

2-2-2 Basic Plan

Provided below are a tentative list of broadcasting equipment to be provided by the Project and basic design drawings.

(1) Equipment List

Table 2-2-1: Equipment List

No.	Description	Q'ty
1	4WD SNG OB VAN	1 lot
1.1	Digital Camera and CCU System	1 set
(1)	3 Chip CCD Camera	2 sets
(2)	40x Zoom Lens	1 sets
(3)	20x Zoom Lens	1 sets
(4)	UV Filter	2 sets
(5)	Rain Jacket	2 sets
(6)	Camera Head Carrying Case	2 sets
(7)	Tripod / Head / Dolly	2 sets
(8)	5 inch View Finder	2 sets
(9)	Camera Control Unit	2 sets
(10)	Camera Cable (100m)	8 sets
(11)	Portable Test Chart Set	2 sets
1.2	Digital VTR	2 sets
1.3	Digital Video System	1 lot
(1)	Portable Video Mixer	1 set
(2)	Title Generator	1 set
1.4	Digital Audio System	1 lot
(1)	Audio Mixer	1 set
(2)	Limiting Amplifier	1 set
1.5	Microphone & Accessories	1 lot
(1)	Wireless Michrophone	1 set
1)	UHF Synthesized Transmitter	1 set
2)	UHF Synthesized Tuner	1 set
3)	Lavalier Microphone	1 set
(2)	Gun Microphone	1 set
(3)	Hand Grip	1 set
(4)	Wind-shield	1 set
(5)	Fish Pole	1 set
(6)	Dynamic Microphone	2 sets

No.	Description	Q'ty
(7)	Microphone Cable	1 set
1)	Mic Cable:50m	4 sets
2)	Mic Cable:20m	4 sets
1.6	Monitoring System (A/V)	1 lot
(1)	LCD Video Monitor	1 lot
(2)	Portable LCD Video Monitor	1 set
(3)	Coaxial Cable 50m for Video Monitor	4 sets
(4)	Audio Monitor Panel	1 set
(5)	Headphone	1 set
1.7	Intercom System	1 lot
(1)	Head Set	4 sets
(2)	Interface	1 set
(3)	Intercom Cable (50m)	4 sets
1.8	Sync Signal Generator	1 set
1.9	Battery Light Set	1 set
1.10	Ku Band Up-link System	1 lot
(1)	D-TV Codec	1 set
(2)	D-TV Modulator	1 set
(3)	SNG Antenna	1 set
1.11	Measuring Equipment	1 lot
(1)	Waveform/Vector Monitor	1 set
(2)	Spectrum Analyzer	1 set
1.12	BGAN Communication System	1 lot
1.13	SNG VAN (4WD)	1 lot
1.14	Equipment/Control Rack	1 lot
2	Master Control System	1 lot
2.1	Master Control System	1 lot
(1)	A/V Master Matrix Switcher System	1 lot
1)	Embedded Matrix Switcher (32x32)	1 set
2)	Back-up Power Supply for Matrix Switcher	1 set
3)	Control Panel	1 set
(2)	Digital VTR	2 sets
	(each comprising)	
1)	Digital VTR	1 set
2)	Remote Control Unit	1 set
(3)	Digital Video System	1 lot

No.	Description	Q'ty
	1) Video A/D Unit	1 lot
	2) Video D/A Unit	1 lot
	3) Embedded Encoder	1 lot
	4) Embedded Decoder	1 lot
	5) VDA, DDA, VJ, Patch Cable	1 lot
	6) Logo Generator	1 set
	7) Inserter/Remote Control Panel	3 sets
	8) Frame Synchronizer/ Remote Control Panel	1 lot
	9) Test Signal Generator	1 set
	10) Multi-ch (5ch) O/E	1 set
(4)	Digital Audio System	1 lot
	1) Audio A/D Unit	1 lot
	2) Audio D/A Unit	1 lot
	3) AGC	3 sets
	4) ADA, DDA, AJ, Patch Cable	1 lot
	5) Test Signal Generator	1 set
(5)	A/V Monitoring System	1 lot
	1) 14-inch Video Monitor	1 lot
	2) 20-inch Video Monitor	1 lot
	3) Air Monitor	1 set
	4) Master Monitor	1 set
	5) Waveform/Vector Monitor (Analog/Digital)	1 lot
	6) Stereo Scope	1 set
	7) VU Meter Panel	1 set
	8) Audio Monitor	1 lot
	9) OA Tally Logic	1 set
	10) OA Tally Light for PM	1 set
	11) Monitor Shelf	1 lot
	12) Master Console	1 set
(6)	Sync Signal Generator	1 lot
	1) Sync Signal Generator	2 sets
	2) Auto Change-over Unit	1 set
	3) Pulse Distribution Amplifier	1 lot
	4) Audio Sync. System	1 lot
(7)	Room to Room Communication Terminal	3 sets
(8)	Equipment Rack	1 lot

No.	Description	Q'ty
2.2	Power Supply System	1 lot
(1)	Isolation Transformer (10kVA)	1 set
(2)	PDB	1 lot
(3)	Earth Material for Equipment Ground	1 set
3	Transmission System	1 lot
3.1	TX Equipment	5 sets
	(each comprising)	
(1)	Digital VTR	1 set
(2)	DVB Encoder	1 set
(3)	DVB/E1 Encoder	1 set
(4)	VDA	1 set
(5)	A/V Monitoring System	1 set
	1) LCD Video Monitor	1 set
	2) Audio Monitor Panel	1 set
(6)	AVR	1 set
(7)	CN Patch Panel	1 set
(8)	Equipment Rack	1 set
3.2	RX Equipment	1 set
(1)	E1/DVB Decoder	5 sets
(2)	DVB Decoder	5 sets
(3)	Multi-ch (5ch) E/O	1 set
(4)	A/V Monitoring System	1 set
	1) A/V Monitor Switcher	1 set
	2) LCD Video Monitor	1 set
	3) Waveform/Vector Monitor	1 set
	4) Audio Monitor Panel	1 set
(5)	AVR	1 set
(6)	Equipment Rack	1 set
4	News and Production Equipment for Bureaus	1 lot
4.1	For Jakar, Phuentsholing, Kanglung Regional Centers	3 sets
	(each comprising)	
(1)	Digital CAM Coder System	1 set
	1) Digital CAM Coder	1 set
	2) 20x Zoom Lens	1 set
	3) UV Filter	1 set
	4) Rain Jacket	1 set

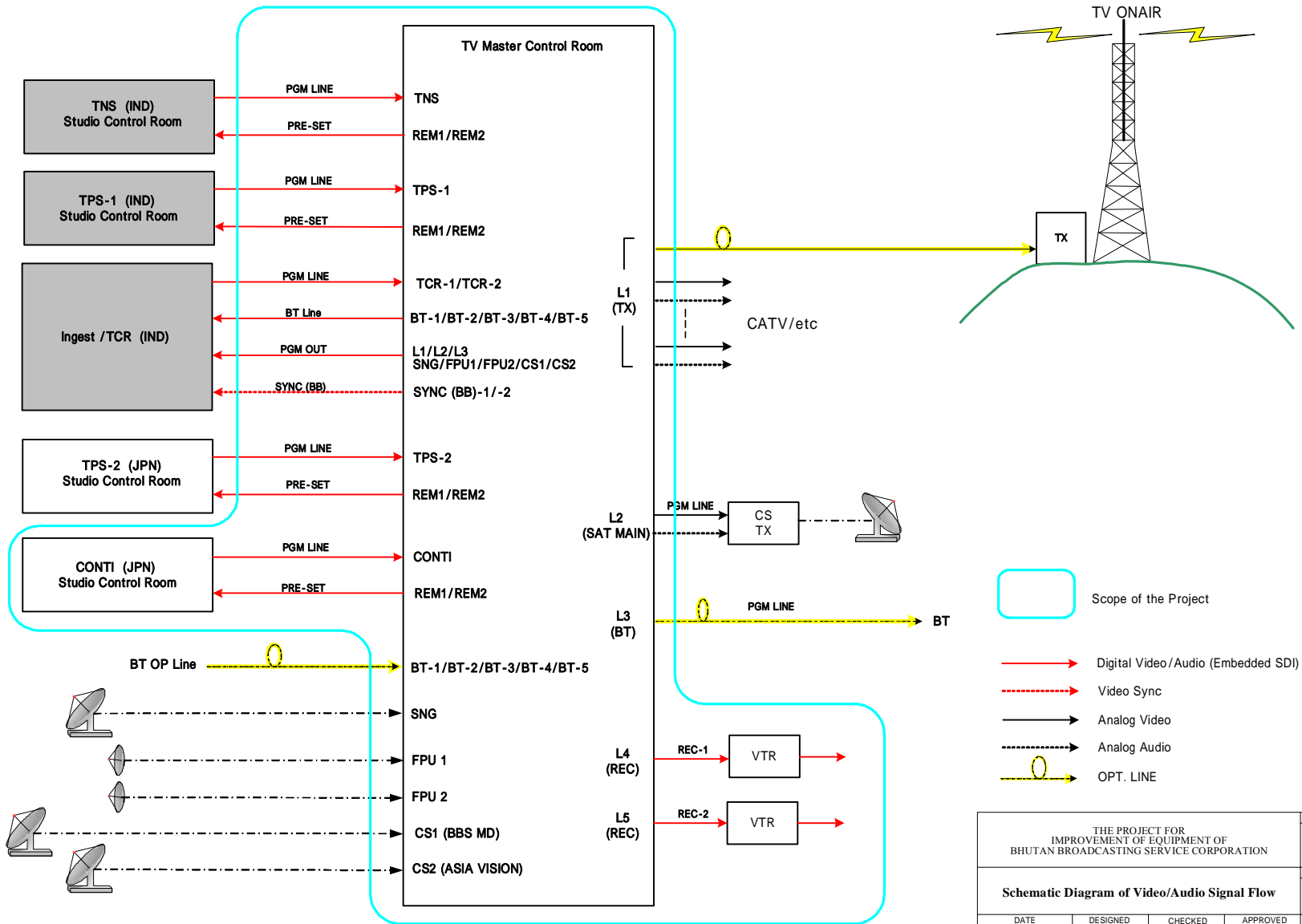
No.	Description	Q'ty
	5) Camera Head Carrying Case	1 set
	6) Tripod / Head / Dolly	1 set
	7) Battery Pack	1 set
	8) AC Adaptor	1 set
	9) Power Code	1 set
	10) Portable LCD Video Monitor	1 set
	11) Coaxial Video Cable (50m)	4 sets
	12) Cam-Light	1 set
(2)	Digital VTR	1 set
(3)	Nonlinear Editing Set	1 set
	1) PC for Editing	1 set
	2) Editing Software	1 set
	3) Stereo Monitor Speaker (with Power Amp.)	1 set
	4) Audio Mixer for Voice Over	1 set
	5) Microphone with Table Stand	1 set
	6) UPS for PC	1 set
(4)	A/V Mixer	1 set
(5)	Microphone & Accessories	1 set
	1) Portable Audio Mixer	1 set
	2) Gun Microphone	1 set
	3) Hand Grip	1 set
	4) Wind-shield	1 set
	5) Fish Pole	1 set
	6) Dynamic Microphone	2 sets
	7) Mic Cable : 50m	2 sets
	8) Mic Cable : 20m	2 sets
(6)	Wireless Microphone	1 set
	1) UHF Synthesized Transmitter	1 set
	2) UHF Synthesized Tuner	1 set
	3) Lavalier Microphone	1 set
(7)	Battery Light Set	1 set
(8)	FPU System	1 set
	1) FPU Transmitter	1 set
	2) FPU Transmitter Control Box	1 set
	3) FPU Receiver	1 set
	4) FPU Receiver Control Box	1 set

No.	Description	Q'ty
	5) Control Cable for TX, RX	4 sets
4.2	For Wangduephodrang and Paro Bureaus (each comprising)	2 sets
(1)	Digital CAM Coder System	1 set
	1) Digital CAM Coder	1 set
	2) 20x Zoom Lens	1 set
	3) UV Filter	1 set
	4) Rain Jacket	1 set
	5) Camera Head Carrying Case	1 set
	6) Tripod / Head / Dolly	1 set
	7) Battery Pack	1 set
	8) AC Adaptor	1 set
	9) Power Code	1 set
	10) Portable LCD Video Monitor	1 set
	11) Coaxial Video Cable (50m)	4 sets
	12) Cam-Light	1 set
(2)	Digital VTR	1 set
(3)	Nonlinear Editing Set	1 set
	1) PC for Editing	1 set
	2) Editing Software	1 set
	3) Stereo Monitor Speaker (with Power Amp.)	1 set
	4) Audio Mixer for Voice Over	1 set
	5) Microphone with Table Stand	1 set
	6) UPS for PC	1 set
(4)	Wireless Microphone	1 set
	1) UHF Synthesized Transmitter	1 set
	2) UHF Synthesized Tuner	1 set
	3) Lavalier Microphone	1 set
5	Equipment for Continuity Studio	1 lot
5.1	Video A/D Unit	1 lot
5.2	Video D/A Unit	1 lot
5.3	Audio A/D Unit	1 lot
5.4	Audio D/A Unit	1 lot
5.5	Embedded Encoder	1 lot
5.6	Embedded Decoder	1 lot
5.7	Audio Mixer	1 set

No.	Description	Q'ty
5.8	Monitor Equipment	1 lot
(1)	OA Tally Box for PM	1 lot
(2)	Monitor Shelf	1 set
(3)	Console	1 set
(4)	Plasma Video Monitor	2 sets
5.9	Production Intercom System	1 lot
5.10	Audio Cough System	1 set
6	Maintenance Equipment and Tools	1 lot
6.1	Video Analyzer	1 set
6.2	Video Test Signal Generator	1 set
6.3	Tool Kit	1 set
6.4	Alignment Tape	1 set

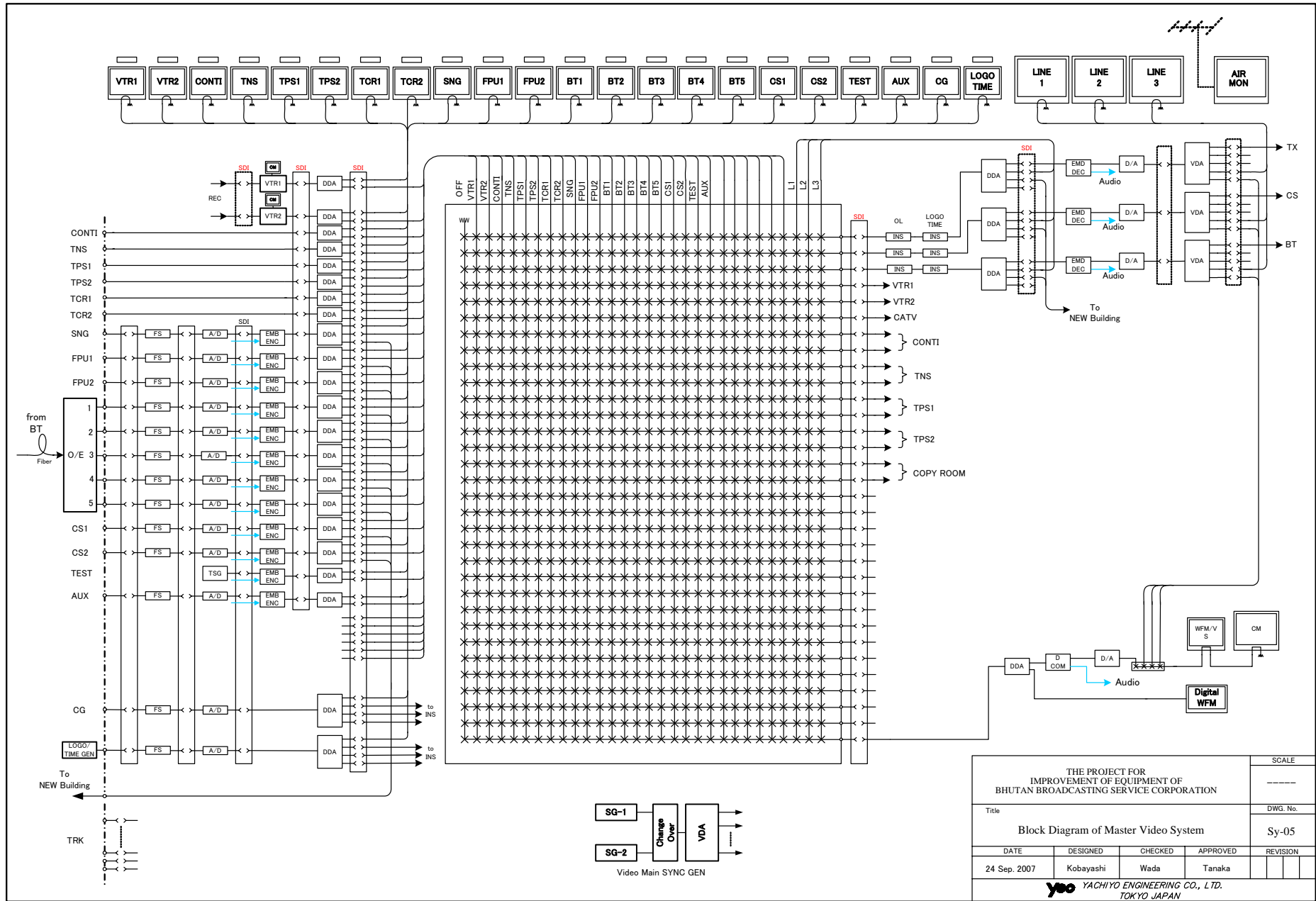
(2) Basic Design Drawings

<u>Drawing No.</u>	<u>Title</u>
Sy-1	Schematic Diagram of Video / Audio Signal Flow
Sy-2	Schematic Diagram of 4WD SNG OB Van System
Sy-3	Block Diagram of 4WD SNG OB Van System
Sy-4	System Diagram of 4WD SNG OB Van Live Program Transmission
Sy-5	Block Diagram of Master Video System
Sy-6	Block Diagram of Master Audio System
Sy-7	Schematic Diagram of BBSC Nationwide Network
Sy-8	Block Diagram of Program Transmission System (TX Equipment)
Sy-9	Block Diagram of Program Transmission System (RX Equipment)
Sy-10	Block Diagram of News Program Transmission Equipment
Sy-11	Schematic Diagram of News Program Production System
Sy-12	Block Diagram of Continuity Studio Video System
Sy-13	Block Diagram of Continuity Studio Audio System
Sy-14	Block Diagram of Continuity Studio Intercom System
Sy-15	Single Line Diagram of Power Supply System
L -01	Layout Plan of Master Control Room and Continuity Control Room

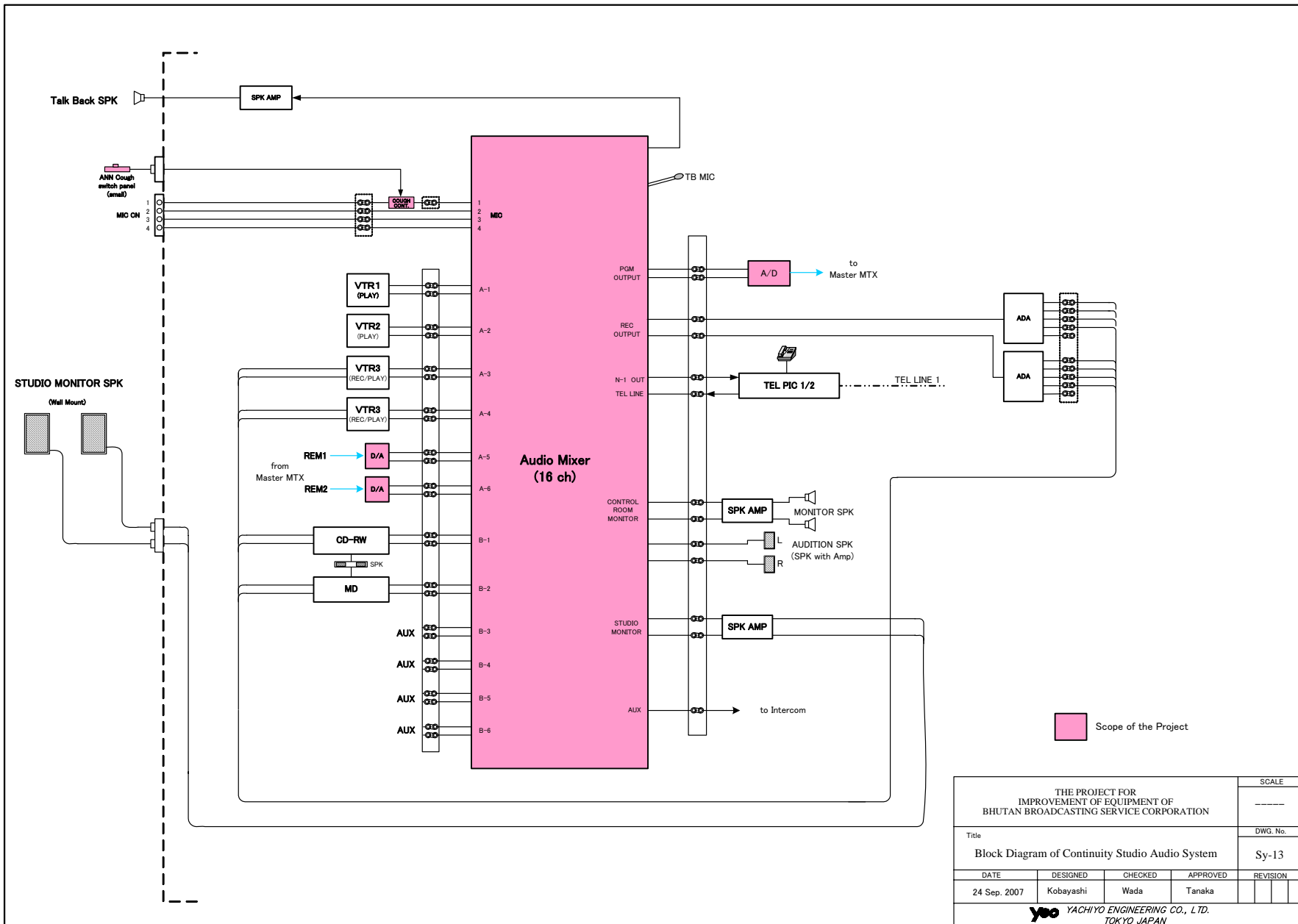


THE PROJECT FOR IMPROVEMENT OF EQUIPMENT OF BHUTAN BROADCASTING SERVICE CORPORATION				SCALE

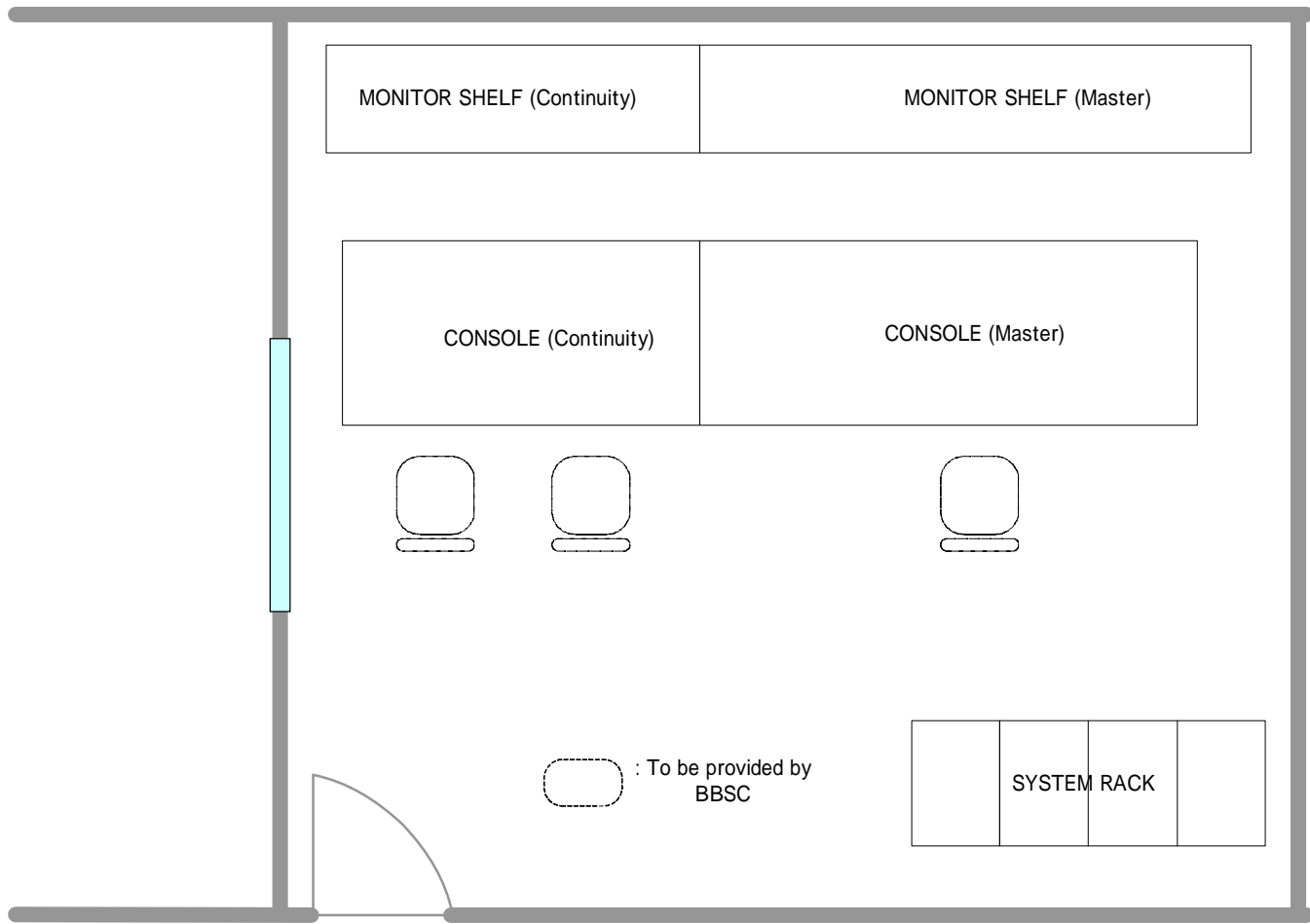
Schematic Diagram of Video/Audio Signal Flow				DWG. No.
				Sy-01
DATE	DESIGNED	CHECKED	APPROVED	REVISION
24 Sep. 2007	Kobayashi	Wada	Tanaka	
YACHIYO ENGINEERING CO., LTD. TOKYO JAPAN				



THE PROJECT FOR IMPROVEMENT OF EQUIPMENT OF BHUTAN BROADCASTING SERVICE CORPORATION				SCALE
Title				-----
Block Diagram of Master Video System				DWG. No.
				Sy-05
DATE	DESIGNED	CHECKED	APPROVED	REVISION
24 Sep. 2007	Kobayashi	Wada	Tanaka	
YACHIO ENGINEERING CO., LTD. TOKYO, JAPAN				



THE PROJECT FOR IMPROVEMENT OF EQUIPMENT OF BHUTAN BROADCASTING SERVICE CORPORATION					SCALE ----
Title Block Diagram of Continuity Studio Audio System					DWG. No. Sy-13
DATE	DESIGNED	CHECKED	APPROVED	REVISION	
24 Sep. 2007	Kobayashi	Wada	Tanaka		
YACHIKYO ENGINEERING CO., LTD. TOKYO JAPAN					



THE PROJECT FOR IMPROVEMENT OF EQUIPMENT OF BHUTAN BROADCASTING SERVICE CORPORATION				SCALE

Title Layout of TV Master Control and Continuity Control Room				DWG. No. L-01
DATE	DESIGNED	CHECKED	APPROVED	REVISION
24 Sep. 2007	Kobayashi	Wada	Tanaka	
YACHIYO ENGINEERING CO., LTD. TOKYO JAPAN				

2-2-3 Implementation Plan

2-2-3-1 Implementation Policy

This Project will be implemented in accordance with the framework of the Grant Aid of Japan. Accordingly, the implementation of the Project will commence upon its approval by the Japanese government and signing of the Exchange of Notes (E/N) by and between the governments of Japan and Bhutan. Basic matters and special notes to be taken in implementing the Project are described below.

(1) Project Executing Organizations

BBSC is the executing organization on the Bhutanese side responsible for the implementation of the Project. The Technical Department of the BBSC Headquarters will be in charge of carrying out the Project, as well as in operating and maintaining the equipment to be installed in the Headquarters. Each Bureau will be responsible for the operation and maintenance of their own news and production equipment and transmission systems. In order to smoothly implement the Project, BBSC's Technical Department will appoint appropriate personnel to take charge of the Project while maintaining close contact and holding discussions with the Japanese consultant and contractor.

(2) Consultant

Prior to proceeding with the procurement and installation of the equipment, the Japanese consultant will conclude a design and supervision contract with BBSC to undertake the detailed design and construction supervising works for the Project. The consultant will prepare tender documents and carry out the tender procedure on behalf of BBSC.

(3) Contractor

A Japanese contractor, who will be selected by the Bhutanese side through a public tender process in accordance with the framework of Japanese Grant Aid, will undertake the procurement and installation of equipment and supplies for the Project. The contractor will maintain communications link with BBSC after the handover of the Project, as the contractor will need to continue providing follow-up services, such as supplying spare parts and fixing equipment failures after the completion of the Project.

(4) Necessity for Dispatch of Engineers

The equipment to be procured by the Project will require advanced skills for adjusting and testing after installation, at which point, it will be necessary to dispatch engineers from Japan to impart necessary skills and techniques for controlling the equipment quality and work process.

BBSC's technical crew already have enough skills and knowledge to properly operate and maintain the existing analogue-type broadcasting equipment and professional-grade devices. However, they are inexperienced at operating and maintaining the latest digital equipment and therefore will need technical guidance of Japanese engineers to be dispatched from the equipment suppliers at the time of installation.

2-2-3-2 Implementation Conditions

Although construction and electrical installation companies exist in Bhutan, none of them possess advanced techniques required for installing the broadcasting equipment to be procured by the Project. Therefore, for the installation, adjustment, and testing of the equipment, as well as for OJT for the BBSC staff, Japanese engineers will be dispatched to the sites to give technical guidance and supervise the quality/process control.

2-2-3-3 Scope of Work

The Japanese side will undertake the procurement and installation of the broadcasting equipment while the Bhutanese side will take charge of the removal of the existing equipment and the remodeling/expansion of the existing facilities. The tentative work demarcation between Japan and Bhutan sides is shown in Table 2-2-2 below.

Table 2-2-2: Work Demarcation

Work Item	Responsibilities		Remarks
	Japan	BBSC	
< Common >			
(1) Removal Work of the Existing Equipment at BBSC's HQ, if any			To be completed before starting the Installation Work by the Japanese side.
(2) Temporary Shifting Work of the Existing TV Master Control System and Temporary Broadcasting at BBSC's HQ			Ditto
(3) Shifting Work of the Existing Radio Master Control System at BBSC's HQ			Ditto
(4) Securing of City Power, Air-conditioning and Water Supply			Ditto
(5) Provision of Places necessary for On-the-Job Training			Including desks, chairs, a whiteboard and stationeries.
(6) Provision of Chairs necessary for Daily Operation of the Equipment			
(7) Test Broadcasting	(Advise)		
(8) To obtain any legal permissions or licenses necessary for execution of the Project in Bhutan			
(9) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts			
(10) To bear the following commissions of the Japanese bank for banking services based upon the B/A - Advising commission of A/P - Payment commission			

Work Item	Responsibilities		Remarks
	Japan	BBSC	
(11) To maintain and use properly and effectively the facilities contracted and equipment provided under the Grant Aid			
(12) To bear all the expenses, other than those to be borne by the Grant Aid			
1. 4WD SNG OB Van			
(1) Procurement of the Equipment			
(2) Transportation of the Equipment to the Project sites			Delivery Point: BBSC's HQ
(3) Adjustment and Testing			
(4) Initial Operation & Total System Trainings			
(5) Provision of CS Receiving Equipment			See the Block Diagram.
(6) To Secure Satellite Line and Cover the Operation Cost (Including Cost for OJT and Test Broadcast)			
2. Master Control System			
(1) Procurement of the Equipment			
(2) Transportation of the Equipment to the Project sites			Delivery Point: BBSC's HQ
(3) Installation of the Equipment			
(4) Extension Work of Power Supply System			Including Earthing Work for Broadcasting Equipment. See the Single Line Diagram in detail.
(5) Adjustment and Testing			
(6) Initial Operation & Total System Trainings			
(7) To maintain the existing SNG Receiving Equipment at BBSC' HQ			
3. Transmission System			
(1) Procurement of the Equipment			
(2) Transportation of the Equipment to the Project sites			Delivery Point: BBSC's HQ, Bhutan Telecom's HQ and Bureaus
(3) Securing of Places to Install			Including Power Supply and Air-conditioning.
(4) Installation of the Equipment			
(5) Adjustment and Testing			
(6) Initial Operation Training			
(7) To contract with Bhutan Telecom to utilize the Facilities and Land Lines			
4. News and Production Equipment for Bureaus			

Work Item	Responsibilities		Remarks
	Japan	BBSC	
(1) Procurement of the Equipment			
(2) Transportation of the Equipment to the Project sites		*	Delivery Point: BBSC's HQ * Transportation from BBSC's HQ to each Bureau shall be done by BBSC.
(3) Adjustment and Testing			
(4) Initial Operation Training			To be conducted for all trainees of the appointed Bureaus at BBSC's HQ.
5. Equipment for Continuity Studio			
(1) Procurement of the Equipment			
(2) Transportation of the Equipment to the Project sites			Delivery Point: BBSC's HQ
(3) Installation of the Equipment			
6. Maintenance Equipment and Tools			
(1) Procurement of the Equipment			
(2) Transportation of the Equipment to the Project sites			Delivery Point: BBSC's HQ
(3) Initial Operation Training			

Note: * indicates the side responsible for the work.

2-2-3-4 Construction Supervision

(1) Basic Policy on Construction/Procurement Supervision

The Consultant has the obligation to carry out smoothly the detailed design and construction supervision works in accordance with the Japanese Grant Aid guidelines, as well as based on the contents of the Basic Design, by organizing a project team in charge of the Project. The Consultant is also required to supervise and give guidance to the Contractor to ensure that the work process, equipment quality, output, and safety are properly controlled and managed according to the plan by dispatching engineers to the project sites at appropriate timings according to the progress of the installation, on-site testing/adjustment and other works. In addition, the Contractor is obligated to conduct pre-shipment inspections to prevent the equipment from malfunctioning after their deliveries to the Project sites.

Described below are the main points to be noted in supervising the installation/procurement works.

1) Process Control

The Consultant will supervise the progress of the work process on a weekly/monthly basis and demand that the Contractor will complete the works on or by the specified dates provided on the contract. When a delay is foreseen, the Consultant will warn and ask the Contractor to submit and implement a

corrective action plan. The Consultant will compare the actual progress of the works with the planned schedule by checking the points listed below.

- Confirm output (manufacture and shipment of equipment from the factory)

- Confirm delivery of equipment.

- Check the required manpower against the actual number of engineers, skilled workers, and laborers.

2) Quality/Output Control

The Consultant will carry out quality/output control to ensure that the procured equipment satisfy the quality and output specified in the contract documents. When, as a result of verification and/or collation, the actual quality and/or output do not seem to be meeting the requirements, the Consultant will immediately demand that the Contractor will correct, rectify, or revise the situation.

- Collate the equipment specifications.

- Collate the production drawings and specifications of the equipment.

- Witness the factory inspection or verify the result thereof.

- Collate the installation procedure.

- Test run the equipment and collate the adjustment/test/inspection procedures.

- Supervise the onsite installation, test run the equipment, and witness the adjustment/test/inspection.

3) Labor Management

The Consultant will have ample discussions with the safety manager of the Contractor to prevent labor disasters at work sites, as well as injuries and accidents involving third parties. Points to note in controlling safety at work sites are as follows.

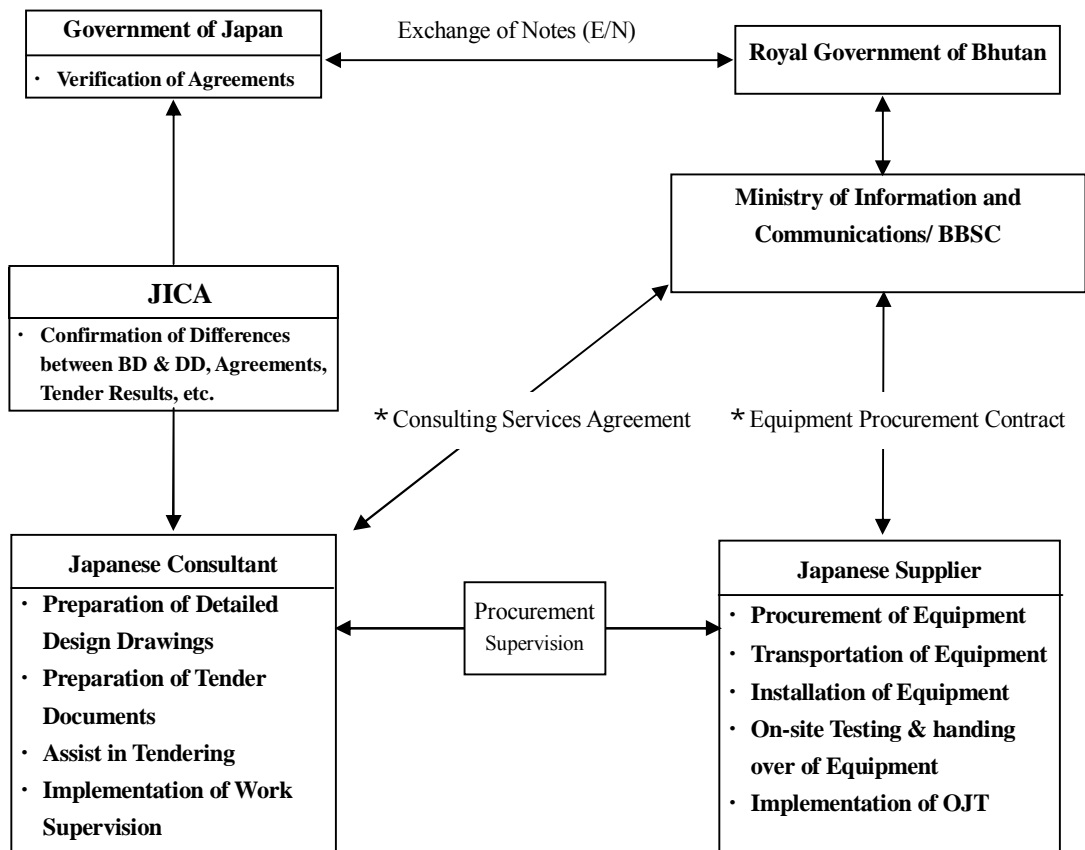
- Establish procedures and rules related to work safety and appoint a manager.

- Establish designated routes for construction and transportation vehicles and enforce safe driving.

- Provide appropriate welfare benefits for the workers and enforce holidays.

- Provide safety and security for the workers during their stay at the work sites.

The interrelation among the parties involved in the Project is illustrated in Figure 2-2-11 below.



* Note: The Consulting Services Agreement and the Equipment Procurement Contract shall be verified by the Government of Japan.

Figure 2-2-11: Project Implementation Relationship

(2) Construction Supervisor

In addition to procuring and delivering the equipment, the Contractor will carry out the installation work. To ensure that the subcontractors will also strictly comply with the provisions of the Contractor Contract by adhering to the specified construction schedule, quality standards, output, and safety measures, the Contractor will dispatch an engineer(s) with experience in similar overseas project to guide and educate the local subcontractors.

2-2-3-5 Quality Control Plan

To ensure that the procured equipment satisfies all technical specifications stipulated in the tender documents, pre-shipment inspections at the suppliers' factories will be strictly enforced. During the installation work at the Project sites, the work quality will be controlled in accordance with the installation control standards written in the installation procedure.

2-2-3-6 Procurement Plan

The types of equipment and supplies needed for the Project are not manufactured in Bhutan, and therefore will be procured from Japan and third countries. The news-gathering cameras and VTRs will also include third countries as potential suppliers, as they are available from several local agents of Japanese and third-country manufacturers. The procurement sources are listed in Table 2-2-3 below.

Table 2-2-3: Procurement Sources of Equipment

No.	Equipment	Procurement Source		
		Japan	Bhutan	3 rd country
1	4WD SNG OB Van		-	
2	Master Control System		-	
3	Transmission System		-	
4	News and Production Equipment for Bureaus		-	
5	Equipment for Continuity Studio		-	
6	Maintenance Equipment and Tools		-	

The equipment for the Project will be provided with 1-year manufacturer's warranty. To ensure proper operation and maintenance of the equipment on a continuous basis, the Bhutanese side will need to allocate a budget for purchasing spare parts, etc. after the completion of the Project.

2-2-3-7 Operation Guidance Plan

BBSC has been independently operating and maintaining the existing equipment, including analogue devices, without encountering particular technical problems. However, BBSC is inexperienced in handling the latest digital equipment to be provided by the Project. Japanese engineers will need to give initial technical guidance on the equipment operation, troubleshooting, replacement of spare parts, and daily inspections, as well as on the series of procedures for sending data from the transmission equipment to be installed in BT facilities and broadcasting programs from the Master Control System at the BBSC HQ immediately after the installation, adjustment, and testing of the equipment.

2-2-3-8 Implementation Schedule

This Project will be implemented based on the guidelines of Japan’s Grant Aid according to the following schedule. The entire process, including detailed design and installation work, will take 17 months to complete.

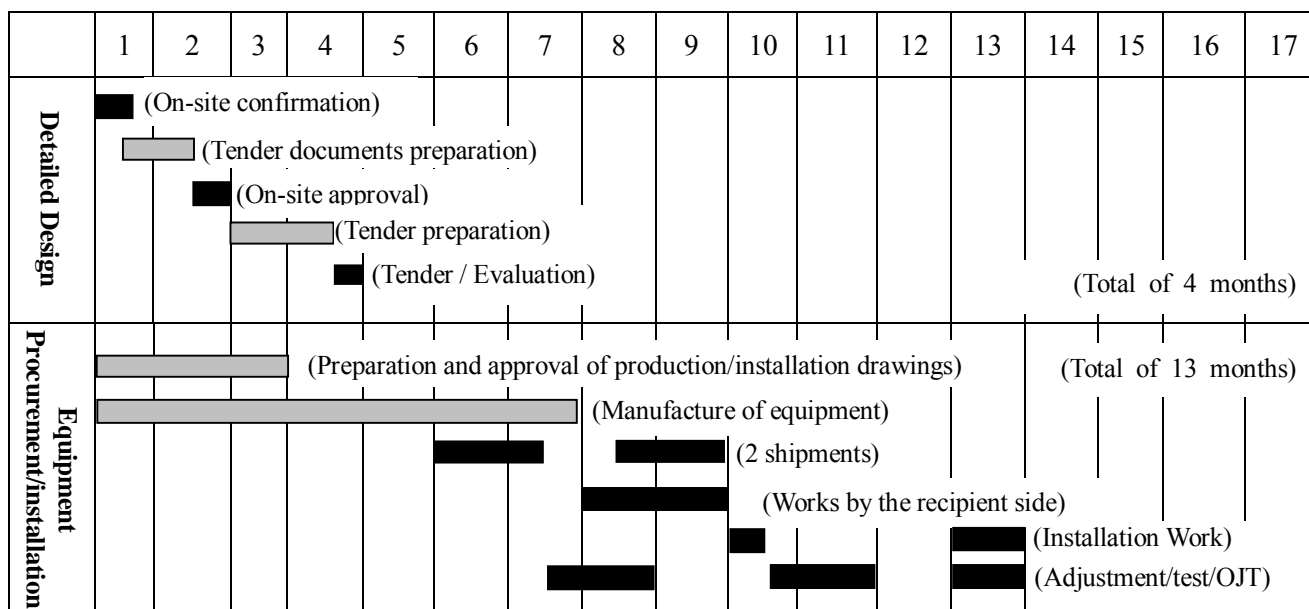


Figure 2-2-12: Project Implementation Schedule

2-3 Project Operation Plan

(1) Recruitment Plan

Based on the design policies described under Section 2-2-1, we formulated a recruitment plan for BBSC’s TV Broadcasting and Technical Departments, as well as Regional Centers and Bureaus, that will be involved in the operation of the Project. The Radio Broadcasting Department uses partially modified scripts prepared by the TV Broadcasting Department, and as such that a possible increase in personnel of the Radio Broadcasting Department in case of an increase in radio programs will need to be estimated separately. However, since such an increase would be minimum, it was not accounted for in this recruitment plan, with the exception of the Technical Department personnel, the required size of which needed to be calculated by taking into account the radio broadcasting operations.

1) TV Broadcasting Department

The required manpower was calculated based on the new program schedule, which intends to produce the following numbers of general programs.

Table 2-3-1: Number of Programs to be Produced

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
No. of programs	3	4	2	4	2	2	2

Source: BBSC

At BBSC, the TV studio for producing a general TV program is normally staffed with a producer, camera/sound crew, and graphics staff. The news studio consists of an anchorperson, technical director, and sound person. Because the camera is in a fixed position, no cameraman is needed in the news studio.

- Producer

Table 2-3-2 below shows the number of days and the number of producers needed to prepare a program. The required number of producers, which cannot be determined based on the required manpower for operating the equipment resources or the operation rates thereof as shown in Table 3-3-2, can be derived from the number of preparation days. These figures were derived based on the interviews with the producers in charge of each genre about the number of days normally required to prepare a program at BBSC.

Table 2-3-2: Numbers of Days and Producers Needed for Program Preparation

Program genre/Method	Preparation	No. of programs broadcast per week	Required man-days of producers per 4 weeks	Reasoning
Documentary	7 days x 4 weeks (28 days)	7 /week	28 man-days	28 programs (= 7 x 4 weeks) are being produced concurrently. Each program takes one month to produce, requiring one dedicated producer. In order to produce 28 programs per month, 28 man-days of producers will be needed.
Panel Discussion	1 day	1 / week	1 man-day	One producer per 4 weeks will be more than sufficient to produce/broadcast one panel-discussion program per week. Likewise, one producer can handle a music program broadcast once a week. Since some BBSC staff are combining multiple posts for personnel efficiency, the same producer can take charge of programs of both genres, which require a total of 4 days per week for preparation
Music	3 days	1 / week		
Education	7 days x 4 weeks (28 days)	7 /week	28 man-days	Same as the "Documentary."
Purchasing of drama	1 day	1 / week	1 man-day	Same as the "Panel Discussion" and "Music."
Sports	4 days	1 / week		
Total			58 man-days	

Source: Prepared by the Study Team

Assuming that the ratio of reruns will be reduced to 50% of the current ratio and that three additional producers in charge of the studio on the day of broadcasting are needed to carry out the new program schedule, the total number of producers needed, including extra 20% as substitute personnel on holidays, will be approximately 38 as calculated in the formula below:

$$\{ (58 \times 0.5) + 3 \} \times 1.2 = 38$$

The ratio of the substitute personnel was set based on some examples of Japanese broadcasting companies, as well as the skill levels and the size of the BBSC staff.

- Anchorperson

A total of four anchorpersons are needed each day to broadcast news programs in Dzongkh and English every morning and evening. If the news programs on weekdays and weekends are to be anchored by different persons, a total of eight anchorpersons will be needed.

- Chief Editor

Since the contents of the Dzongkh and English news are essentially the same, one chief editor can take charge of news programs in both languages each morning or evening, which means two chief editors are needed per day. In a 3-day or 4-day /week shift arrangement, a total of four chief editors will be needed.

- Sub-Chief Editor

Similarly to the chief editor, three sub-chief editors are needed each day to take charge of English/Dzongkh news programs and Regional Bureaus. Therefore, a total of six assistants will be needed.

- Reporter

Five reporters are needed each day to produce a maximum of ten reports per day, five of which are made by and sent from Regional Bureaus. Taking into account two additional reporters per day for emergency situations, as well as around 20% extra manpower as substitutes on holidays, a total of eight reporters will be needed.

- News Cameraman

A total of eight news cameraman would be needed to produce five reports per day, attend the continuity studio (1 person/day), and secure around 20% extra manpower for holidays. However, since the continuity studio and some other posts can be served concurrently, the additional personnel will not be needed.

Table 2-3-3 below compares the number of required personnel thus calculated and the number of staff members currently employed.

Table 2-3-3: No. of Personnel – Required vs. Current

(Unit: persons)

No. of staff at TV Broadcast Dept.	Current	Required	Shortage	
General program producer	23	38	15	
Pool staff (camera, sound)	14	14	Not needed	(3 persons x 3 studios + 2 persons x 1 studio + 1 person x 1 studio) x 1.2
Graphics	4	6	2	{(1 person x 4 studios) + editing room staff} x 1.2
Editing	8	9	1	(1 person x 7 editing rooms) x 1.2
Reporter (anchorman, editor, etc.)	14	26	12	8 anchorpersons, 4 chief editors, 6 assistants to chief editors, 8 reporters
News cameraman	7	8	Not needed	served by pool staff
Web operator	2	2	-	1 + extra manpower
Total	72	103	30	

Source: prepared by the Study Team

In addition to the above, extra personnel will be needed to work as substitutes during technical training and OJT of the newly employed staff (see Table 2-3-10 for the number of training courses). Table 2-3-4 below incorporates the extra personnel to figure out the number of persons that need to be newly recruited.

The training schedule takes account the skill levels of the current staff. In order to broadcast an increased number of programs, additional chief editors, who will play critical roles especially in news programs, must be fostered. Thus, the number of training courses was calculated by including the training program for improving the currently-employed staff's skills enough to serve as chief editors.

Table 2-3-4: Personnel Newly Required for the TV Broadcasting Department

(Unit: persons)

No. of staff at TV Broadcast Div.	Shortage	Substitute during	Required
General program producer	15	2	17
Pool staff (camera, sound)	-	-	-
Graphics	2	1	3
Editing	1	-	1
Reporter (anchorman, editor, etc.)	12	3	15
News cameraman	-	-	-
Web operator	-	-	-
Total	30	6	36

Source: prepared by the Study Team

2) Technical Department

The required manpower for the Technical Department depends on the operation rates of the equipment resources. The table below shows the required number of personnel per day per

equipment resource. The calculation was made based on BBSC's current work shift arrangement, as well as on the assumption that a similar number of personnel would be needed to operate the new complex and the additional equipment resources to be procured by the Project.

Table 2-3-5: No. of Technical Personnel Required Per Day Per Equipment Resource

Facility	Qty	Persons/day	Remarks
TV-MCR	2	6	3 shifts (3 man-days / day) x 2
Radio-MCR	1	3	3 shifts (3 man-days / day) x 1
TV Studio	2	6	3 shifts (3 man-days / day) x 2
News Studio	1	3	3 shifts (3 man-days / day) x 1
Continuity Studio	1	3	3 shifts (3 man-days / day) x 1 * For normal program production only, not including emergency broadcasting.
Radio News Studio	1	3	3 shifts (3 man-days / day) x 1
Radio Studio	1	3	3 shifts (3 man-days / day) x 1
Transmitting Station	1	3	3 shifts (3 man-days / day) x 1
IT System	N/A	5	Presently 3 and 2 more added for the new complex
Maintenance	N/A	4	Presently 2 and 2 more added for the new complex
R & D		1	Same as present
SNG OB van	2	Calculated separately	
Total		40	

Source: prepared by the Study Team

The required manpower for operating the OB and SNG vans was calculated separately, assuming that each van would be mobilized once a week. The current shift arrangements (3 shifts per day to operate MCR and other facilities, and 2 shifts per day to operate some equipment resources on weekends) were also assumed. In addition to the forgoing, Table 2-3-6 incorporates extra personnel needed as substitutes in case of paid holidays and sick leaves.

Table 2-3-6: Personnel Requirement for the Technical Department (weekly)

(Unit: persons)

Technical Dept.	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Remark
OB van	-	-	1 Meeting	1 Preview	1 Design	3 Prep.	3 Broadcast	
SNG van	1 Mtg/Preview	1 Mtg/Preview	1 Design	3 Prep.	3 Travel	3 Broadcast	3 Travel	
Subtotal	1	1	2	4	4	6	6	
From Table 2-3-5	40	40	40	40	40	32	32	2 shifts for MCR, etc.
Division total	41	41	42	44	44	38	38	
Days off	7	7	7	7	7	7	7	Additional personnel needed to give 2 days off per week each to 44 persons.
Total	48	48	49	51	51	45	45	
Grand total	58	58	59	62	62	54	54	Extra 20% added for substitute staff in case of emergency or sick leave.

Source: prepared by the Study Team

According to Table 2-3-6 above, the largest number of personnel, or 62 persons, are needed on Thursdays and Fridays, which need to be further supplemented by extra personnel to work as substitutes during training. The final manpower requirement derived from these figures is shown in Table 2-3-7 below.

Table 2-3-7: Manpower Requirement for the Technical Department

	Technical Dept. staff	No. of personnel
A	Current personnel	42
B	Manager	4
C(A-B)	Actual working staff	38
E	Substitute during training	5
F	Personnel needed per day	62
G(F-C+E)	No. of persons to be recruited	29

* Each training course is given constantly to a group of five trainees. The number of substitute personnel indicates the manpower needed to make up for the trainees during their absence.

3) Media Resource Center

Upon completion of the new complex, BBSC plans to enhance the Media Resource Center, which centrally manages an archive of video and other media presently owned by BBSC and facilitate their use both from inside and outside of BBSC. Presently, the Media Resource Center is attended by a cameraman on a part-time basis and therefore may not be accessed immediately when needed.

To improve the situation, additional workers for the Media Resource Center were also included in the calculation of the required manpower. In order to always have one person attending the Media Resource Center for 24 hours a day consisting of three shifts, three additional workers (3 shifts x 1 person = 3 man days) will be needed. Taking into account holidays, a total of four persons will be required for the Media Resource Center.

4) Regional Centers and Bureaus

Table 2-3-8 shows the number of additional persons required at each Bureau in carrying out the Project. The figures are the numbers of personnel needed for operating the existing equipment, as well as newly procured equipment through the Project, on a daily basis.

It is assumed that the personnel to be recruited can operate both the basic existing equipment and the newly procured equipment.

Table 2-3-8: Additional Manpower Needed for Bureaus

Bureau	Current TV staff	Additional personnel needed	Breakdown	News Equipment	Reasoning
Wangduephodrang	Reporter: 1	1	Reporter: 1	2 units	One additional reporter is minimally needed to operate the 2 camera units individually so that news can be gathered from a wider area. The Headquarters will continue to provide equipment maintenance services.
Jakar	Producer: 1 Reporter: 1 Cameraman: 1 Engineer: 1	3	Producer: 1 Cameraman: 1 Engineer: 1	3 units	A basic news-gathering team can be established with 2 producers and 1 reporter. For news reports, the reporter, who travels to the site by himself, usually works as a cameraman as well. The transmission engineers will carry out the maintenance works, etc. on the ENC and other equipment to be installed within the BT facilities, including FPU that can be used for live broadcasting, as well as the FM transmission station.
Kanglung	Producer: 2 Reporter: 2 Cameraman: 2 Engineer: 1	3	Producer: 1 Cameraman: 1 Engineer: 1	3 units	Kanglung Regional Center has been dispatching a team of 1 producer and 1 reporter to gather materials for general and news programs. This customary procedure can be enhanced by adding another procurer and a cameraman so that their numbers correspond to the number of the camera units. The transmission engineers will carry out the maintenance works, etc. on the ENC and other equipment to be installed within the BT facilities, including FPU that can be used for live broadcasting, as well as the FM transmission
Phuentsholing	Producer: 1 Reporter: 1 Cameraman: 1	4	Reporter: 1 Producer: 1 Cameraman: 1 Engineer: 1	3 units	Phuentsholing Regional Center usually sends a video package with narration to the Headquarters. Adding one extra reporter to a basic team of 2 producers and 1 reporter, as the one to be established in Jakar, will expedite the narration work. For news reports, the reporter, who travels to the site by himself, usually works as a cameraman as well. The transmission engineer

Bureau	Current TV staff	Additional personnel needed	Breakdown	News Equipment	Reasoning
					will carry out the maintenance works, etc. on the ENC and other equipment to be installed within the BT facilities, including FPU that can be used for live broadcasting, as well as the FM transmission station.
Paro	Reporter: 1	1	Reporter: 1	2 units	One additional reporter is minimally needed to operate the 2 camera units individually so that news can be gathered from a wider area. The Headquarters will continue to provide equipment maintenance services.

Note: Radio producers are not included.

Source: prepared by the Study Team

5) Five Year Recruitment Plan

Table 2-3-9 below summarizes the required manpower, as discussed above, translated into the number of persons to be recruited each year. The recruitment figures were distributed evenly throughout the years to avoid a sudden increase in personnel, which would lead to a significant rise in labor and training costs. Until 2012, when the total requirements will be met, BBSC may experience temporary difficulties in operating all the equipment resources. This, however, could be compensated by continuing the out-sourcing of program production and by adjusting the ratio of reruns. For the Headquarters, exceptionally, the required number of personnel will be recruited at once from the previous year, concurrently with the procurement of the new equipment through the Project.

The Media Resource Center has implemented the management of the library as well as other operations, and it will need exclusive staffs for the management of the videos to use them smoothly.

Table 2-3-9: BBSC's Manpower Requirement for the Next 5 Years

(Unit: persons)

Additional personnel needed		FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total
Production	Producer	4	4	3	3	3	17
	Editor/graphics	2	1	1	-	-	4
News	Reporter	3	3	3	3	3	15
Technical		6	6	6	6	5	29
Bureaus	Reporter	2	1	-	-	-	3
	Producer	2	1	-	-	-	3
	Cameraman	-	3	-	-	-	3
	Transmission	3	-	-	-	-	3
Media Resource Center	Administrator	2	2	-	-	-	4
Total		24	21	13	12	11	81

Source: prepared by the Study Team

6) Training Plan

Shown below are the numbers of training courses necessary to operate and maintain the equipment.

All necessary technical training for engineers will be completed by the time the equipment procurement is finished in 2009. Training courses for other duties will be conducted evenly over a 5-year period.

The personnel and training plans shown in Tables 2-3-9 and 2-3-10 will be reflected in formulating the financial plan (See Table 2-4-5 in the subsequent section).

Table 2-3-10: No. of Training Courses Needed at BBSC for the Implementation of the Project

(Unit: persons)

Training needed for maintenance		FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total
Production	Producer	3	3	3	3	3	15
	Editor	1	-	-	-	-	1
	Graphics	1	1	-	-	-	2
News	Chief editor	2	3	-	-	-	5
	Sub-chief editor	2	2	1	1	1	7
	Reporter	3	3	2	2	2	12
Technical	TD	4	3	-	-	-	7
	Sound/lighting	4	4	-	-	-	8
Bureaus	Reporter	2	1	-	-	-	3
	Producer	1	2	-	-	-	3
		23	22	6	6	6	63

The above training courses are necessary for maintaining and controlling the equipment to be additionally installed.

Programs for improving individual skills are not included.

(2) Financial Plan

The purpose of the financial plan is to work out a viable operation/maintenance plan for the equipment to be procured by the Project by making allowances for anticipated expenses including periodic renewal. The time period of estimation of this financial plan is 10 years from the time of beginning securement of personnel to be required for implementing the Project in FY 2008 to the time of next renewal projected in FY 2019. In formulating the financial plan, such relevant factors as operation/maintenance expenses for other new equipment outside the scope of the Project (capital investment for the new complex, etc.) and the existing equipment, will be taken into account to draft a sustainable plan for the sound operations of BBSC.

In order to secure necessary funds according to the financial plan, BBSC is going to coordinate with the GNH Commission, the Ministry of Finance and other related government agencies.

In formulating the plan, the following four conditions are assumed:

BBSC is going to earn stable cash income to maintain its payment capacity. In other words, the cash income of 8,311,434.31 ngultrum recorded at the end of FY2006 will be maintained throughout the 10-year period.

The ratio of operational income will increase, while lack of funds to cover necessary expenses will be compensated by government subsidies in a stable/flexible manner.

Net assets to total assets ratio will be kept above 90%.

No additional costs or incidental expenses will be incurred.

Table 2-3-11 is the financial plan formulated based on the above assumptions.

Table 2-3-11: Financial Plan

Item		Contents	
Revenue	Sales revenue	MSO	In April 2007, BBSC'S MSO business became an independent enterprise called Druk Media Networks, which continues to carry out its mission to "support BBSC in increasing sales revenues" by dedicating 50% or more of its net profit to BBSC. It is projected that Druk will begin making net profit in 2011.
		TV/radio advertisement	BBSC is actively soliciting TV/radio advertisers with a goal to increase advertisement sales income at an annual rate of 20% from 2007 on. However, since whether or not this goal will be achieved is unknown, the actual record in 2007 will be used as a fixed figure throughout the 10-year period.
	Government subsidy and foreign aid	Government subsidy	It is assumed that the government (Finance Ministry) will provide necessary operational funds in a flexible manner in light of further expansion of BBSC and its social responsibilities.
		Foreign aid	No foreign aid is on the horizon.
Expenditure	Consumables		Past records and future trend in consumer price index will be taken into account.
	Program procurement (out sourcing)		Past records and future trend in consumer price index will be taken into account.
	Labor cost		Additional personnel (81 persons) to be recruited for the Project will be taken into account (existing manpower required manpower)
	Administrative cost (consists of the following 3 items)		Cost for training personnel (63 persons) necessary for carrying out the Project will be taken into account. It is assumed that after the end of the rental free period of Insat (2009), the Ministry of Finance will continue to pay the rental fees.
	· Human resource development		
	· Rental fees for Indian National Satellite System (Insat)		
	· Other (travel expenses, communications, utilities, etc.)		Past records and future trend in consumer price index will be taken into account.
Repair and maintenance		Past records and future trend in consumer price index will be taken into account.	
Operational expenses for the new TV complex.		Server replacement cost of the server transmission system for the first year is covered by the equipment procurement contract as part of 1-year maintenance services. From the second year on, a reserve fund will be created for server replacement, and allowances will be made for other consumable items that need to be replaced annually.	
Depreciation and amortization cost		It is assumed that the GNH Commission will provide necessary funds for the renewal of the equipment.	

(3) Daily inspection

Owing to the recent technical innovations, the reliability and durability of digital equipment with reduced number of components are improving, resulting in less frequent equipment failures. Accordingly, the frequency of inspection is generally decreasing in Japan.

However, in order for BBSC to effectively utilize the equipment on a long-term basis, a minimum inspection procedure for daily and periodic maintenance will need to be established to prevent equipment failures. Table 2-3-12 below shows the points to be inspected daily or periodically and the measuring instruments needed for inspecting the equipment to be procured by the Project.

Table 2-3-12: Inspection Points and Measuring Instruments Needed

Type of inspection	Points to inspect	Measuring instruments
Daily / pre-work Inspection	Visual inspection of meters, failure display, etc. Checking of test video/audio test recording.	Video/sound monitor
	Visual check of connecting parts	Tool kit
Semiannual inspection (characteristic test)	Measuring of video/audio characteristics (frequency characteristics, S/N), distortion, level diagram	Video analyzer, video test signal generator
	Voltages of power source and other critical points	Digital tester

2-4 Project Cost Estimation

2-4-1 Initial Cost Estimate

2-4-1-1 Expenses to be taken by the Japanese Side

The total cost of the Project to be implemented in accordance with the Japan's Grant Aid scheme will be determined before concluding the Exchange of Notes (E/N) for the Project.

2-4-1-2 Expenses to be taken by the Recipient Side

1,133,000 Nu (Approximately 3.26 million yen)

- | | |
|--|---|
| 1) Provide chairs needed for operating the equipment. | 25,000 Nu (Approximately 0.07 million yen) |
| 2) Procure/install satellite receiver equipment, etc. | 600,000 Nu (Approximately 1.73 million yen) |
| 3) Cover the operation cost for OJT and test broadcast during construction of satellite lines. | 300,000 Nu (Approximately 0.86 million yen) |

*Normal cost is included in the operational cost.

- | | |
|---|---|
| 4) Secure space for installing transmission system (including a power supply and air conditioner) | This expense is able to be secured by normal operational cost, and it was confirmed that there was no extra expenditure in the Project. |
|---|---|

- | | |
|---|---|
| 5) Sign contract with BT for renting its facilities, transmission links, etc. | Same as above. |
| 6) Others | 208,000 Nu (Approximately 0.60 million yen) |

2-4-1-3 Estimated Conditions

- 1) Time of estimation: September 2007
- 2) Exchange rate: 1 US\$ = 120.66 JPY
1 Nu = 2.88 JPY
- 3) Implementation and procurement period: The period of detailed design and equipment procurement/installation is shown in the implementation schedule.
- 4) Other: The cost estimation will be implemented in accordance with the Guidelines for Japan's Grant Aid.

2-4-2 Operation and Maintenance Cost

In order for BBSC to sustain sound operations into the future, the equipment procured by the Project will need to be renewed at appropriate intervals. Therefore, the operation/maintenance cost of the Project needs to be estimated based not only on the maintenance cost of the existing/new equipment, but also on the cost of periodic equipment renewal as described in the subsequent section. The O/M cost will be estimated based on the projected financial conditions after FY 2008. Equipment renewal cost will be estimated separately, as, unlike the O/M cost, it will be subsidized by the GNH Commission.

(1) Equipment Cost and Equipment Renewal Cost

The equipment for the Project will be procured on the assumption that an allowance will be made annually for a reserve fund to cover the renewal cost, which is estimated to be 206,817,000 Nu in FY 2016. Capital resources for the reserve fund will come from government subsidy and revenues from MSO sales and advertisement. The calculation method of each equipment-related expense is shown in Table 2-4-1 below.

Table 2-4-1: Calculation Method of Equipment Cost

(Unit: Nu.)

Equipment expenditures	Calculation method	Budget needed (10 th 5-Year Plan)
Depreciation cost	<p>Depreciation cost = remaining value at fiscal year end (purchase value – cumulative depreciation) x depreciation rate</p> <p>BBSC’s depreciation rate (3% for architectures, 15% for equipment) and our company’s standard (7-year service life) are applied.</p> <p>The existing equipment (except for land and buildings) will be amortized over 7 years and renewed at the original purchase value of 240,690,00 Nu in FY 2006. Since 80% of the equipment was depreciated as of FY 2006, the next renewal is estimated to take place in 2009 and every subsequent seven years thereafter.</p>	580,461,296 (Accumulated cost of total income from equipment in each year during 2009 - 2013 in Table 3-4-2. However, as for 2013, the planning period is from January to June, and the amount was to be 50% of the above cost.)
Loss on disposal of equipment	In addition to BBSC’s depreciation rate (15%), our company’s standard (7-year service life) is applied. All equipment items will be fully depreciated after seven years of service life and recorded as loss on disposal.	

The estimations of equipment expenditures are summarized in Table 2-4-2 below.

Table 2-4-2: Estimated Equipment Expenditures and Reserve Fund at BBSC

(Unit: Nu.)

BBSC Capital Cost Projection (2007-2019) & Preparation Cost for Renewing the JICA Equipment

(Fiscal Year)		9th 5-Year Plan		10th 5-Year Plan					11th 5-Year Plan				(12th 5-Year Plan)		
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Project Period		GOI (TV Studio) Japan's Grant Aid (the Project)		Warranty Period											
Capital Income	Existing Capital	1) Renew buildings													
		2) Renew equipments (15%)			240,690,000						240,690,000				
	Newly-Added Capital (GOI)	3) TV studio building	0	103,944,000	0	0	0	0	0	0	0	0	0	0	
		4) TV studio equipment	0	119,800,000	0	0	0	0	0	0	0	0	0	0	
		5) Radio equipment	86,000,000	0	0	0	0	0	0	0	0	0	0	0	
	New Equipment (this Project)	-RGoB funds renewing cost for GOI capitals	0	0	0	0	0	0	0	86,000,000	119,800,000	0	0	0	
		6) JICA Grant-aid equipment provision	0	0	206,817,311	0	0	0	0	0	0	0	0	0	
-Preparation for renewing (to be funded by RGoB)		0	0	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330		
Total		86,000,000	223,744,000	477,052,641	29,545,330	29,545,330	29,545,330	29,545,330	115,545,330	149,345,330	270,235,330	29,545,330	29,545,330	29,545,330	
Depreciation	Existing Capitals	1) Renew buildings (3%)	557,778	541,044	524,813	509,069	493,797	478,983	464,613	450,675	437,155	424,040	411,319	398,979	387,010
		2) Renew equipment (15%)	7,912,288	6,725,445											
		-Renew the equipment (15%, 7yrs)			36,103,500	30,687,975	26,084,779	22,172,062	18,846,253	16,019,315	13,616,418				
	Newly-Added Capital (GOI)	-Renew the equipment (15%, 7yrs)										36,103,500	30,687,975	26,084,779	22,172,062
		3) TV studio building (3%)		3,118,320	3,024,770	2,934,027	2,846,006	2,760,626	2,677,807	2,597,473	2,519,549	2,443,963	2,370,644	2,299,524	2,230,539
		4) TV studio equipment (15%, 7yrs)		17,970,000	15,274,500	12,983,325	11,035,826	9,380,452	7,973,384	6,777,377		17,970,000	15,274,500	12,983,325	11,035,826
	New Equipment (this Project)	-Renew the equipment (15%, 7yrs)													
5) Radio equipment (15%, 7yrs)		12,900,000	10,965,000	9,320,250	7,922,213	6,733,881	5,723,799	4,865,229							
-Renew the equipment (15%, 7yrs)									12,900,000	10,965,000	9,320,250	7,922,213	6,733,881	5,723,799	
New Equipment (this Project)	6) JICA Grant-aid equipment provision			31,022,597	6,733,880	5,723,798	4,865,228	4,135,444	3,515,127	2,987,858					
	-Renew the equipment (15%, 7yrs, RGoB fund)										31,022,597	6,733,880	5,723,798	4,865,228	
Capital Disposal	Loss of Asset		38,110,857					27,569,630	38,405,135	143,460,591					
Total		21,370,066	77,430,666	95,270,430	61,770,489	52,918,087	45,381,150	66,532,360	80,665,102	191,956,570	94,588,849	61,109,355	52,276,787	44,759,089	
Annual Balance		64,629,934	146,313,334	381,782,211	-32,225,159	-23,372,757	-15,835,820	-36,987,030	34,880,228	-42,611,240	175,646,481	-31,564,025	-22,731,457	-15,213,759	
Accumulated Balance		64,629,934	210,943,268	592,725,479	560,500,320	537,127,563	521,291,743	484,304,713	519,184,941	476,573,701	652,220,182	620,656,157	597,924,699	582,710,940	

Necessary Capital Cost for Each 5-Year Plan (incl. JICA Grants)		10th 5-Year Plan: 580,461,296 ngultrum					11th 5-Year Plan: 59,4216,650 ngultrum				
--	--	---	--	--	--	--	---	--	--	--	--

Preparation cost for renewing the equipment in this Project	0	0	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330	29,545,330
Accumulated preparation cost	0	0	29,545,330	59,090,660	88,635,990	118,181,320	147,726,650	177,271,980	206,817,310	236,362,640	265,907,970	295,453,300	324,998,630	

According to BBSC, government subsidies and sales revenues (from MSO and advertisement) will be sufficient to cover the renewal cost 10 years after the initial installment of the equipment.

(2) Calculation of Operation/Maintenance/Administrative Costs

The operation/maintenance/administrative costs (hereinafter collectively referred to as “operational expenditures”) and revenues are estimated based on the conditions described below.

1) Expenditures

The methods of calculating operational expenditures are shown in Table 2-4-3 below.

Table 2-4-3: Calculation Method of Operational Expenditures

(Unit: Nu.)

Operational expenditures	Calculation method	Budget needed (FY 2010)
Consumables	The average expenditure over the past three years (FY 2004 – 2006), as well as the consumer price growth rate (4.99%) for the same period, is applied each year.	3,964,000
Purchasing of programs	The average expenditure over the past three years (FY 2004 – 2006), as well as the consumer price growth rate (4.99%) for the same period, is applied each year.	1,505,000
Labor cost	Labor cost of FY 2006 will be used as a base figure, to which additional cost of newly recruiting 81 employees for the Project is added.	46,288,000
Human resource development	Cost of training (63 times) required for the Project is estimated.	1560,000
MSO-related expense	The actual expense in FY 2006 (1 st year) is applied each year during FY 2007 –2010. After FY 2011, the MSO Project Phase-II will start making net profit, 50% of which will be contributed to BBSC without charging for expenses.	8,423,000
Insat satellite link rental fee	Based on a fixed annual rate.	6,000,000
Other (travel expenses, communications, utilities, etc.)	The average expenditure over the past three years (FY 2004 – 2006), as well as the consumer price growth rate (4.99%) for the same period, is applied each year.	15,618,000
Repair/maintenance cost	The average expenditure over the past three years (FY 2004 – 2006), as well as the consumer price growth rate (4.99%) for the same period, is applied each year.	2,376,000
Spare parts, etc. after the completion of the Project	Purchase cost of VTR heads, studio lighting bulbs, and other spare parts needed on a regular basis. Note: BBSC will begin incurring this cost in FY 2011, as the 1 st year is covered by the manufacturer’s warranty.	3,255,457
Operational expenditures after the completion of	Breakdown of expenses are as follows:	4,248,801 (Actual operation of the new TV

Operational expenditures	Calculation method			Budget needed (FY 2010)
		Base	Multiplier	
complex.				
	Office expense	Past 3-year average	1.5 X	
	Electricity	FY 2006 record	2X	Expansion in office space
	Water supply / sewage	Past 3-year average	2X	Expansion in office space
	Repair cost	VTR heads, studio lighting bulbs, server system maintenance	-	Equipment maintenance
The required budget is estimated by applying the consumer price growth rate of the past three years (4.99%) to the total of the above expenses.				
complex will be assumed beginning in 2009. Therefore, the maintenance cost of 2009 will be for the building facilities only, and the cost of spare parts, etc. of the equipment to be installed in the complex will not incur until 2010.)				

In addition to the above, the operational expenses were estimated by taking into account the following factor, which is expected to raise the expenses within a few years:

- Operational expenses after the completion of the new TV complex (through assistance by the Indian government)

The initial capital is spent on constructing buildings (103,944,000 Nu) and procuring equipment (119,800,000 Nu). After the operation of the partial facilities, which is scheduled to start from July in 2008, an increase in utility charges and various other expenses is expected.

2) Revenue from Government Subsidy

The Bhutanese government has been providing BBSC necessary funds to cover operational expenses in the past, and will certainly continue to subsidize BBSC given its importance in the education of Bhutanese people and the democratization of the country. Therefore, in the table below, the required amount of government subsidy was estimated by applying the following formula:

$$\text{Government subsidy} = \text{ordinary expenditure} - \text{sales revenue} - \text{other revenue}$$

The needed amount of government subsidy was estimated based on the assumption that BBSC will have ample cash flow to pay for necessary expenses by maintaining the cash balance as of the end of FY 2006 or 8,311,434.31 Nu.

3) Sales Revenue

Table 2-4-4 below shows the annual revenues from three different sources, namely, MSO (started in FY 2006), TV/radio advertisement, and other.

Table 2-4-4: Annual Revenue

(Unit: Nu.)

Item	Calculation method	Amount (annual)
MSO	The FY 2006 revenue record is applied each year during FY 2007 – 2010. From FY 2011 to 2013, net profit of the MSO Project Phase-II is taken into account. From FY 2014 on, the estimated profit in FY 2013 is applied uniformly each year (BBSC is projecting that the FY 2013 profit will nearly double by FY 2019 because of the expansion of the fiber optic network, etc. However, since there are so many unpredictable factors, including possible delay in the construction of fiber optic network, we decided to use the FY 2013 figure as a minimum profit).	8,423,000
TV/radio advertisement fee	Average income for the past three years (FY 2004 – 2006).	5,598,162
Other revenue	Average income for the past three years (FY 2004 – 2006).	1,964,095

(3) Result of Estimations

Based on the above calculation methods, we estimated the operational expenditures of BBSC and summarized the result in Table 2-4-5 below. As seen from this table, it is difficult to manage BBSC by spending only operational incomes from MSO Project and TV and radio advertisement. Therefore, the amount of government subsidies shown in this table should be secured every fiscal year.

Also, when the financial plan in Table 2-4-5 is implemented, as shown in the balance sheet in Table 2-4-6, BBSC will be able to maintain the net asset ratio (“total net asset” ÷ “total liabilities and net asset”) at around 95-98% during FY 2007 – 2019, sustaining a sound financial position.

Table 2-4-5: Estimation of BBSC's Operational Expenditures

(Unit: Nu.)

BBSC Budgetary Plan after the Project

(Fiscal Year)			9th Plan		10th Plan					11th Plan				12th Plan	
			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Project Period	GOI (Satellite use)		←		→		←		→		←		→		
	GOI (TV Studio)		←		→		←		→		←		→		
Japan's Grant Aid (the Project)			←		→		←		→		←		→		
					Warranty Period										
Income	Revenue	MSO	8,423,000.00	8,423,000.00	8,423,000.00	8,423,000.00	3,529,433.00	13,598,761.00	20,340,609.00	20,340,609.00	20,340,609.00	20,340,609.00	20,340,609.00	20,340,609.00	
		TV/Radio Ads	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	5,598,162.18	
		Others	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	1,964,095.09	
		Sub-total	15,985,257.27	15,985,257.27	15,985,257.27	15,985,257.27	11,091,690.27	21,161,018.27	27,902,866.27	27,902,866.27	27,902,866.27	27,902,866.27	27,902,866.27	27,902,866.27	
	Grants Received	RGoB subsidy	51,195,648.24	57,846,514.46	67,484,853.13	85,080,016.47	91,940,105.21	84,733,126.53	79,107,093.02	80,707,520.01	82,387,808.31	84,151,942.99	86,004,108.00	87,948,696.04	89,990,319.02
	GOI	6,000,000.00	4,967,742.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	Sub-total	57,195,648.24	62,814,256.46	67,484,853.13	85,080,016.47	91,940,105.21	84,733,126.53	79,107,093.02	80,707,520.01	82,387,808.31	84,151,942.99	86,004,108.00	87,948,696.04	89,990,319.02	
	Others	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	515,303.03	
Operating Income			73,696,208.54	79,314,816.76	83,985,413.43	101,580,576.77	103,547,098.51	106,409,447.83	107,525,262.32	109,125,689.31	110,805,977.61	112,570,112.29	114,422,277.30	116,366,865.34	118,408,488.32
Expenses	Consumption of Materials		3,425,784.98	3,596,731.65	3,776,208.56	3,964,641.37	4,162,476.97	4,370,184.57	4,588,256.78	4,817,210.80	5,057,589.61	5,309,963.34	5,574,930.51	5,853,119.54	6,145,190.20
	Acquisition of Programmes		1,300,539.00	1,365,435.90	1,433,571.15	1,505,106.35	1,580,211.15	1,659,063.69	1,741,850.97	1,828,769.33	1,920,024.92	2,015,834.17	2,116,424.29	2,222,033.86	2,332,913.35
	Employee Cost		38,979,386.22	41,928,484.52	44,621,139.49	46,288,021.14	47,826,681.12	49,237,119.44	49,237,119.44	49,237,119.44	49,237,119.44	49,237,119.44	49,237,119.44	49,237,119.44	49,237,119.44
	Administration Expenses & General Charges (Sum of below 4 items)		27,919,050.00	30,158,598.25	30,797,566.30	30,450,448.36	22,806,831.55	23,625,105.95	24,075,665.38	24,977,641.08	25,924,625.37	26,918,864.17	27,962,715.50	29,058,655.00	30,208,281.88
		1) Training (HRD)	0.00	1,566,096.35	1,498,005.21	408,546.88	408,546.88	408,546.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		2) MSO Related Expenses	8,423,000.00	8,423,000.00	8,423,000.00	8,423,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		3) Insat Use (GOI supports until 2009)	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00	6,000,000.00
		4) Other Adm Expenses (incl. Travel, Transport, Utilities, etc.) Existing Buildings	13,498,050.00	14,169,502.90	14,876,561.09	15,618,901.49	16,398,284.67	17,216,559.08	18,075,665.38	18,977,641.08	19,924,625.37	20,918,864.17	21,962,715.50	23,058,655.00	24,209,281.88
	Repairs & Maintenance		2,053,115.00	2,155,565.44	2,263,128.15	2,376,058.25	2,494,623.56	2,619,105.27	2,749,798.62	2,887,013.58	3,031,075.55	3,182,326.22	3,341,124.30	3,507,846.40	3,682,887.94
	Additional recurrent cost for new TV Center		0.00	0.00	983,799.78	4,248,801.30	4,460,816.49	4,683,411.23	4,917,113.45	5,162,477.41	5,420,085.03	5,690,547.28	5,974,505.58	6,272,633.41	6,585,637.82
	Operational Cost of the Equipment by the Project		0.00	0.00	0.00	0.00	3,255,457.68	3,255,457.68	3,255,457.68	3,255,457.68	3,255,457.68	3,255,457.68	3,255,457.68	3,255,457.68	3,255,457.68
	Satellite-use (KU-Band)		0.00	0.00	0.00	7,200,000.00	9,600,000.00	9,600,000.00	9,600,000.00	9,600,000.00	9,600,000.00	9,600,000.00	9,600,000.00	9,600,000.00	9,600,000.00
	Bhutan Telecom line-use		0.00	0.00	0.00	5,437,500.00	7,250,000.00	7,250,000.00	7,250,000.00	7,250,000.00	7,250,000.00	7,250,000.00	7,250,000.00	7,250,000.00	7,250,000.00
	BGAN		18,333.33	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00	110,000.00
	Operating Expenses			73,696,208.54	79,314,816.76	83,985,413.43	101,580,576.77	103,547,098.51	106,409,447.83	107,525,262.32	109,125,689.31	110,805,977.61	112,570,112.29	114,422,277.30	116,366,865.34
Net Operating Profit / (Loss)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Prior Period Adjustment			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Net Profit / (Loss)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Profit/(Loss) before Taxation			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Provision for Taxation			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Profit/(Loss) after Taxation			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Profit/(Loss) brought forward			-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	
Profit/Loss Balance			-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	-98,425,249.69	
Cash Balance (FY2006 Cash Balance to be Maintained)			8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	8,311,434.31	

Table 2-4-6: BBSC's Asset Estimation (Balance Sheet)

(Unit: Nu.)

BBSC Balance Sheet Projection (2004-2019)

Items	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fixed Assets																
Gross Block	276,708,346	290,323,391	269,832,910	355,832,910	338,887,150	786,394,461	786,394,461	786,394,461	786,394,461	700,394,461	666,594,461	338,887,150	786,394,461	786,394,461	786,394,461	786,394,461
Depreciation	201,201,020	209,627,171	196,668,510	218,038,577	54,779,485	150,049,915	231,455,731	301,063,847	360,631,521	353,222,427	324,337,293	77,498,852	172,087,701	252,832,384	321,799,200	380,744,813
Net Block	75,507,326	80,696,220	73,164,401	137,794,334	284,107,666	636,344,546	554,938,730	485,330,614	425,762,940	347,172,034	342,257,168	261,388,298	614,306,760	533,562,077	464,595,262	405,649,648
Capital Work-in progress	0	1,840,000	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022	22,920,022
Current Asset, Loans, Advances	25,922,909	17,005,225	125,396,507	125,396,507	125,396,507	154,941,837	184,487,168	214,032,498	243,577,828	273,123,158	302,668,488	332,213,819	154,941,837	184,487,168	214,032,498	243,577,828
Total Current Assets	25,922,909	18,845,225	148,316,529	148,316,529	148,316,529	177,861,859	207,407,189	236,952,519	266,497,850	296,043,180	325,588,510	355,133,840	177,861,859	207,407,189	236,952,519	266,497,850
Total Assets	101,430,234	99,541,445	221,480,929	286,110,862	432,424,194	814,206,405	762,345,919	722,283,134	692,260,790	643,215,214	667,845,678	616,522,138	792,168,619	740,969,267	701,547,781	672,147,497
Current liabilities & Provisions	10,535,816	15,991,000	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689	14,483,689
Secured Loan			6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000
Share Capital	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100	130,835,100
Reserve & Surplus	21,143,885	34,272,184	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390	168,487,390
Profit & Loss Account	61,084,566	81,556,840	98,425,250	33,795,317	112,518,015	494,300,226	442,439,740	402,376,955	372,354,611	323,309,035	347,939,499	296,615,960	472,262,440	421,063,088	381,641,603	352,241,319
Total Net Assets	90,894,418	83,550,444	206,997,240	271,627,173	417,940,505	799,722,716	747,862,230	707,799,445	677,777,101	628,731,525	653,361,989	602,038,450	777,684,930	726,485,578	687,064,093	657,663,809
Total liabilities and Net Assets	101,430,234	99,541,445	221,480,929	286,110,863	432,424,195	814,206,406	762,345,920	722,283,135	692,260,790	643,215,215	667,845,679	616,522,139	792,168,620	740,969,268	701,547,782	672,147,498
Net Assets Ratio (%)	89.61	83.94	93.46	94.94	96.65	98.22	98.10	97.99	97.91	97.75	97.83	97.65	98.17	98.05	97.94	97.85

2-5 Points to Note in Implementing the Assistance Project

2-5-1 Tax Exemption

The equipment to be procured by the Project will be exempted from taxation in Bhutan according to the following procedure. In order not to cause delay in the exemption procedure, which could affect the progress of the Project, the following points need to be observed.

< Imported Equipment >

Japanese contractor in charge of equipment procurement will submit to BBSC three copies of the invoice of the imported equipment immediately after their embarkation.

BBSC will fill out three copies of the tax exemption application form.

BBSC will submit three copies each of the above invoice and tax exemption application form to the Department of Revenue and Customs (hereafter DRC) of Bhutan.

DRC will approve the application and send back the approved form to BBSC.

The Japanese contractor will receive the approved tax exemption form from BBSC and submit it to the customs office on the Bhutanese border, which in return will issue a tax exemption permit for the imported equipment.

< Locally Procured Equipment >

Japanese contractor in charge of equipment procurement will submit to BBSC a receipt of the locally procured equipment.

BBSC will submit the above receipt to DRC.

DRC will refund the Bhutan Sales Tax (BST) to the Japanese contractor through BBSC.

2-5-2 Spare Parts Purchase Plan

The equipment for the Project will be supplied with a 1-year manufacturer's warranty. From the second year on after the completion of the Project, the Bhutanese side will need to allocate a budget for purchasing spare parts and consumable items.

CHAPTER 3

PROJECT EVALUATION AND RECOMMENDATIONS

CHAPTER 3

PROJECT EVALUATION AND RECOMMENDATIONS

3-1 Project Effects

Current Situation and Problems	Solutions Provided by the Project (Scope of Japanese Assistance)	Positive Effects and Degree of Improvement
<p>Information disparity BBSC, as the sole public broadcasting corporation in Bhutan, is transmitting information to all of its citizens. However, information on local affairs are currently conveyed by way of videotapes carried by regular bus services, which do not work for transmitting emergency announcements in case of disasters, etc.</p>	<p>This Project will procure the following broadcasting equipment:</p> <ul style="list-style-type: none"> • 4WD SNG OB VAN (1 lot) • Master control room system (1 lot) • Transmission system (1 lot) • News and Production Equipment for Bureaus (1 lot) • Equipment for Continuity Studio (1 lot) • Maintenance Equipment and Tools (1 lot) 	<p>(1) Direct Effects</p> <p>1) Expediting of Local News Report</p> <p>This Project will build a network connecting BBSC's Headquarters and Regional Bureaus, thereby enabling speedy transmission of local news concerning disasters, politics, and other information more closely related to people's lives.</p> <ul style="list-style-type: none"> ➤ Present: Local news is transmitted to the Headquarters two or three days after transmission in local districts due to transportation of the recorded tapes (images) by bus. ➤ After the Project completed: Speedy broadcasting of local news will become possible immediately after transmission in local districts because the recorded images are transmitted from the Regional Bureaus and Headquarters. <p>2) Diversification of Program Contents</p> <p>Provision of an SNG van and terrestrial transmission system will expand the area of live broadcasting, which has been limited to the Thimphu area, and enable the transmission of video images from local communities to the entire country in a timely manner.</p> <ul style="list-style-type: none"> ➤ Outdoor live broadcasting that is conducted once or twice a month will become possible around three to eight times a month. ➤ Local news and other programs are broadcasted two or three times per day, but it will become possible four or five times per day. <p>(2) Indirect Effects</p> <p>The enhanced production efficiency and establishment of the nation's trust for a public broadcasting service, which resulted from timely transmission of local news and the increase of outdoor live broadcasting programs, will increase the number of audience, thereby mitigating information disparities among different regions of the country.</p>

3-2 Recommendations

In order to implement the Project as planned, the Bhutanese side is required to perform the following:

(1) Recruit Sufficient Manpower and Provide Proper Training

In order to produce and provide high-quality programs for the nation, necessary manpower should be recruited and trained systematically to improve their skills to a sufficient degree.

(2) Carry Out the Tasks Undertaken by the Bhutanese Side

- 1) Provide chairs needed for operating the equipment
- 2) Procure and install satellite receiver equipment
- 3) Secure a satellite link and pay associated fees
- 4) Secure space for installing the equipment
- 5) Sign a contract with Bhutan Telecom with respect to leasing facilities, subscribing to transmission links, etc.

(3) Acquire Techniques for Operating the Renewed Equipment

At the time of equipment installation by the Japanese suppliers, have them impart necessary knowledge and operational techniques to the relevant Bhutanese engineers so that they will be able to operate and maintain the equipment on their own and be prepared for future expansion. Make necessary arrangements to enable the engineers to participate in the training program.

(4) Operation and Maintenance

Obtain necessary spare parts and replace old parts at proper intervals in order to prevent equipment failures during broadcast and prolong their service life. It is necessary to cooperate with the suppliers concerning satellite broadcasting and terrestrial broadcasting that are to be procured in the Project, and ensure to manage the operation and maintenance of the network between the Headquarters and the Regional Bureaus.

(5) Maintain the Building

Continue the present maintenance system to preserve the building. Also, provide good-quality power supply and air-conditioning to create an optimum environment for program production and equipment operation.

(6) Increase the Number of Programs and Streamline the Production Cost

Reduce the rate of reruns and provide more up-to-date information for the nation by increasing the

number of new programs. However, an inordinate increase of new programs would raise production cost, leading to financial crunch. Therefore, in planning and making new programs, efficient approaches should be taken to minimize the production cost by inviting participation by ordinary citizens and using volunteers, student-trainees (interns), etc.

3-3 Validity of the Project

Shown below are the results of our verification of the validity of the Project. We have concluded that it is appropriate to implement the Project as Grant Aid of the Government of Japan.

(1) Basic Policies of the Bhutanese Government for the Transmission of Information

Since the late 1990s, the Bhutanese government has been using a unique development concept called “Gross National Happiness (GNH)” as the guiding principle toward accomplishing the national development objectives of: 1) human resource development, 2) preservation of cultural heritage, 3) balanced, equitable development, 4) good governance, and 5) preservation of the environment.

As part of the Ninth Five Year Plan, BBSC, with a goal to “contribute to the provision of accurate information and the improvement of education for the general public,” is endeavoring to produce and broadcast programs that convey information from different parts of the country to the entire county. BBSC’s broadcasting services are recognized as an important educational tool in implementing the governmental programs in the health and educational sectors and vocational training.

(2) Improvement of Program Quality

Establishment of a network that connects the Headquarters and Regional Bureaus through the Project will enable timely broadcasting of news and cultural events not only from the metropolitan area but also from the local communities to the nation. Enhancement of the MCR and other functions of the Headquarters will enable more stabilized broadcasting and give BBSC an expanded capacity to handle emergency reports. BBSC will become able to make greater contribution to the improvement of Bhutanese people’s livelihood through timely provision of a wider range of information.

(3) Ability to Maintain and Control the Equipment

BBSC has been independently maintaining and managing their own existing equipment (analog type), and necessary techniques have been transferred to their staff through Japanese technical cooperation projects. Therefore, by maintaining the current system, they will likely be able to adequately maintain the renewed equipment after the implementation of the Project. Also, BBSC has been funded by governmental subsidies and operational income, which will be sufficient to cover the maintenance cost.

(4) Environmental Impact

The equipment to be procured by the Project will be replacing BBSC's existing equipment mostly in the Master Control Room. Removed equipment will be used on a temporary basis during the system changeover, and then put to use in production studios and other areas, thus creating no negative impact on the environment.

3-4 Conclusion

This Project is expected to bring about significant benefits as stated above, as well as to facilitate the implementation of Bhutan's national development plans and mitigate information disparities among its people, which will lead to the improvement of their living conditions. Therefore, it is deemed appropriate to implement the Project as Grant Aid of the Japanese government. In addition, the recipient country is deemed to be capable of allocating sufficient human and financial resources to the operation and maintenance of the Project. However, to ensure smooth, efficient implementation of the Project, the recipient side is advised to carry out the following:

Relocate the existing equipment and set up a temporary broadcasting station to use during the installation/construction phase prior to the delivery of the new equipment as part of the undertakings of the Bhutanese side.

Continue with the current maintenance/control system and ensure that necessary equipment inspections and repair works will be carried out.

Transfer the techniques for operating broadcasting equipment, replacing spare parts, etc. to the engineers of the broadcasting sector in Bhutan.

APPENDIX 1

MEMBER LIST OF THE STUDY TEAM

APPENDIX 1 MEMBER LIST OF THE STUDY TEAM

< Basic Design Study Team >

Name	Work Assignment	Position
Toshiyuki IWAMA	Team Leader	Team Director ICT and Governance Team, First Group, Grant Aid Management Dept., JICA
Yasumichi ARAKI	Project Coordinator	Senior Project Administration Officer, ICT and Governance Team, First Group, Grant Aid Management Dept., JICA
Kiyofusa TANAKA	Project Manager/ TV Broadcasting Planning	Yachiyo Engineering Co., Ltd.
Masuo WADA	Broadcasting Equipment/ Operation & Maintenance Planning	“
Naoaki NAMBU	Transmitting Equipment/ Operation & Maintenance Planning/ Operational Structure	“
Shinichi MURATA	Financial Analysis	“
Tatsuya KOBAYASHI	Procurement Planning/ Cost Estimation	“

< Explanation of Draft Final Report >

Name	Assigned Work	Position
Yumiko ASAKUMA	Team Leader	Deputy Resident Representative, JICA India Office
Yasumichi ARAKI	Project Coordinator	Senior Project Administration Officer, ICT and Governance Team, First Group, Grant Aid Management Dept., JICA
Kiyofusa TANAKA	Project Manager/ TV Broadcasting Planning	Yachiyo Engineering Co., Ltd.
Masuo WADA	Broadcasting Equipment/ Operation & Maintenance Planning	“

APPENDIX 2

STUDY SCHEDULE

APPENDIX 2 STUDY SCHEDULE

(1) Basic Design Study

No.	Date		Contents of the Study					Stay at	
			JICA	Consultant Team					
				Project Manager/ TV Broadcasting Planning	Transmitting Equipment/ Operation & Maintenance Planning/ Operational Structure	Broadcasting Equipment/ Operation & Maintenance Planning	Procurement Planning/ Cost Estimation		Financial Analysis
			Toshiyuki Iwama/ Yasumichi Araki	Kiyofusa Tanaka	Naoaki Nambu	Masuo Wada	Tatsuya Kobayashi	Shinichi Murata	
1	28 Aug.	Tue		Trip [Tokyo (10:30) JL717 → Bangkok (15:05)]					Bangkok
2	29 Aug.	Wed		Trip [Bangkok (05:50) KB121 → Paro (09:10) → Thimphu (12:00)] <ul style="list-style-type: none"> • Courtesy call to JICA Bhutan Office with explanations of study schedule, etc. • Courtesy call to Bhutan Broadcasting Services Corporation (BBSC) with explanations of study schedule, Inception Report, etc. 					Thimphu
3	30 Aug.	Thu		<ul style="list-style-type: none"> • Courtesy call to Ministry of Information & Communication • Courtesy call to Planning Commission of Bhutan • Survey at BBSC's existing facilities • Courtesy call to Bhutan Telecom (BT) • Meeting with local construction and transportation companies for quotations 					Thimphu
4	31 Aug.	Fri		Trip [Thimphu (07:00) → Wangduephodrang (09:00)] <ul style="list-style-type: none"> • Survey at BBSC Wangduephodrang Bureau • Survey at BT Wangduephodrang Bureau 			<ul style="list-style-type: none"> • Study of BBSC's financial status • Study of the Government's financial status 	Trongsa Thimphu (Murata)	
5	01 Sep.	Sat		Trip [Trongsa (08:00) → Jakar (10:00)] <ul style="list-style-type: none"> • Survey at BBSC Jakar Regional Center • Survey at BT Bumthang Bureau 			• Data sorting	Jakar Thimphu (Murata)	
6	02 Sep.	Sun		Trip [Jakar (07:30) → Trashigang (17:00)]			• Ditto	Trashigang Thimphu (Murata)	
7	03 Sep.	Mon		<ul style="list-style-type: none"> • Survey at BBSC Kanglung Regional Center • Survey at BT Trashigang Bureau 			<ul style="list-style-type: none"> • Study of BBSC's financial status • Visit to DANIDA 	Trashigang Thimphu (Murata)	
8	04 Sep.	Tue		Team A Trip [Kanglung (08:00) → Mongar (11:00)] <ul style="list-style-type: none"> • Survey at BBSC Mongar Bureau • Survey at BT Mongar Bureau 	Team B Trip [Trashignag (08:00) → Samdrup Jongkhar (15:30)] <ul style="list-style-type: none"> • Survey at BBSC Samdrup Jongkhar Bureau • Survey at BT Samdrup Jongkhar Bureau 	<ul style="list-style-type: none"> • Study of BBSC's financial status • Study of Tariffs of Bhutan Telecom and INSAT 	A: Mongar B: Samdrup Jongkhar Thimphu (Murata)		
9	05 Sep.	Wed		Trip [Mongar (08:00) → Jakar (14:00)]	Trip [Samdrup Jongkhar (08:00) → Mongar (18:00)]	• Ditto	A: Jakar B: Mongar Thimphu (Murata)		
10	06 Sep.	Thu		Trip [Jakar (08:00) → Thimphu (16:30)]	Trip [Mongar (09:00) → Jakar (18:00)]	• Collection and Analysis of Answers to Questions of financial status	A and Murata: Thimphu B: Jakar		
11	07 Sep.	Fri		Trip [Thimphu (07:00) → Gelephu, cancelled due to a road condition] <ul style="list-style-type: none"> • Data sorting 	Trip [Thimphu (07:00) → Paro (09:00)] <ul style="list-style-type: none"> • Survey at BBSC Paro Bureau • Survey at BT Paro Bureau 	Trip [Jakar (09:00) → Wangduephodrang (18:30)]	<ul style="list-style-type: none"> • Meeting with BBSC on his financial status 	A: Paro B: Wangdue Phodrang Thimphu (Tanaka and Murata)	
12	08 Sep.	Sat		<ul style="list-style-type: none"> • Data sorting • Internal meeting 	Trip [Paro (07:00) → Phuentsholing (16:00)] <ul style="list-style-type: none"> • Survey at BBSC Phuentsholing Regional Center • Survey at BT Phuentsholing Bureau 	Trip [Wangduephodrang (09:00) → Thimphu (12:00)] <ul style="list-style-type: none"> • Data sorting • Internal meeting 	<ul style="list-style-type: none"> • Data sorting • Preparation of financial report 	A: Phuentsholing Thimphu (Tanaka, Wada, Kobayashi and Murata)	
13	09 Sep.	Sun	Trip [Tokyo (10:50) →	<ul style="list-style-type: none"> • Data sorting • Internal 	Trip [Phuentsholing	<ul style="list-style-type: none"> • Data sorting • Internal meeting 	Thimphu		

No.	Date	Contents of the Study					Stay at
		JICA	Consultant Team				
			Project Manager/ TV Broadcasting Planning	Transmitting Equipment/ Operation & Maintenance Planning/ Operational Structure	Broadcasting Equipment/ Operation & Maintenance Planning	Procurement Planning/ Cost Estimation	
Toshiyuki Iwama/ Yasumichi Araki	Kiyofusa Tanaka	Naoaki Nambu	Masuo Wada	Tatsuya Kobayashi	Shinichi Murata		
			Bangkok (15:25]	meeting	(09:00) → Thimphu (17:00] • Internal meeting		
14	10 Sep.	Mon	Trip [Bangkok (05:50) KB121 → Paro (09:10)] • Meeting at JICA Bhutan Office	• Technical meeting with BBSC • Meeting at JICA Bhutan Office		• Social condition and Market surveys	Thimphu
15	11 Sep.	Tue	• Courtesy call to BBSC with discussion • Courtesy call to Planning Commission	• Meeting with BBSC • Survey at BBSC's existing studio and other facilities • Study on Equipment Specifications		• Preparation of financial report	Thimphu
16	12 Sep.	Wed	• Courtesy call to Ministry of Information & Communication • Discussion with BBSC on M/D	• Meeting with BBSC on M/D • Survey at BBSC's existing studio and other facilities • Study on Equipment Specifications		• Preparation of financial report	Thimphu
17	13 Sep.	Thu	• Discussion with BBSC on M/D	• Discussion with BBSC on M/D • Study on Equipment Specifications		• Preparation of financial report Trip [Thimphu (15:00) → Paro (18:00)]	Thimphu Paro (Murata)
18	14 Sep.	Fri	• Signing on M/D with BBSC • Report to JICA Bhutan Office	• Signing on M/D with BBSC • Study on Equipment Specifications		Trip [Paro (10:00) KB124 → Bangkok (15:20)] Trip [Bangkok (22:25) JL718 → In flight]	Thimphu
19	15 Sep.	Sat	Trip [Thimphu → Paro] Iwama: Trip [Paro (10:00) KB124 → Bangkok (15:20)] Trip [Bangkok (22:25) → In flight]	• Data sorting • Internal meeting		Arrival at Tokyo (06:30)	Paro (JICA) Thimphu
20	16 Sep.	Sun	Iwama: Arrival at Tokyo (08:05) Araki: Trip [Paro (10:00) KB204 → Delhi (12:00)]	• Ditto			Delhi (JICA) Thimphu
21	17 Sep. (National Holiday)	Mon	Araki: • Meeting at JICA India Office • Report to Embassy of Japan in India Trip [Delhi (23:30) TG316→ In flight]	• Ditto			Thimphu
22	18 Sep.	Tue	Araki: Arrival at Bangkok (05:05) Trip [Bangkok (08:15) → Tokyo (16:20)]	• Survey at BT HQ • Financial meeting with BBSC	• Preparation of Equipment Specifications and Drawings	• Market surveys • Preparation of Equipment Specifications and Drawings	Thimphu
23	19 Sep.	Wed		• Technical meeting with BBSC	• Technical meeting with BBSC • Preparation of	• Market surveys • Meeting with Ministry of	Thimphu

No.	Date		Contents of the Study					Stay at
			JICA	Consultant Team				
				Project Manager/ TV Broadcasting Planning	Transmitting Equipment/ Operation & Maintenance Planning/ Operational Structure	Broadcasting Equipment/ Operation & Maintenance Planning	Procurement Planning/ Cost Estimation	
Toshiyuki Iwama/ Yasumichi Araki	Kiyofusa Tanaka	Naoaki Nambu	Masuo Wada	Tatsuya Kobayashi	Shinichi Murata			
					Equipment Specifications and Drawings	Finance on Tax Exemption • Preparation of Equipment Specifications and Drawings		
24	20 Sep.	Thu		<ul style="list-style-type: none"> Financial meeting with BBSC Meeting with BBSC on Field Report 			Thimphu	
25	21 Sep.	Fri		<ul style="list-style-type: none"> Site Inspection of BBSC's Live Broadcasting Data sorting Internal meeting 			Thimphu	
26	22 Sep.	Sat		<ul style="list-style-type: none"> Ditto 			Thimphu	
27	23 Sep.	Sun		<ul style="list-style-type: none"> Data sorting Internal meeting 			Thimphu	
28	24 Sep.	Mon		<ul style="list-style-type: none"> Discussion with BBSC on Field Report Meeting with BT HQ 			Thimphu	
29	25 Sep.	Tue		<ul style="list-style-type: none"> Discussion with BBSC on Field Report and obtaining the approval 			Thimphu	
30	26 Sep.	Wed		<ul style="list-style-type: none"> Report to JICA Bhutan Office Trip [Thimphu (15:00) → Paro (18:00)]			Paro	
31	27 Sep.	Thu		Trip [Paro (10:30) KB206 → Delhi (13:10)] <ul style="list-style-type: none"> Report to Embassy of Japan in India Market surveys 			Delhi	
32	28 Sep.	Fri		<ul style="list-style-type: none"> Market surveys Trip [Delhi (21:40) JL472 → In flight]				
33	29 Sep.	Sat		Arrival at Tokyo (09:25)				

(2) Explanation of Draft Final Report

No.	Date		Contents of the Study				Stay at
			JICA		Consultant Team		
			Yumiko Asakuma	Yasumichi Araki	Kiyofusa Tanaka	Masuo Wada	
1	29 Jan. 08	Tue			Trip [Tokyo (10:55) JL744 → Bangkok (16:00)]		Bangkok
2	30 Jan.	Wed			Trip [Bangkok (06:50) KB125 → Paro (10:20)] Trip [Paro (12:00) → Phuentsholing (12:00)]		Phuentsholing
3	31 Jan.	Thu	Trip [Delhi (09:00) KB205 → Paro (13:05)]			• Survey at BBSC Phuentsholing Regional Center Trip [Phuentsholing (11:00) → Thimphu (18:00)]	Paro (Asakuma) Thimphu (Tanaka, Wada)
4	01 Feb.	Fri	• Visit to sites of other ODA Projects			• Survey at BBSC	Thimphu
5	02 Feb.	Sat	• Ditto			• Ditto	Thimphu
6	03 Feb.	Sun	• Ditto	Trip [Tokyo (10:55) JL744 → Bangkok (16:00)]		• Data sorting • Internal meeting	Thimphu
7	04 Feb.	Mon	• Courtesy call to Gross National Happiness Commission (GNH Commission) • Explanation of Draft Final Report to BBSC • Courtesy call to BT • Internal meeting	Trip [Bangkok (06:50) KB125 → Paro (10:20)]		• Courtesy calls to GNH Commission	Thimphu
8	05 Feb.	Tue	• Discussion on Draft Final Report with BBSC				Thimphu
9	06 Feb.	Wed	• Signing on M/D with BBSC				Thimphu
10	07 Feb.	Thu	• Report to JICA Bhutan Office • Survey at BBSC Transmitting Station Trip [Thimphu → Paro]			• Report to JICA Bhutan Office • Survey at BBSC Transmitting Station	Paro (Asakuma, Araki) Thimphu (Tanaka, Wada)
11	08 Feb.	Fri	Trip [Paro (13:05) KB206 → Delhi (17:00)] • Report to Embassy of Japan in India	Trip [Paro (13:45) KB128 → Bangkok (15:00)] Trip [Bangkok (23:30) JL704 → In flight]		Trip [Thimphu (08:00) → Paro (09:30)] Trip [Paro (13:05) KB206 → Delhi (17:00)] • Report to Embassy of Japan in India	Delhi
12	09 Feb.	Sat		Arrival at Tokyo (07:15)		• Internal meeting • Data sorting	Delhi
13	10 Feb.	Sun				• Ditto	Delhi
14	11 Feb.	Mon				• Technical meeting with an Indian consulting company Trip [Delhi (19:50) JL472 → In flight]	
15	12 Feb.	Tue				Arrival at Tokyo (06:45)	

APPENDIX 3

LIST OF PARTIES CONCERNED IN THE RECIPIENT COUNTRY

APPENDIX 3

LIST OF PARTIES CONCERNED IN THE RECIPIENT COUNTRY

<u>Organization and Name</u>	<u>Job Title</u>
Gross National Happiness Commission (former Planning Commission)	
Mr. Thinley Namgyel	Chief Planning Officer
Mr. Phuntsho Wanggel	Planning Officer
Ms. Leki Wangmo	Planning Officer
Mr. Sonam Chokey	Assistant Planning Officer
Mr. Namgyel Wang Chunk	Deputy Chief Program Officer
Ministry of Information & Communications	
Mr. Kezang	Chief Planning Officer
Ms. Yeshy	Planning Officer
Ministry of Finance	
Mr. Kinzang	Commissioner, Department of Revenue and Customs
Mr. Lekzang Dorji	Chief Budget Officer, Budget Division Department of National Budget
Ministry of Trade and Industry	
Mr. Tashi Dorjee	Executive Engineer, Hydropower Planning
Ministry of Health	
Mr. Leki Dorji	Officer, Audio Visual Section
Mr. Sonem Wangchuk	Officer, Communication Technology Section
Ministry of Education	
Mr. Sangay Wangdi	ICT Officer, Education Media Section
National Statistics Bureau	
Mr Cheku Dorji	Statistical Officer
Bhutan Broadcasting Service Corporation (BBSC)	
Ms. Pema Choden	Managing Director
Mr. Rajesh Kafley	Officiating Chief Engineer
Mr. Tashi Dorji	General Manager, TV
Mr. Kesang	General Manager, Radio
Mr. Kinley Dorji	General Manager, HRAD
Mr. Ashok Moktan	General Manager, Financial & Commercial
Mr. Tshewang Rinzin	Financial Manager

Mr. Panchaman Rai	Head, Radio & TV Studio
Mr. Sherub Tharchen	TV Studio Engineer, Technical Department
Ms. Sangay Choden	Assistant Planning Officer
Ms. Tshelthrim Dukar	Human Resource Development Officer
Mr. Nyema Zam,	MSO Coordinator
Mr. Thinley Dorji	Junior Engineer
Mr. Shacha Wangdi	Senior Technician

BBSC Jakar Regional Center

Mr. Wangchuk Tobgyal	Producer
Mr. Rinzin Dukpa	Cameraman/Program Editor
Mr. Yonten	Technician

BBSC Kanglung Regional Center

Mr. Jigme Lhundrup	Producer
Mr. Tenzin Namgyel	Reporter
Mr. Ugyen Wangchuk	Cameraman
Mr. Sonam Zangpo	Cameraman

BBSC Phuentsholing Regional Center

Mr. Karma Dorji	Bureau Head
Mr. Phuntsho Choden	Producer
Mr. Tenzin Wangda	Reporter
Mr. Kunzang Lhundrup	Cameraman

BBSC Wangduephodrang Bureau

Mr. Kinzang Thinley	Producer/Cameraman
---------------------	--------------------

BBSC Mongar Bureau

Mr. Kinzang Thinley	Producer/Cameraman
Mr. Tshering Jamtsho	Cameraman/Video Editor

BBSC Samdrup Jongkhar Bureau

Mr. Pema Samdrup	Reporter/Cameraman
------------------	--------------------

BBSC Paro Bureau

Mr. Wangchuk	Reporter/Producer
--------------	-------------------

Bhutan Telecom Ltd.

Mr. Thinley Dorji	Managing Director
Mr. P. M. Pradhan	General Manager, Operations
Mr. Karma Chewang	General Manager, D&CAD
Mr. Ugyen Chopel	Manager, Transmission

Mr. Sonam Rinchen	Planning Engineer (D & CAD)
Bhutan Telecom Ltd. Bumthang	
Mr. Sonam Chopel	Lineman
Bhutan Telecom Ltd. Trashigang	
Mr. Sangay Norbu	Area Manager
Bhutan Telecom Ltd. Phuentsholing	
Mr. Tashi Chewang	Area Manager
Mr. Krishna Chhetri	Technician
Bhutan Telecom Ltd. Kanglung	
Mr. Tashi Phuntsho	Engineer
Bhutan Telecom Ltd. Wangduephodrang	
Mr. Rinzin Dorji	Area Manager
Mr. Namgyal Wangchuk	Engineer
Bhutan Telecom Ltd. Mongar	
Mr. Santi	Manager
Mr. Pemba Sherpa	Engineer
Bhutan Telecom Ltd. Samdrup Jongkhar	
Mr. Karma Sherub	Area Manager
Bhutan Telecom Ltd. Paro	
Mr. Kencho Namgyel	Area Manager
Mr. Sonam	Engineer
Bhutan Telecom Ltd. Trongsa	
Mr. Ugyen	Engineer
Bhutan Power Corporation Ltd.	
Mr. Jai Dev Sharma	General Manager, Engineer & Design Division
Road Safety & Transport Authority	
Mr. Dopfu Dukpa	Regional Transport Officer
Mr. Yeshi Dorji	ICT Officer
Danish International Development Agency (DANIDA)	
Ms. Karma Doma	Project Coordinator
Embassy of Japan in India	
Mr. Hisashi Sakata	First Secretary
JICA Bhutan Office	

Mr. Tetsuo Yabe	Resident Representative
Ms. Mayumi Miyata	Project Formulation Advisor
Mr. Hajime Kikumura	Expert (Broadcast Engineer)
Mr. Kenzo Muroi	Expert (Broadcast Engineer)
Mr. Satoshi Ogata	Expert (Broadcast Program Director)
Mr. Jyunji Matsuoka	Expert (Broadcast Engineer)

APPENDIX 4

MINUTES OF DISCUSSIONS (MD)

APPENDIX 4 MINUTES OF DISCUSSIONS (MD)

Minutes of Discussions

on the Basic Design Study on the Project for Strengthening of Bhutan Broadcasting Service Corporation (BBSC) Program Production and Improving Local Contents and Participation from the Rural Area in The Kingdom of Bhutan

Based on the results of the Preliminary Study, the Government of Japan decided to conduct a Basic Design Study on "The Project for Strengthening of Bhutan Broadcasting Service Corporation (BBSC) Program Production and Improving Local Contents and Participation from the Rural Area" (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the RGOB the Basic Design Study Team (hereinafter referred to as "the Team"), headed by Mr. Toshiyuki IWAMA, Team Director, ICT and Governance Team, Project Management Group 1, Grant Aid Management Department, JICA, and is scheduled to stay in the country from August 29 to September 27, 2007.

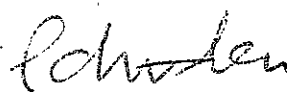
The Team held discussions with the officials concerned of the RGOB and conducted the field survey at the study areas.

In the course of the discussions and field 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.

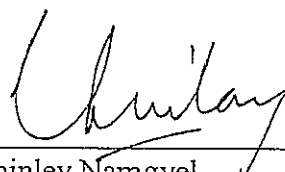
Thimphu, September 14, 2007



Toshiyuki IWAMA
Leader
Basic Design Study Team
Japan International Cooperation Agency



Pema CHODEN
Managing Director
Bhutan Broadcasting Service Corporation
Kingdom of Bhutan



Thinley Namgyel
Head, Development Cooperation Division
Planning Commission
Kingdom of Bhutan

ATTACHMENT

1. Objective of the Project

The objective of the Project is to enhance the capacity of BBSC for producing local news/information/contents at the provincial level, transmit them within a reasonable time to BBSC Head Quarter and also strengthen the programme production capacity at the BBSC Head Quarter.

2. Project Site

The Project sites are Thimphu, Kanglung, Jakar, Phuentsholing, Wangdue-Phodrang and Paro shown in Annex-1.

3. Responsible and Implementing Organization

The responsible and implementing organization is BBSC. The organization chart is shown in Annex-2.

4. Items requested by the RGOB

The Team explained that the Project focuses on enhancing the role of the national public broadcasting by active participation from all corners of the country. This idea was raised and discussed during the Preliminary Study and through the field survey to recommended project sites in particular, which was conducted in January to February 2007. The Team also suggests optimizing the equipment from the viewpoint of technical and financial viability, sustainability and cost-effectiveness. After discussions with the Team, the equipment described in Annex-3 (hereinafter referred to as "the Equipment") which is the finalized list of items, were confirmed as the request from the RGOB. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

5. Japan's Grant Aid Scheme

The RGOB side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the RGOB as explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions on the Preliminary Study signed by both parties on February 6, 2007.

6. Schedule of the Study

6-1 The consultants will proceed to further study in the Bhutan until September 27, 2007.

6-2 JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around the end of January, 2008.

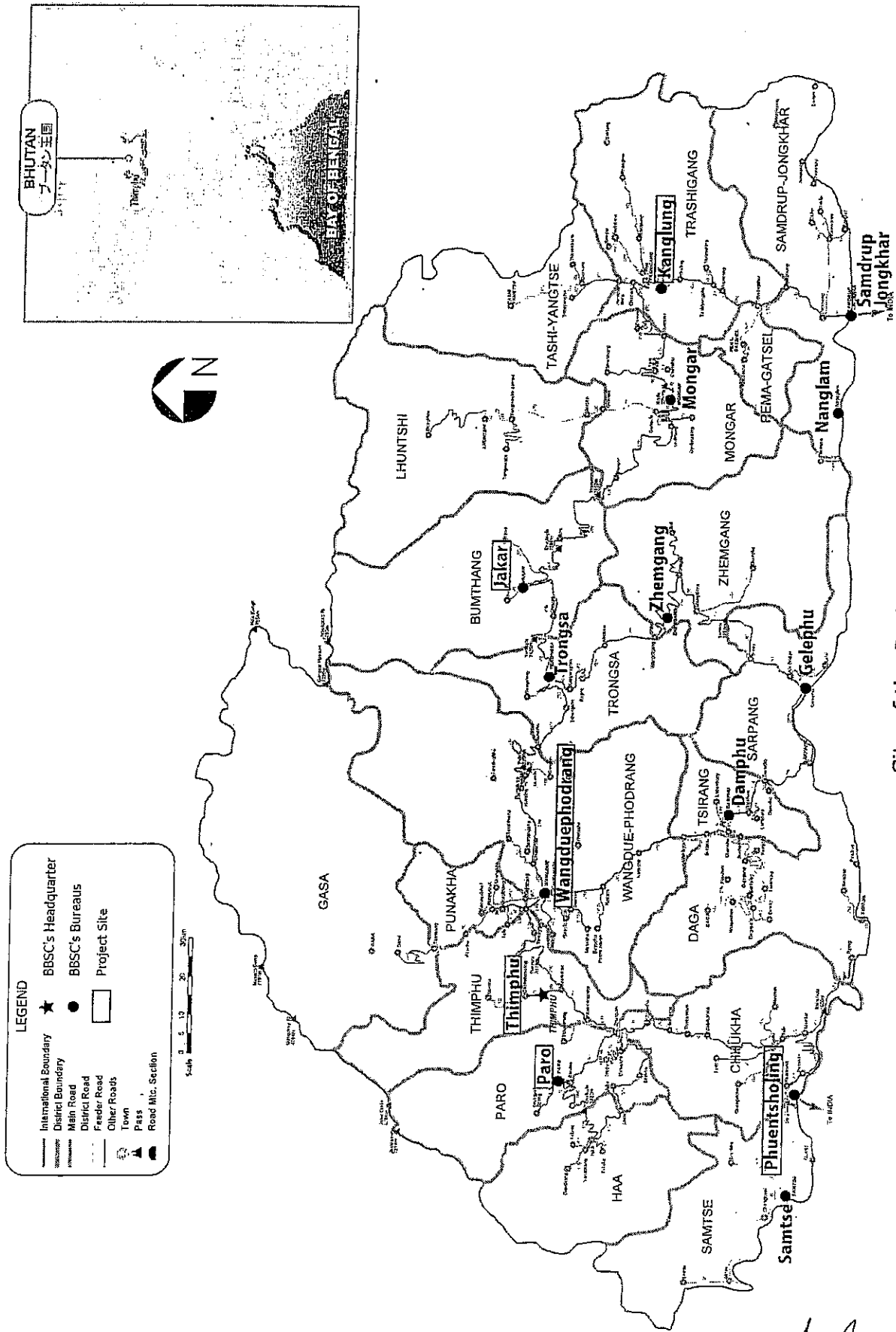
6-3 In case that the contents of the report is accepted in principle by the RGOB, JICA will complete the final report and send it to the RGOB by the end of May, 2008.

7. Other Relevant Issues

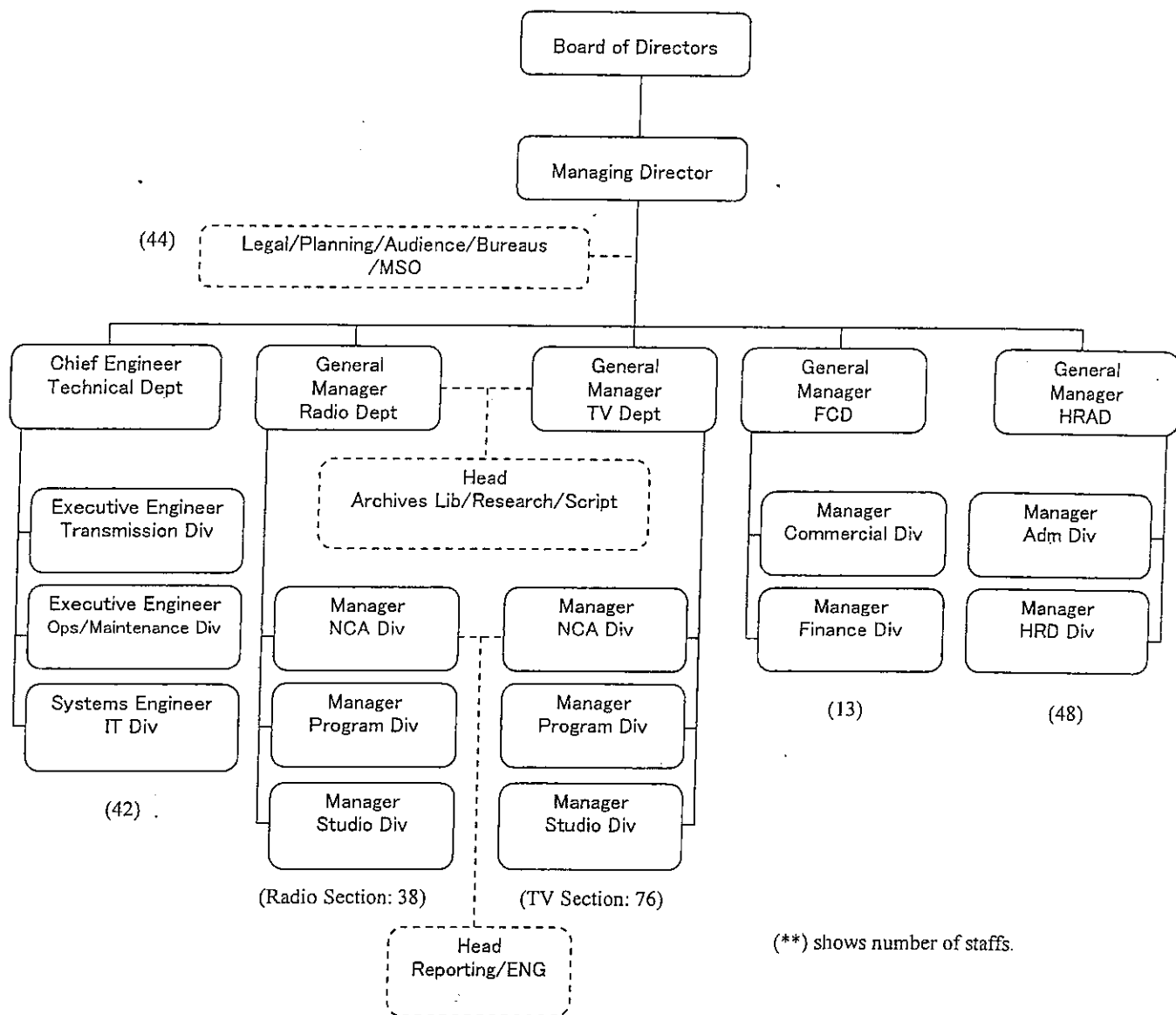
- 7-1 The RGOB will allocate sufficient budget and qualified staff to properly and effectively operate and maintain the Equipment. The necessary staff and budget will be reported by the consultants after analyzing work based on BBSC's reports and plans. It will be a prerequisite for the Project to be implemented that RGOB shall guarantee the staff and budget allocation. The RGOB shall confirm to secure them by the time of draft final report explanation in January 2008.
- 7-2 The BBSC expressed that the RGOB could utilize the C-band and Ku-band of the INSAT for the live broadcasting by the arrangement between Bhutan and India shown in Annex 6.
- 7-3 The BBSC shall make an arrangement with the Bhutan Telecom to utilize the facilities of the Bhutan Telecom's local bureaus to enable the use of BBSC encoder/decoder systems by the end of December 2007.
- 7-4 In case that existing BBSC's equipment are required to use with the Equipment under the Project, the BBSC shall shift those existing equipment to proper locations.
- 7-5 The RGOB indicated, in Annex 7, the detailed procure of exempting customs duties, internal taxes and other fiscal levies which may be imposed in Bhutan with respect to the supply of the products and services for the Project.
- 7-6 The RGOB shall ensure prompt reimbursement of sales tax and any other tax/levies concerning local procurement of goods and services under the Project by a Japanese supplier, provided all necessary documents are submitted by him.
- 7-7 The BBSC shall facilitate a routing permit for inland transportations of the Equipment (if necessary) and trips of the Japanese personnels during the implementation of the Project.
- 7-8 The RGOB shall stick national flag of Japan and/or ODA symbol mark sticker on all the Equipment procured by the Japanese Grant Aid.
- 7-9 The RGOB shall submit answers of the questionnaire given by the Team before 24th September 2007.

(End)

Annex – 1	Site of the Project
Annex – 2	Organization Charts
Annex – 3	Requested Equipment List
Annex – 4	Japan's Grant Aid Scheme
Annex – 5	Major undertakings to be taken by each Government
Annex – 6	INSAT capacity for DSNG applications – quotation
Annex – 7	Procedures for Tax Exemption



Site of the Project



(**) shows number of staffs.

Organization Chart of BBSC

Handwritten signature and initials

Requested Project Component

	Requested Equipment	Q'ty	Purpose	Priority
1.	Driveaway SNG System [Location] Thimphu	1 set	This is a 4WD SNG car mounted with two cameras and other equipment needed for gathering TV news contents in order to broadcast news footage and short news programs live from outside of Thimphu via satellite connection. A 4WD SNG car is smaller and lighter than an OB van, and therefore can be used on mountain paths, etc. (Receiving system at BBSC in Thimphu shall be provided by BBSC.)	A
2.	Transmission System		Encoders and Decoders are necessary for transmitting and receiving news and other program footage between the BBSC HQ in Thimphu and its local bureaus via E1 layers of Bhutan Telecom's line. Subject to the confirmed arrangement between BBSC and the Bhutan Telecom, BBSC requests to upgrade to Priority A.	B
(1)	TX Equipment [Location] Jakar, Kanglung, Phuentsholing, Wangduephodrang, Paro	5 sets		
(2)	RX Equipment [Location] Thimphu	1 set		
3.	Master Control System		The requested equipment is to be added to the existing two studios and existing peripheral equipment in the BBSC HQ in Thimphu in order to upgrade the functions of the core facilities. The existing equipment in the Master Control Room was also provided by a Japan's technical cooperation, but is not satisfactory for providing the core functions of the existing facilities. Therefore, in addition to the existing equipment provided under the said Japan's technical cooperation in the past, this requested equipment will be added so as to provide the core functions, including assignment and control of signal input and output and distribution and feed of basic TV signals, of the existing two studios, new two studios and existing peripheral equipment.	A
(1)	Master Control System [Location] Thimphu	1 set		
(2)	Equipment for Continuity Studio [Location] Thimphu	1 set	Continuity studio will be attached to the Master Control Room. BBSC will provide the existing equipment and the Grant Aid Project will provide only equipment necessary to supplement to the existing equipment. The installation of the equipment to be provided under the Grant Aid Project shall be done by BBSC.	B
4.	News and Production Equipment for Bureaus [Location] Jakar*, Phuentsholing*, Kanglung* (* include FPU) Wangduephodrang, Paro	5 sets	The requested equipment is to be provided to reinforce the program production capacities of the local bureaus. Identified as necessary during the field survey.	A for 3 sets B for 2 sets
5.	Measuring Equipment [Location] Thimphu	1 set	The requested equipment includes measuring instruments and tools that are indispensable for construction and maintenance of the TV transmitting, studio, and satellite receiving facilities. Only Video Analyzer will be provided.	A

[Priority]

A: Top prioritized equipment

B: Second prioritized equipment

JAPAN'S GRANT AID SCHEME

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

(1) Grant Aid Procedures

1) Japan's Grant Aid Scheme 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 the Cabinet of Japan)
- Determination of Implementation (The Notes exchanged between the Governments of Japan and the recipient country)
- Implementation (Implementation of the Project)

2) Firstly, the application or a 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 Japan's 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 firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Scheme, 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 Governments of Japan and the recipient country.

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

(2) Basic Design Study

Contents of the Study

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

- i) 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,
- ii) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economical point of view,
- iii) Confirmation of items agreed on by both parties concerning the basic concept of the Project,
- iv) Preparation of a basic design of the Project,
- v) 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 the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the

Handwritten signature and initials in the bottom right corner of the page.

implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA selects (a) firm(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 Basic Design Study is (are) recommended by JICA to the recipient country to also work in the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

(3) Japan's Grant Aid Scheme

1) Exchange of Notes (E/N)

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

2) "The period of the Grant Aid" means the one Japanese 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 natural disaster, 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.

3) 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.)

4) Necessity of the "Verification"

The Government of the 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.

5) 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 followings:

- i) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the Project.
- ii) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
- iii) To secure buildings prior to the procurement in case the installation of the equipment.
- iv) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
- v) 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.

- vi) 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.

6) "Proper Use"

The recipient country 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.

7) "Re-export"

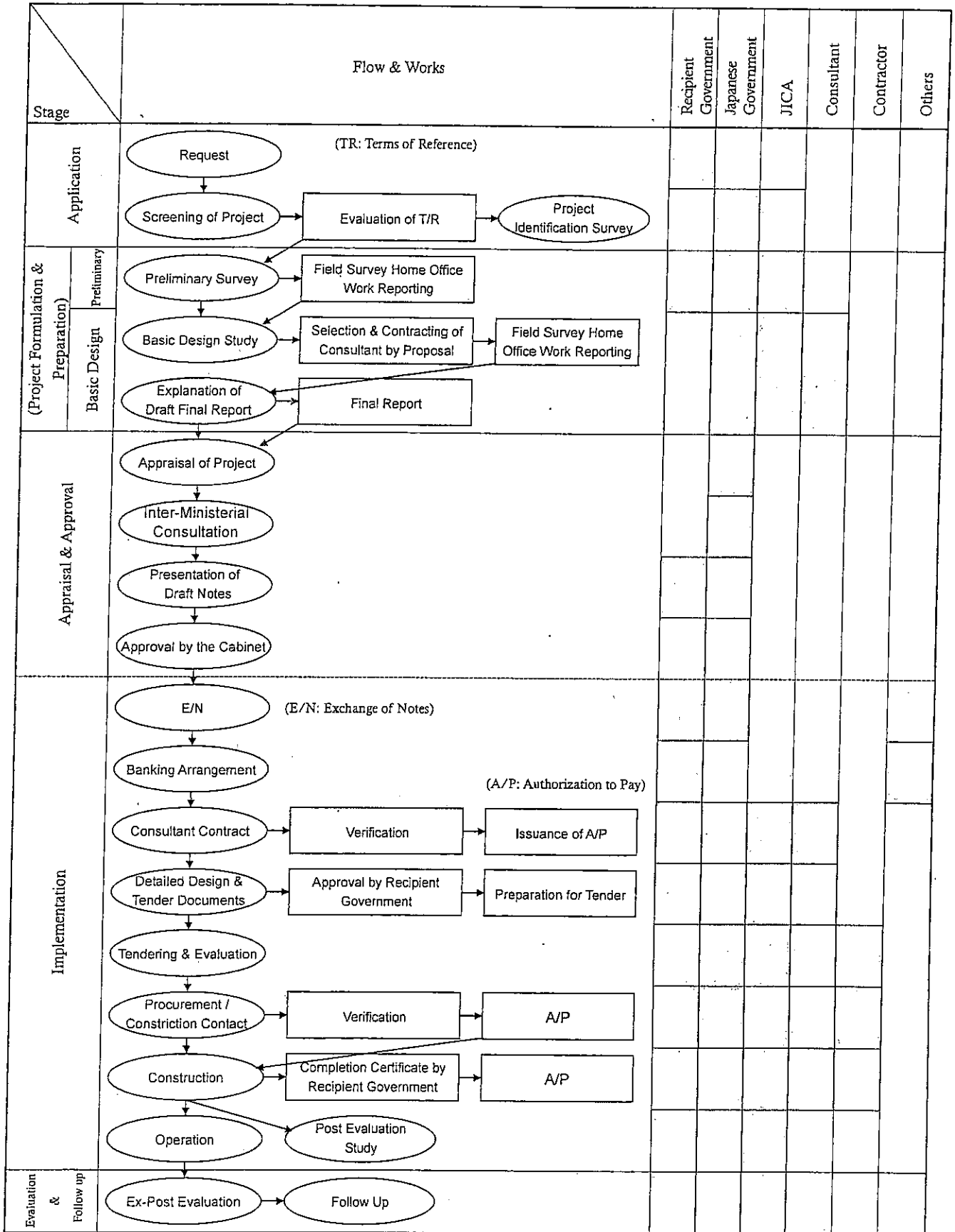
The products purchased under the Grant Aid should not be re-exported from the recipient country.

8) Banking Arrangement (B/A)

- a) 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 a bank in 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.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay (A/P) issued by the Government of the recipient country or its designated authority.

Handwritten initials and a checkmark.

Grant Aid Procedures



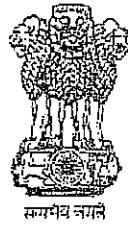
Handwritten signature and initials

Major Undertakings to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To bear the following commissions to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
2	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine and land transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	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 the recipient country and stay therein for the performance of their work.		●
4	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts		●
5	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
6	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●

(B/A: Banking Arrangement, A/P: Authorization to pay)

भारत सरकार
अन्तरिक्ष विभाग
इन्सैट कार्यक्रम कार्यालय



GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
INSAT PROGRAMME OFFICE

SCPO/F 631/2007

September 5, 2007

The Officiating Chief Engineer
Bhutan Broadcasting Corporation
Thimpu BHUTAN

Dear Sir

Subject: INSAT capacity for DSNG applications – quotation
Reference: E-mail dated September 5, 2007 from BBS

With reference to the above E-mail, we are pleased to provide you the following information:

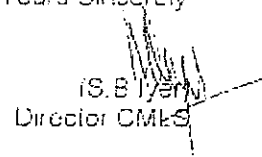
- a. The lease charges for C-band capacity (long term): INR 1,200,000 (Indian Rupees One Million Two Hundred Thousand) per MHz per year
- b. The lease charges for C-band capacity (Occasional Use): INR 4000 (Indian Rupees Four Thousand) per MHz per day (subject to availability)
- c. The lease charges for Ku-band capacity (long term): INR 1,600,000 (Indian Rupees One Million Six Hundred Thousand) per MHz per year
- d. The lease charges for Ku-band capacity (Occasional Use): INR 5000 (Indian Rupees Five Thousand) per MHz per day (subject to availability)

Other terms and conditions:

- (i) Occasional Use capacity is available only on per day basis (and not a fraction thereof)
- (ii) 72 hours advance information will be required for occasional use. BBS can uplink only after receiving the 'Authorisation to Uplink' by DOS, which will specify the frequencies.
- (iii) Billing for 'occasional use' will be made immediately after the issue of 'Authorisation to Uplink' by DOS. Invoices will have to be paid within 2 weeks thereafter – whether the capacity is used or not.
- (iv) Every effort will be made to provide C-band capacity at 83 deg location (INSAT-2E or INSAT-4A).
- (v) Ku-band capacity will probably be available from 74 deg location.
- (vi) The above rates include the special rebate for SAARC Broadcaster

With Kind Regards,

Yours Sincerely


S. B. Jeyaraj
Director CM&S



अन्तरिक्ष भवन, न्यू बी.ई.एल रोड, बंगलूर - 560 094 भारत
Antariksh Bhavan, New B.E.L. Road, Bangalore - 560 094 India.
दूरभाष / Telephone - 91-80-23415474
फैक्स / Fax - 91-80-23412141

Procedures for Tax Exemption

1. Equipment and services imported for direct use in the Project shall be exempt from taxes, levies/duties. Any procurement made under tax exemption basis shall be liable for tax payment as per the *Sales Tax, Customs and Excise Act, 2000* of the Kingdom of Bhutan if disposed off in Bhutan.
2. Sales tax levied on Project inputs procured domestically will be reimbursed provided all necessary documents are furnished at the time the claim is made, and in accordance with the procedures laid down in the *Sales Tax, Customs and Excise Act and Rules*.
3. Japanese nationals are exempted from customs duties, internal taxes and other fiscal levies which will be imposed in Bhutan with respect to the supply of the products and services under the Verified Contracts. However, any other local contractor, local subcontractor or local consultant recruited in connection with the Project, will be liable for tax in Bhutan as per the *Income Tax Act of the Kingdom of Bhutan, 2001*.
4. For purposes of income tax wherever applicable, all details of the payment made to the local contractor(s) will be furnished to the Department of Revenue and Customs, Ministry of Finance, latest by the tenth day of the following month.

T.

T. =
LB

Minutes of Discussions
on the Basic Design Study on the Project for Improvement of Equipment of
Bhutan Broadcasting Service Corporation (BBSC)
(Explanation on Draft Final Report)

In September 2007, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Basic Design Study Team on the Project for Improvement of Equipment of Bhutan Broadcasting Service Corporation (BBSC) (hereinafter referred to as "the Project") to the Royal Government of Bhutan (hereinafter referred to as "RGOB"), and through discussions, field survey, and technical examination of the results in Japan, JICA prepared a draft final report of the study.


In order to explain and to consult with concerned officials of the RGOB on the components of the draft final report, JICA sent to the RGOB the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Ms. Yumiko ASAKUMA, Deputy Resident Representative, India Office, JICA from January 30 to February 8, 2008.

In the course of the discussions, both sides confirmed the main items described on the attached sheet.

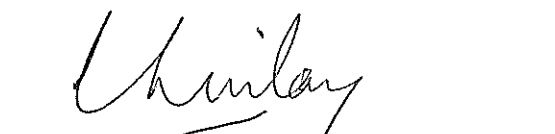
Thimphu, February 6, 2008



Yumiko ASAKUMA
Leader
Basic Design Study Team
Japan International Cooperation Agency



Pema CHODEN
Managing Director
Bhutan Broadcasting Service Corporation
Kingdom of Bhutan



Thinley NAMGYEL
Head, Development Cooperation Division
Gross National Happiness Commission
Kingdom of Bhutan

ATTACHMENT

1. Components of the Draft Final Report

The RGOB side has agreed and accepted in principle the components of the draft final report explained by the Team.

2. Japan's Grant Aid Scheme

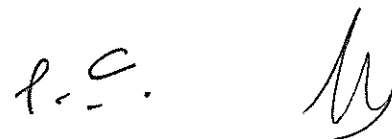
The RGOB side understands the Japan's Grant Aid scheme and the necessary undertakings to be taken by the RGOB as explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions signed by both sides on September 14, 2007.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the RGOB by the end of May, 2008.

4. Other Relevant Issues

- 4-1 Both sides agreed the components of the Project as shown in **Annex 1**.
- 4-2 The RGOB side has confirmed to secure necessary operational budget described on the draft final report as a part of subsidy to BBSC and confirmed it as shown in **Annex 2**.
- 4-3 As for staff recruitment, the BBSC explained to put a priority on technical staff recruitment and to allocate staff to bureaus after training and working in the BBSC's HQ. The BBSC also explained that a staff should take multi tasks and roles, for example a cameraman would write and edit news articles. Both sides confirmed that the recruitment plan by the BBSC as **Annex 3** met necessary requirement proposed at the draft final report.
- 4-4 The BBSC explained that it made the Memorandum of Understanding with the Bhutan Telecom (BT) as shown in **Annex 4** to use backbone transmission channel with adequate capacity provided by BT, to secure space, required power supply and a/c facilities at the BT's bureaus for the installation and utilization of equipments and to allow BBSC personnel to enter its facilities for maintenance and servicing of its equipment.
- 4-5 The BBSC expressed to have already discussed with INSAT office in India and confirmed the same condition of Annex 6 in the previous Minutes of Discussions. The BBSC shall make an agreement between BBSC side and INSAT side by the time of procurement of 4WD SNG OB Van by Japanese side.



- 4-6 Both sides confirmed that the following undertakings should be taken by the RGOB side at its expenses.
- (1) Temporary shifting works of the existing TV Master Control System, Radio Master Control System to install the Equipment before the commencement of installation works by the Japanese side.
 - (2) Maintaining the existing SNG Receiving Equipment at BBSC's HQ.
 - (3) Providing chairs necessary for daily operation of the Equipment.
 - (4) Bearing the following commissions of the Japanese financial institute for the banking services based upon the Banking Arrangement;
 - Advising commission of A/P
 - Payment commission
 - (5) Providing CS Receiving Equipment for the 4WD SNG OB Van before shipping it from Japan.
 - (6) Transporting News and Production Equipment for local bureaus from BBSC's HQ to each bureau after initial operation trainings to be conducted by the Japanese side.
- 4-7 Both sides agreed that the draft detailed specifications of equipment are confidential and should not be duplicated or released to other parties in order to secure the fairness of the tender of the Project.
- 4-8 Both sides agreed that the Project Cost Estimation, as attached in **Annex 5**, should never be duplicated or released to other parties before the signing of all the Contract(s) for the Project.
- 4-9 Both sides have agreed that the Project title is "The Project for Improvement of Equipment of Bhutan Broadcasting Service Corporation" for the sake of simplicity and brevity.

Annex 1 Component of the Project

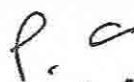
Annex 2 Budget Allocation for the Project by the Gross National Happiness Commission

Annex 3 Detail work out of the recruitment plan by BBSC

Annex 4 Memorandum of Understanding between BBSC and BT

Annex 5 Project Cost Estimation

(Remark) Annex 5 is excluded from the Minutes of Discussions of this Basic Design Study Report.



Component of the Project

	Item	Quantity
1.	4WD SNG OB Van	1 lot
2.	Master Control System	1 lot
2.1	Master Control System	1 lot
2.2	Power Supply System	1 lot
3.	Transmission system	1 lot
3.1	TX Equipment for Jakar, Phuentsholing, Kanglung Regional Centers, Wangduephodrang and Paro Bureaus	5 sets
3.2	RX Equipment	1 set
4.	News and Production Equipment for Bureaus	1 lot
4.1	For Jakar, Phuentsholing, Kanglung Regional Centers	3 sets
4.2	For Wangduephodrang and Paro Bureaus	2 sets
5.	Equipment for Continuity Studio	1 lot
6.	Maintenance Equipment and Tools	1 lot

lm

P.C

[Signature]



ཀླུ་ལོ་ལོ་སྐྱོད་དུ་གྲུབ་མྱོང་གི་དམ་འཇུག་ལྷན་ཚོགས།

Gross National Happiness Commission

GNHC/DCD/JAP-BBS/
February 2007.

The Managing Director
Bhutan Broadcasting Service
Thimphu.

Dear Madam,

The RGoB's policy has been to cover recurrent cost through domestic revenue and seek external financing for capital investment projects. This would continue till such time RGoB is able to meet both the recurrent and capital costs through its internal revenue.

In line with the above, all recurrent cost/maintenance cost of externally financed project would be covered by the RGoB.

Yours sincerely

(Thinley Namgyel)
Chief Programme Officer

P.O Box: 127, Tashichhodzong, Thimphu
PABX - 00975-2-325192/325850/325741/321053. FAX- 00975-2-322928
AFD PABX - 00975-2-333230/333231/333232/333234/326777 FAX - 00975-2-326779
Website: www.gnhc.gov.bt

Annex 3

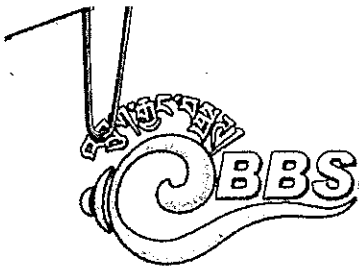
Detail work out of the recruitment plan

Additional Personnel Required		2008	2009	2010	2011	2012	Total
Production	Producer	3	4	5	4	4	20
	Editor/graphics	2	1	3			6
News	Reporter	2	2	5	4	4	17
Technical		8	12	11	5	2	38
Bureaus	Reporter	1	2				3
	Producer	1	2				3
	Cameraman	-	3				3
	Transmission	3					3
Media Resource Center	Administrator	2	2				4
Radio Department		4	5	4	1	1	15
Human Resource & Adm.		1	1	3			5
Finance & Commercial		1					1
Total		28	34	31	14	11	118

VM

P.C.

lh



ལྷོ། འབྲུག་གྱི་བསྐྱུགས་ལས་འཛིན།
BHUTAN BROADCASTING SERVICE CORPORATION

Memorandum of Understanding

Subject: BBS signal transport over Bhutan Telecom Facilities

This memorandum of understanding (MoU) made and executed on this 24th of January 2008, between Bhutan Telecom (hereinafter called BT) which term shall include its head administrators, executors and assignees and the Bhutan Broadcasting Service Corporation (hereinafter called BBSC) which term shall include its head administrators, executors and assignees.

WHEREAS BBS, under its JICA Grant Aid Project, shall procure and install TV news and program gathering system at five different Telecom stations viz: Kanglung, Jakar, Phuentsholing, Wangduephodrang and Paro, BT will provide backbone transmission channel equivalent to 3E1 layers capacity.

Now the parties hereby agree to the following terms and conditions:

1. That BBSC shall procure all the necessary equipments to be installed at various bureaus
2. BT will provide space, required power supply and a/c facilities, if any, for the installation of BBSC's equipments
3. BBSC shall pay the BT a rate agreed by both parties for the use of transmission channel capacity and rental charges for the space occupied by its equipment including the power supply and other miscellaneous items.
4. BT shall allow BBS service personnel to enter their facilities for maintenance and servicing of their equipment.
5. BT will not be responsible for the failure of BBSC's equipment.
6. BT shall provide prior notice to BBSC in case of major repair and maintenance of their facilities which will directly or indirectly affect the transmission of signal for BBSC.

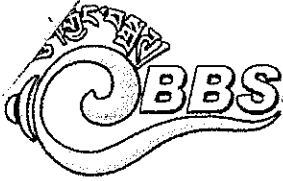
On this 24th day of January 2008, the BBSC and BT fully accept the provisions laid down in this memorandum of Understanding and agree to comply them without any conditions.

P.C.

ym

P.C.

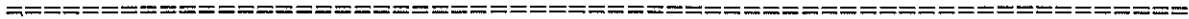
lh



ལྷོ། འབྲུག་གྱི་དྲ་བསྐྱུག་ལས་འཛུགས།

BHUTAN BROADCASTING SERVICE CORPORATION

IN WITNESS THEREOF, the parties execute this MoU as of the day and year mentioned as of the day and year mentioned above.



Signed on behalf of Bhutan Telecom



(Handwritten signature)
(Thinley Dorji)
Managing Director

Signed on behalf of BBBS



(Handwritten signature)
(Pema Chöden)
Managing Director

Witness on behalf of BT

1.

(Handwritten signature)
25/1/08
P.M. Pradhan

Witness on behalf of BBBS

1.

(Handwritten signature)
P. Ken
Offg. Acting CE

(Handwritten mark)

(Handwritten mark)

(Handwritten mark)

APPENDIX 5

LIST OF ACQUIRED REFERENCE MATERIALS AND DATA

APPENDIX 5 LIST OF ACQUIRED REFERENCE MATERIALS AND DATA

Basic Design Study Report on the Project for Improvement of Equipment of Bhutan Broadcasting Service Corporation in the Kingdom of Bhutan

No.	Name	Form Book/Video/Map/ Photograph etc.	Original/Copy	Issue Organization	Issue Year
1	BHUTAN At a Glance 2006	Book	Copy	National Statistics Bureau	2006
2	Quarterly Consumer Price Index Bulletin	Book	Original	National Statistics Bureau	2006
3	Statistical Yearbook of Bhutan 2006	Book	Original	National Statistics Bureau	2006
4	National Account Statistics 1994-2004	Book	Original	National Statistics Bureau	2006
5	National Account Statistics 2000-2005	Book	Original	National Statistics Bureau	2005
6	National Budget Financial Year 2007-08	Book	Copy	Ministry of Finance	2007
7	Ninth Five Year Plan (2002-2007) Mid Term Review Report of Central Sectors & Agencies	Book	Copy	Ministry of Finance	2005
8	First Annual Report 2006	Book	Copy	BBSC	2006
9	Executive Summary of the BBS-MSO Phase-II	Book	Copy	BBSC	2007
10	Balance Sheet as at 31 st December 2006	Material	Copy	Gupta & Co.	2007
11	Minimum Audit Examination and Reporting Requirement (Part-II of schedule XIV to the Companies Act of the Kingdom of Bhutan, 2000)	Material	Copy	Gupta & Co.	2007

No.	Name	Form Book/Video/Map/ Photograph etc.	Original/Copy	Issue Organization	Issue Year
12	Statement of Affairs as on 30 th June, 2002 BBSC	Material	Copy	NAG & Associates	2002
13	Status Report: GOI Projects	Material	Copy	BBSC	2007
14	Good Governance/Public Administrative Reform Programme II, Bhutan, Third Joint Review Final Technical Report	Material	Copy	DANIDA	2007

APPENDIX 6

BBSC PROGRAM SCHEDULE (AS OF SEPTEMBER, 2007)

APPENDIX 6 BBSC PROGRAM SCHEDULE (AS OF SEPTEMBER, 2007)

NEW TV PROGRAMME SCHEDULE FROM SEPTEMBER 2006 (MORNING)								
Time	Language	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0600-0601	Dzongk	SIGNATURE TUNE						
0601-0603		National Anthem						
0603-0610		News in Brief						
0610-0635		Prayer						
0635-0700		Discourse						
0700-0701		SIGNATURE TUNE						
0701-0720		News Headlines / National News						
0720-0722		News Break / 1 Primetime Commercial						
0722-0728		International News / News Headlines / 1 TV Spot / 1 Teaser						
0728-0733		Weather / Currency / 1 TV spot						
0733-0737	3 Public Announcements / 3 Commercials / 1 TV Spot							
0737-0800		POLITICAL(JUD) (CA)	POLITICAL (LEGIS.) (CA)	TSERIG (CA)	SOCIAL (MIDAY) (CA)	SOCIAL (SANAM) (CA)	SOCIAL (H&E) (CA)	POLITICAL (EXE) (CA)
0800-0820	English	News Headlines / National News						
0820-0823		News Break / 1 Primetime Commercial						
0823-0828		International News / News Headlines / 1 TV Spot / 1 Teaser						
0828-0833		Weather / Currency / 1 TV spot						
0833-0837		3 Public Announcements / 3 Commercials / 1 TV Spot						
0837-0900			POLITICAL(CHILDREN) (CA)	POLITICAL(EXE) (CA)	SOCIAL (YOUTH) (CA)	SOCIAL (WOMEN) (CA)	ECONOMICS (MBF) (CA)	SOCIAL (H&E) (CA)
0900-0920	Dzongk	News Headlines / National News						
0920-0923		News Break / 1 Primetime Commercial						
0923-0928		International News / News Headlines 1 TV Spot / 1 Teaser						
0928-0933		Weather / Currency / 1 TV spot						
0933-0937		3 Public Announcements / 3 Commercials / 1 TV Spot						
0937-1000			KANGLUNG BUREAU	TROWA	SERIAL	SERIAL	BTW	TROWA
1000-1020	English	News Headlines / National News						
1020-1023		News Break / 1 Primetime Commercial						
1023-1028		International News / News Headlines / 1 TV Spot / 1 Teaser						
1028-1033		Weather / Currency / 1 TV spot						
1033-1037		3 Public Announcements / 3 Commercials / 1 TV Spot						
1037-1100			OSHIN SERIAL	ICT	G/PHUG BUREAU	JAKAR BUREAU	ICT	BTW
	PRAYER / TRANSMISSION CLOSE							

NEW TV PROGRAMME SCHEDULE FROM SEPTEMBER 2006 (EVENING)

<i>Time</i>	<i>Language</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
1755-1800	Dzongk	SIGNATURE TUNE						
1800-1803		National Anthem						
1803-1823		News Headlines / National News / News Break / 1 Primetime Commercial						
1823-1828		International News / News Headlines / 1 TV Spot / 1 Teaser						
1828-1833		Weather / Currency						
1833-1837		3 Public Announcements / 3 Commercials / 1 TV Spot						
1837-1900		CA SETPIECE	CA (CD) LEGISLATIVE	CA (DAWA)	JAKAR BUREAU	DOCUMENTARY	CA (PT) TSERIG	P/LING BUREAU
1900-1920		News at Seven. Live, Interactive with reports from the Bureaus / guests in the Studio						
1920-1923		News Break / 1 Primetime Commercial						
1923-1928		International News / News Headlines / 1 TV Spot / 1 Teaser						
1928-1933	Weather / Currency / 1 TV spot							
1933-1937	3 Public Announcements / 3 Commercials / 1 TV Spot							
1937-2000	CA(NAM)	ZHUNGCHOG (JUD)	CA (DAWA)	CA (DC) BUREAU REPORT	CA (CD) LEGISLATIVE	CA (K.DOLMA) PELJOR	CA (TP) CHILDREN	
2000-2020	English	News at Seven. Live, Interactive with reports from the Bureaus / guests in the Studio						
2020-2023		News Break / 1 Primetime Commercial						
2023-2028		International News / News Headlines / 1 TV Spot / 1 Teaser						
2028-2033		Weather / Currency / 1 TV spot						
2033-2037		3 Public Announcements / 3 Commercials / 1 TV Spot						
2037-2100		CA(CR) BUREAU REPORT	CA (AT) MBF	CA (KELSA) WOMEN	CA (KW)	CA (DP) YOUTH	CA (DCD)	BTW (CR)
2100-2120	Dzongk	News Headlines / National News						
2120-2123		News Break / 1 Primetime Commercial						
2123-2128		International News / News Headlines / 1 TV Spot / 1 Teaser						
2128-2133		Weather / Currency / 1 TV spot						
2133-2137		3 Public Announcements / 3 Commercials / 1 TV Spot						
2137-2200	KANGLUNG BUREAU	TROWA	SERIAL	SERIAL	NEYTSHUEL CHARZHIP	TROWA	DOCUMENTARY	
2200-2220	English	News Headlines / National News						
2220-2223		News Break / 1 Primetime Commercial						
2223-2228		International News / News Headlines / 1 TV Spot / 1 Teaser						
2228-2233		Weather / Currency / 1 TV spot						
2233-2237		3 Public Announcements / 3 Commercials / 1 TV Spot						
2237-2300		OSHIN SERIAL	CA (T.YESHEY) H&E	G/PHUG BUREAU (CR-B. REPORT)	CA SETPIECE	CA (AT) MBF	CA (SP)	CA (DCD)
	PRAYER / TRANSMISSION CLOSE							

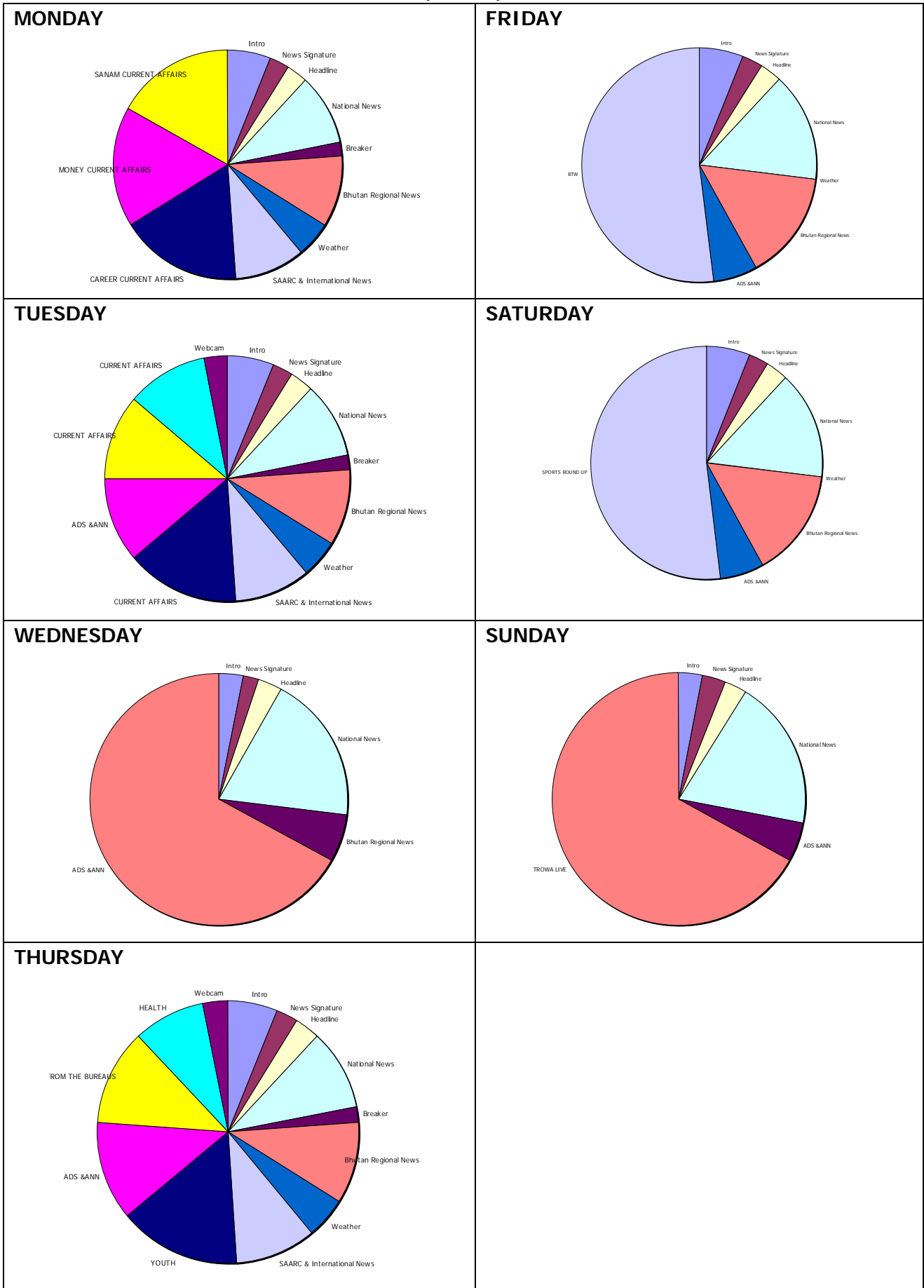
NEW TV PROGRAMME SCHEDULE FROM SEPTEMBER 2006 (AFTERNOON)

<i>Time</i>	<i>Language</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>	<i>Sunday</i>
- 1400		music						
1500-1505		Afternoon Programme line-up with BG music						
1505-1506		Signature Tune						
1506-1507		Programme Trailer (Coming-Up)						
1507-1510		2/3 commercials						
1510-1535							MUSIC on demand	MOVIE / ARCHIVE
1535-1536		Commercial Break						
1536-1600							MUSIC on demand	MOVIE / ARCHIVE
1600-1601		Commercial Break						
1601-1602		Programme Trailer (Coming-Up Next)						
1602-1630	Dzongk						MUSIC on demand	MOVIE / ARCHIVE
1630-1631		Commercial Break						
1631-1658							MUSIC on demand	MOVIE / ARCHIVE
1658-1659		Commercial Break						
1659-1700		Programme Trailer (Coming-Up Next)						
							SERIAL	MOVIE / ARCHIVE
1700-1800		Commercial Break						
							SERIAL	MOVIE / ARCHIVE
		Commercial Break						

APPENDIX 7

NEW PROGRAM SCHEDULE (DRAFT)

APPENDIX 7 NEW PROGRAM SCHEDULE (DRAFT)



* This draft new program schedule is under discussion in BBSC as of September, 2007.