Table 7.2.4.8 Source and Application Statements of the Broadcasting Entity
(Unit: thousand US$) (Case 2-A)

	1994	1995	1996	1997	1998	1999	2000	2001
CASH BALANCE, BEGINNING	0	0	0	0	0	0	0	0
CASH INFLOW								
• Net Profit	-268	-1,353	-2,005	-2,896	-5,869	-4,506	-4,547	-4,611
• Depreciation		413	413	666	1,835	1,835	1,835	1,835
• Foreign Loan		3,874		421	11,494			
• Government Fund for Investment		792		6,667	1,029			
• Subsidy to balance Cash Flow	268	940	1,591	2,230	4,034	2,671	2,906	2,970
- Total Subsidy	268	1,732	1,591	8,897	5,063	2,671	2,906	2,970
Total Cash Inflow	0	4,666	0	7,088	12,523	0	194	194
CASH OUTFLOW								
• Capital Expenditure								
- Foreign		3,874		421	11,494			
- Local		792		6,667	1,029			
• Amortization of Foreign Loans								
- Principal							194	194
Total Cash Outflow	0	4,666	0	7,088	12,523	0	194	194
NET CASH INFLOW	0	0	0	0	0	0	0	0
CASH BALANCE END	0	0	0	0	0	0	0	0
ACCUMULATED SURPLUS (DEFICIT)		-3,874	-7,748	-7,748	-8,169	-19,663	-19,469	-19,276

Foreign Loan : Lending Term 20 years (including 5 year Grace-Period)
Interest Rate 10%

Table 7.2.4.9 Source and Application Statements of the Broadcasting Entity
(Unit: thousand US$) (Case 2-B)

	1994	1995	1996	1997	1998	1999	2000	2001
CASH BALANCE, BEGINNING	0	0	0	0	0	0	0	0
CASH INFLOW								
• Net Profit	-268	-1,353	-2,005	-2,896	-5,869	-2,362	-2,403	-2,467
• Depreciation		413	413	666	1,835	1,835	1,835	1,835
• Foreign Loan		3,874		421	11,494			
• Government Fund for Investment		792		6,667	1,029			
• Subsidy to balance Cash Flow	268	940	1,591	2,230	4,034	527	762	826
- Total Subsidy	268	1,732	1,591	8,897	5,063	527	762	826
Total Cash Inflow	0	4,666	0	7,088	12,523	0	194	194
CASH OUTFLOW								
• Capital Expenditure								
- Foreign		3,874		421	11,494			
- Local		792		6,667	1,029			
• Amortization of Foreign Loans								
- Principal							194	194
Total Cash Outflow	0	4,666	0	7,088	12,523	0	194	194
NET CASH INFLOW	0	0	0	0	0	0	0	0
CASH BALANCE END	0	0	0	0	0	0	0	0
ACCUMULATED SURPLUS (DEFICIT)		-3,874	-7,748	-7,748	-8,169	-19,663	-19,469	-19,276

Foreign Loan : Lending Term 20 years (including 5 year Grace-Period)
Interest Rate 10%

(4) Analysis of Financial Indicators

Result of financial indicators calculated with profit/loss abatements and source/application statements are summarized in Table 12.8.2.10.

Table 7.2.4.10 Financial Indicators

	Operating Ratio* (%)	Maximum Net Loss		Maximum Subsidy Necessary		Average Annual Subsidy**
		Year	Amount**	Year	Amount**	
Case 1-A	195%	2001	- 5,079	1997	8,683	2,796
Case 1-B	117%	2001	- 5,079	1997	8,683	1,992
Case 2-A	195%	2001	- 5,896	1997	8,897	3,262
Case 2-B	117%	2001	- 5,896	1997	8,897	2,458

* Operating Ratio = Operating Expense / Operating Income in 2001

** Unit: thousand US $

Operating ratio, the ratio of operating income to operating expanse that includes depreciation, in full-scale phase 1 (in 2001) is 195% in Case 1-A and Case 2-A, cases with lower advertisement and 112% Case 1-B and 2-B, cases with higher advertisement income. The ratios in all cases show impossibility of self-financing operation in full-scale phase 1.

In the analysis period, maximum net loss (after interest payment of foreign loan) occurs in 2001 in all cases and the amount will reach to US$5.1 million in Case 1-A and Case 1-B, cases with 5% interest, and US$5.9 million in Cases 2-A and 2-B, cases with 10%.

Transfer budget from the Government will be maximized in 1997 in all cases, and will amount to US$8.7 million (5.2% of the budget of the MEC, 1992) in Case 1-A and 1-B, to US$8.9 million (5.4% of the same) in Case 2-A and 2-B. The year of 1997 will correspond to the commencement of construction of ETV Center in Asuncion and 3 main local transmitting stations.

Average annual subsidy during the period will be smallest in Case 1-B, US$2.0 million, and be largest in Case 2-A, US$3.3 million. A comparison among the cases shows that difference of 5% in interest of long term loan will cause US$0.5 million difference in average annual subsidy and the difference in

operating income from advertising will be resulted in US$0.8 difference million of the average annual subsidy.

The main factor of fluctuation in subsidy or transfer budget is the capital cost variation. Total government fund for the construction, financing local portion of construction cost during the period is US$8.5 million and US$6.7 million is to be financed in 1997. The amount corresponds to 39% of the budget for capital expenditure of the MEC in 1992 or to 12% of the capital expenditure of ANTELCO in 1992.

7.2.5 Result from the analysis

As shown in the financial analysis of the Master Plan, rapid growth in the government budget and sharp increase in the budget of the MEC is a preferable factor for subsiding the recurrent expenditure or fulfilling the deficits in cash flow. By applying existing human resource and by utilizing the existing facilities and equipment of the MEC and the ANTELCO will reduce the burden on the Government.

For financing for construction cost, as mentioned in the financial analysis of the Master Plan, financial assistances by foreign countries or international organization with favorable conditions will be necessary.

As pointed out in the above, maximum amount of annually required fund of the Government only for domestic currency portion will reach to 40% of the capital budget of the MEC in 1992. In addition to the fund raising from wide sources such as transfer budget of the MEC and the MOPC and investment of the ANTELCO, it is necessary for the implementation of the Priority Project to secure financial assistances by foreign countries or international organization with favorable condition which also cover domestic currency portion.

PART IV CONCLUSION AND RECOMMENDATION

CONCLUSION AND RECOMMENDATION

Conclusion

(1) The Priority Project of creating an educational television broadcasting network is designed to meet the basic human needs forming the basis of the educational system composed of primary education and education for the socially-disadvantaged. For Paraguay, a country not endowed with significant natural resources, the education or the development of her human resources, although it will take time, is the only way to be able to stand on an equal footing with other nations in the future. The Priority Project presented here is designed to achieve such human resources development effectively and efficiently and has high socio-economic significance. Therefore, the Priority Project should definitely be implemented.

(2) As the Master Plan will target education, the principal operational source of budget should come from National Treasury. However, in order to reduce the burden shared by the Government, taking commercials to the broadcasting without obstructing educational service should be given consideration. It is forecast that in the later part of the Master Plan period, revenue from such commercials will be able to almost cover the operational expenses.

(3) A large initial investment will be required to implement the Master Plan to create an educational television broadcast network. However, in light of the current development budget of the Government and the expansion of the ANTELCO's investment, it will be difficult to obtain such a large amount for capital investment.

Methods of Execution

(1) The Priority Project will serve as the foundation of the operation. In the initial period, advertising income will be limited, and although the subsidies for the operation cost can be expected, it will be imperative to find financial resources that does not rely upon such subsidies to fund for the construction costs, so as not to over-borden the National Treasury at a time.

(2) It will generally take from three to four years to introduce educational television broadcasts into the present educational system. Especially in the case of Paraguay, as this will be the first educational television, the development of the plan will have to be executed gradually in progressive stages.

(3) The actual operation should be executed through a joint venture between the MEC, which will be responsible for the planning and production of the educational programs, and the ANTELCO, which will transmit and broadcast the programs. By transferring as many personnel as possible to the operation, the required increase in the governmental budget can be minimized.

Recommendations

(1) Establishment of an Effective System of Utilizing Educational Television Broadcasting

In order to accomplish in full the objectives of the educational television broadcasting, an effective system should be established between the three parties for smooth coordination and close cooperation. The three parties concerned are the educational television station, schools and pupils, and the government agencies including MEC, which offer administrative supports to the project.

(2) Continuous Effort to Improve Conventional Education System

The objective of educational television is not to replace the current school activities with the television, but to complement and improve them. It is not sufficient to simply introduce educational television broadcasting, but constant efforts should be made to improve the existing education system itself.

(3) Early Implementation of Priority Project

The Priority Project is most essential in establishing the educational television broadcasting service in Paraguay. In particular, the implementation of Work 1 to construct transmitting facilities in Asuncion has an important meaning in securing the TV channel, which the Paraguayan Government has retained for years for educational television in the capital city. With the Asuncion station put into service, some 40% of the entire population of the country will be able to receive education through the television service. Consequently, Work 1 of the Priority Project should be taken up for implimentation at an earliest possible date.

(4) Promotion of Television Receivers and VCRs to Schools

Policies should be established and implemented by the administrative agencies to promote the diffusion and use of television receivers and VCRs in schools.

(5) Use of foreign assistance to reduce finance cost burden

Taking the size of the Paraguayan government's developmental budget into account, it will be difficult to finance all the necessary investments of the project domestically, and acquisition of foreign assistance will be necessary. Particularly, the implementation of the Priority Project should be financed by grants or very soft loans, so as to ease the repayment burden as much as possible.

(6) Provision of National Subsidies

As has been seen from the financial analysis, this project lacks profitability, and for the smooth and successful operation of the educational television, subsidies from the government is a prerequisite. In the initial stage of full-scale operation, commercial revenues are not expected to cover the entire operational expenditure, therefore, subsidies in the region of three to four million dollars a year at most may be needed.

(7) Preparation for Full-scale Broadcasting

Through the five-year preparation period of the preparatory, experimental and introduction phases, some fifty program producers and eighty technical staff for production/transmission should be recruited and trained. Also, over one and half thousands programs must be produced in advance for stock. The following measures should be taken to achieve the objectives as planned;

- Instruction by experts

  Experts, who are experienced with systematized educational broadcasting, will be invited from overseas organizations, to give guidance on program selection, efficient program production methodology and evaluation methodology.

- Training at Home and Overseas

  In addition to the guidance and instruction given by the overseas experts, key personnel should have training at home and overseas. A system of recruitment and training should be so organized that those key personnel are the core of the manpower and they will subsequently train the newly recruits through the OJT method..

- Efficient Program Production System

For the start of full-scale broadcasting service, a sufficient number of educational television programs should be produced in advance. The establishment of an efficient program production system is prerequisite for the full-scale phase. Most of the educational television programs have some simple standardized formats, and a program production system to produce as many programs as possible in one day studio production should be organized and established

- Early Establishment of an Integrated Organization

The organization for the educational television service is inaugurated with the personnel seconded from MEC and ANTELCO. A very close cooperation is required among them for efficient business operation. A unified and integrated system for organizational operation should be established as early as possible.

(8) Coordination with Neighboring Countries for Allocation of UHF lower Channels

In the planning of the educational television network, the lower channels of the UHF television band are proposed to be allocated where the VHF channels cannot be used by the interference from other television stations. At present a reservation is agreed on between the neighbpouring countries for the use of the channels, but coordination should be made with the neighboring countries to secure the use of the channels for the educational television service.

(9) Maintenance System for Equipment/Facilities

Current broasdcasting equipment are highly reliable with the use of semiconductor devices, however, they cannot be repaired easily by user technicians once they break down. Often the equipment must be sent back to manufacturers or maintenance specialists for repair. Arrangements should be made with the manufacturers and external organizations for fast repair and maintenance. A centralized maintenace unit should be formed with a small number of engieering staff to process these repair procedures, and a certain maintenace budget should be set aside to deal with equipment failure quickly.