analog VTR (Record/Play)			
7. STUDIO-2			
1) Color camera chain		1	set
(a) CCD camera with 7-inch viewfinder & triaxial camera adapter	(3 sets)		
(b) Zoom lens (20 times)	(3 sets)		
(c) Pedestal			
(d) Camera console			

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2) Video equipment	1	set
(a) Digital production switcher (18 input 2 MK)		
(b) 1/2-inch Analog VTR (play)	(2 sets)	
(c) 1/2-inch Analog VTR (Record/Play)		
(d) Frame synchronizer	(2 sets)	
(e) Video distribution amplifier		
(f) Video jack panel		
(g) System rack	(1 set)	
(h) Video console		
3) Audio equipment	1	set
(a) Audio mixer (Analog 16 inputs)		
(b) Digital audio tape recorder (DAT)		
(c) Compact disk player (CD)		
(d) Audio distribution amplifier		
(e) Audio jack panel		
4) Studio equipment	1	set
(a) Speaker with amplifier		
(b) Connection box		
(c) Operation box for microphone	(2 sets)	
5) Monitoring equipment	1	set
(a) VE monitor (14-inch)		
(b) Waveform monitor		
(c) Vector scope		
(d) 9-inch input color monitor	(16 sets)	
(e) 21-inch color monitor	(2 sets)	
(f) Air monitor (NICAM)		
(g) On-air tally logic		
(h) Speaker with amplifier		
6) Sync. signal generator	1	set
(a) Sync. signal generator	(2 sets)	
(b) Auto changeover unit		
(c) Video distribution amplifier		
7) Announce booth	1	set
(a) Microphone & stand		
(b) Speaker with amplifier		
(c) Operation box for microphone		
(d) Announce desk		
8. POST-PRODUCTION		
1) Digital production switcher (16 inputs 2MK)	1	set
2) Digital video effect (3-dimension)	1	set
3) Analog audio mixer (12 inputs)	1	set
4) 1/2-inch AB roll editing equipment	1	set
(a) 1/2-inch digital VTR (1 out of 2 players is with DT)	(2 sets)	
(b) 1/2-inch digital VTR (player and Recorder)		
(c) Editing control		

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- (d) Color monitor (14-inch) (4 sets)
 - (e) Speaker with amplifier
 - (f) Console
- 5) Computer graphics 1 set
9. EDITING ROOM
- 1) Editing room No.2 (1/2-inch AB roll) 1 set
 - (a) 1/2-inch analog VTR (play)
 - (b) 1/2-inch analog VTR (play with DT)
 - (c) 1/2-inch analog VTR (play/record)
 - (d) Video switcher
 - (e) Audio mixer
 - (f) Editing control unit
 - (g) Color monitor (14-inch) (3 sets)
 - (h) Console with vertical rack
 - 2) Editing room No.3 & No.4 1 set
 - (a) 1/2-inch analog VTR (play) (2 sets)
 - (b) 1/2-inch analog VTR (play/Record) (2 sets)
 - (c) Editing control unit (2 sets)
 - (d) Color monitor (14-inch) (4 sets)
 - (e) Console with vertical rack (2 sets)
10. OB Van
- 1) Field color camera chain 1 set
 - (a) Studio CCD camera with 7-inch view finder & triaxial camera adapter (2 sets)
 - (b) Zoom lens (45 times) (2 sets)
 - (c) Tripod dolly (2 sets)
 - (d) Triaxial cable (500m) (2 sets)
 - 2) Portable camera chain 1 set
 - (a) Portable CCD camera with 5-inch view finder & triaxial camera adapter (4 sets)
 - (b) Zoom lens (33 times) (4 sets)
 - (c) Tripod dolly (4 sets)
 - (d) Triaxial cable (500 m) (4 sets)
 - 3) Video equipment 1 set
 - (a) Analog video switcher (18 inputs)
 - (b) Digital still store
 - (c) Video distribution amplifier
 - (d) Video jack panel
 - 4) Audio mixer 1 set
 - (a) Audio mixer
 - (b) Audio distribution amplifier
 - (c) Audio jack panel
 - 5) Monitoring equipment 1 set
 - (a) 9-inch color monitor (14 sets)
 - (b) Waveform monitor/ Vector scope
 - (c) Air-monitor(NICAM) with antenna
 - (d) Speaker with amplifier

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(e) Sync. signal generator	(2 sets)		
(f) Auto change unit			
6) Microphone	6	sets	
7) Video & audio equipment	1	set	
(a) 1/2-inch analog VTR (Record/Play with DT)	(2 sets)		
(b) Compact disk player			
8) FPU system,	1	set	
(a) Transmitter			
(b) Receiver			
(c) Parabolic antenna	(2 sets)		
9) Communication system	1	set	
(a) VHF wireless communication system			
(b) Intercom communication system			
10) Vehicle	1	set	
(a) Vehicle			
(b) Engine generator (15 kVA)			
(c) Air conditioner			
(d) System rack			
(e) AVR			
11. Measuring equipment for transmitter	1	set	
(a) Oscilloscope (230 MHz)			
(b) Spectrum analyzer with tracking generator (3 GHz)			
(c) Video-test signal generator (PAL)			
(d) Waveform monitor/Vector scope			
(e) Video monitor			
12. Measuring equipment for studio	1	set	
(a) Oscilloscope (100 MHz)			
(b) Audio distortion meter			
(c) Waveform monitor/Vector scope			

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5. Cost Estimation Borne by the Recipient Country

5. Cost Estimation Borne by the Recipient Country

The necessary budget born by SLRC for implementation of the project for Improvement of SLRC is Rupee 10,560,000 (approximately US\$ 187,000).

Breakdown of expenses:

1) Colombo Broadcasting Center	3,150,000 Rupee
(a) Temporary installation work for existing equip	3,000,000
(b) Securing of routes for carrying in equipment	50,000
(c) Equipment dismatling work after the project completed	100,000
2) Hantana Transposer Station	7,310,000 Rupee
(a) Building construction cost (2 floor, 4 m X 4 m each	6,000,000
(The same scale as the Suriyakanda Transposer Station is considered).	
(b) Installation work for horizontal ladder	600,000
(c) Incoming line work for city power	400,000
(d) Installation work for water supply facilities (mountain top only)	200,000
(e) Telephone facilities installation work	90,000
(f) Securing of routes for carrying in equipment	20,000
3) Pidurutalagala Main Transmitting Station	60,000 Rupee
(a) Provision of wall penetrate of new air duct for the new TV transmitter	20,000
(b) Securing of routes for carrying in equipment	20,000
(c) Disposal of dismantled equipment	20,000
4) Primrose Hill Transposer Station	40,000 Rupee
(a) Securing of routes for carrying in equipment	20,000
(b) Disposal of dismantled equipment	20,000

Total 10,560,000 Rupee

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