Sri Lanka

"The Greater Colombo Telecommunications Network Improvement Project "

Project Summary

Borrower:	Government of Democratic Socialist Republic of Sri Lanka
Executing Agency:	Sri Lanka Telecom Limited (Sri Lanka Telecommunications Department, at the time of L/A signing)
Exchange of Notes:	January 1991
Date of Loan Agreement:	March 1991
Final Disbursement Date:	April 1997
Loan Amount:	¥ 10,968 million
Loan Amount Disbursed:	¥ 10,175 million
Procurement Conditions:	General Untied (Partial Untied for consultanting portion)
Loan Conditions:	Interest Rate: 2.5%, Repayment Period: 30 years (10 years for grace period)

《Reference》

(1) Currency: Sri Lanka・Rupee (Rs)

(2) Exchange Rate: (IFS annual average market rate)

Year		1990	91	92	93	94	95	96	97	98
Rate	Rs/US$	40.1	41.4	43.8	48.3	49.4	51.3	55.3	59.0	64.6
	¥/US$	144.8	134.7	126.7	111.2	102.2	94.1	108.8	121.0	130.9
	¥/Rs	3.61	3.25	2.89	2.30	2.07	1.83	1.97	2.05	2.02
CPI		100.0	112.2	125.0	139.6	151.4	163.1	189.0	207.1	226.5

Source: IFS

(3) Rate at the time of appraisal (August 1990): 1 Rs = ¥ 3.73

(4) Fiscal Year: January ~ December

(5) Abbreviations:

①SLT: Sri Lanka Telecom

②SLTD: Sri Lanka Telecommunications Department

③SLTL: Sri Lanka Telecom Limited

④TRC: Telecom Regulatory Commission

(6) Terminology:

① Subscriber cables: Cables used between telephone exchange offices and telephone subscribers. They can be classified into primary cables for the main lines, secondary cables that branch out from the primary cables, and incoming lines, which are the connections to the individual telephone subscribers.

② Number of subscriber lines: The number of incoming lines. This number is the same as the number of telephone subscribers.

③ Telephone density: Number of subscriber cables (number of telephone subscribers) per population of 100, expressed as a percentage.

④ Number of waiting applicants: Number of applic ants waiting to have a telephone installed.

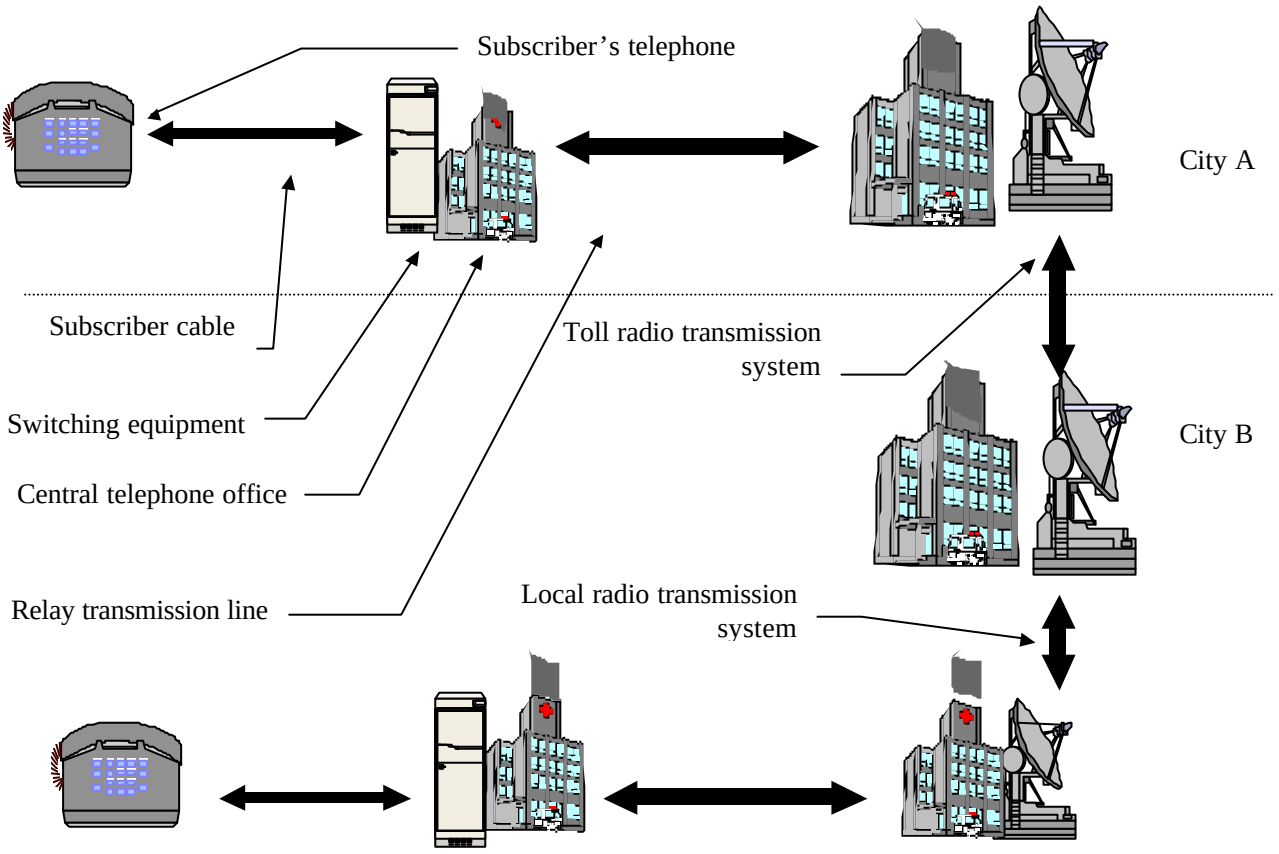
⑤ Call completion rate: Number of completions of telephone calls / number of telephone calls.

⑥ Management contract: A form of management where some human resources are temporarily taken in from the outside to be entrusted with the management of a specific field in order to improve the overall administrative ability. Unlike consultants, such personnel engages in the

actual administrative action for a fixed period of time and in most cases the payment is made in some form associated with the actual achievements.

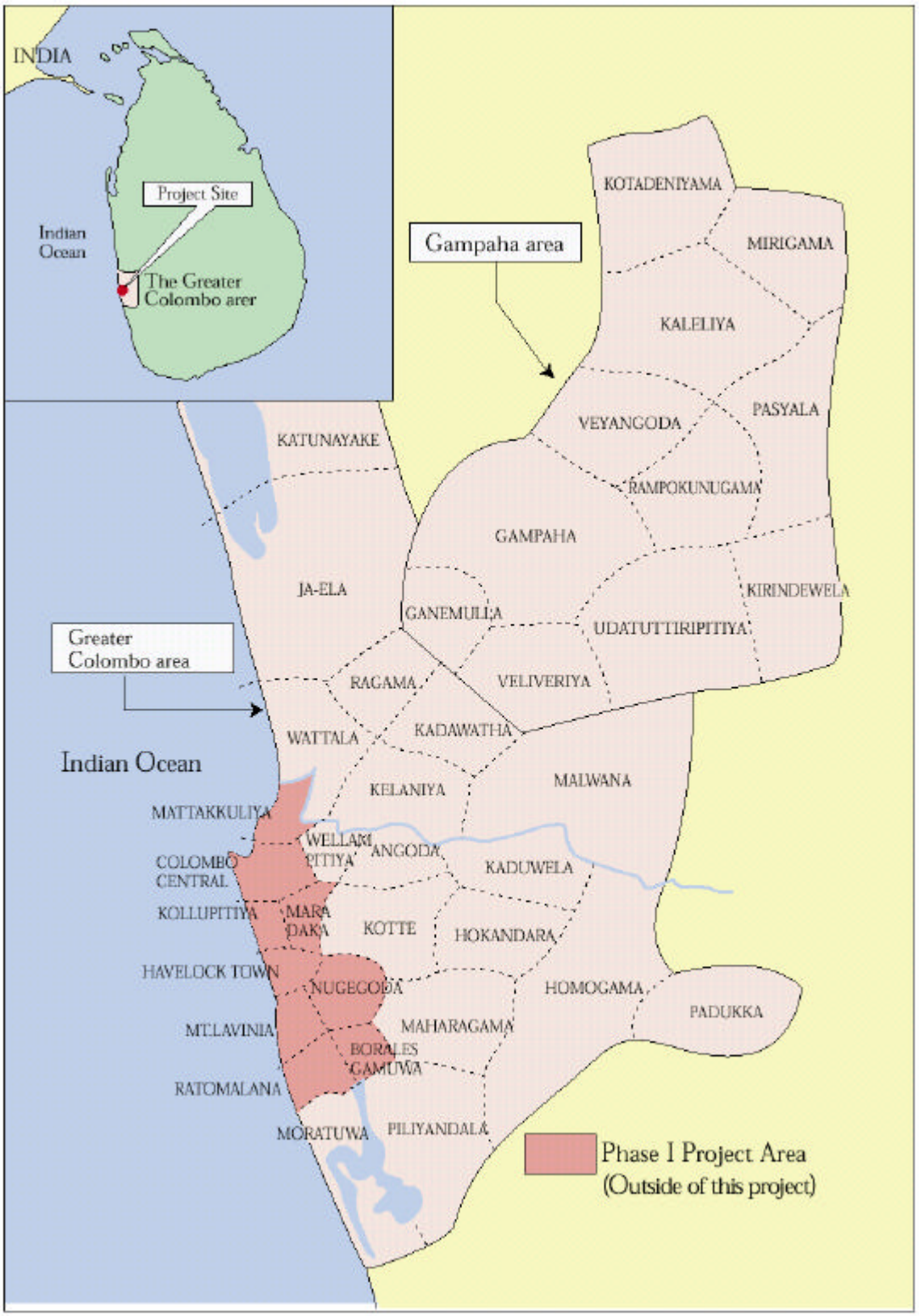
⑦ PCM (Pulse Code Modulation): the most basic conversion system for transforming analogue signals to digital signals. It is widely used in the telecommunication system

【Reference: Communication Network Conceptual Diagram】



1. Project Summary and Comparison of Original Plan and Actual Result

1.1 Project Location



1.2 Project Summary and ODA Loan Portion

This project aims to expand the telecommunication facilities in the Greater Colombo area and the nearby Gampaha area, for the purpose of responding to the increasing demands for telephone communication and improving the quality of the telephone calls. Specifically, it involves building up a network of transmission lines, a radio transmission system, switching equipment, and primary cables for subscribers. The portion of the funding covered by the ODA loan is 10,968 million yen (the entire foreign currency portion and part of the local currency portion), which is 85% of the total project cost of 12,903 million yen.

1.3 Background (at the time of appraisal)

1.3.1 Sri Lanka's National Economy Development Policy and the Position of the Telecommunication Sector

Sri Lanka used to be a country with a mono-culture economy where only a few of the commercial crops, e.g. rubber and tea, accounted for 70% of the export. From the latter half of the 1980s to the beginning of the 1990s, however, the country adopted a policy where a stronger emphasis was put on mining and manufacturing through efficient investment in the sectors that form the infrastructure of the industry, that is, the communication, electric power, and transportation sectors. Upgrading the communication infrastructure was listed as an important step to be taken in the five-year plan for 1984 to 1988 as well.

In parallel with this, a structural adjustment policy has been carried out based on the agreement with the World Bank and IMF since 1988. This policy was enforced in order to improve the aggravated economic situation since 1983. Its purposes are reduction of government spending, privatization of state-owned enterprises, relaxation of regulations such as exchange control, etc. From the start, the telecommunication sector was picked up as the prime subject of privatization.

1.3.2 Development Policy for the Telecommunication Sector

The infrastructure of Sri Lanka's telecommunication sector has been built up centered around the Greater Colombo area in accordance with the "Sri Lanka Telecommunication Network Development Plan" (1962 to 1985) formulated by experts at the International Telecommunication Union. However, the telephone density was only 0.69% in 1989, which is very low compared to the rates found in the surrounding countries (2.5% in Thailand and 14.1% in Malaysia), and as many as 47,885 lines were on the waiting list. In order to alleviate these conditions, JICA formulated the "National Telecommunication Network Improvement Plan" (1986 to 2000) in 1985 and has been mapping out a development policy whose top priority goal is to respond to these immediate demands.

The improvement of the telecommunication sector has been promoted by the Telecommunications Department, which was a department under the Ministry of Post and Telecommunications at the time. However, in accordance with the government policy of reduction of the government spending, it was determined to make the Telecommunications

Department a public corporation. The Telecommunications Department would become a public corporation fully owned by the government once the approval of the Telecommunication Act was given.

1.3.3 The Role of This Project in the Telecommunication Sector Development

In the Greater Colombo area, the political and economic center of Sri Lanka, the number of applicants for telephone subscription has been increasing rapidly. The highest priority of the telecommunication sector development has been to address the demands for telephone communications in this area. For this reason, in 1985 JBIC provided loans for building relay transmission lines and primary cables in Colombo city according to the Greater Colombo Telecommunications Network Improvement Project (I) (hereinafter referred to as the "Phase I Project"). Still, even after the completion of the project, in 1989 there were 30,447 lines on the waiting list in Colombo city, which accounted for 64% of the 47,885 lines on the waiting list of the entire Sri Lanka. Moreover, in order to improve the living standards in the entire Sri Lanka, the expansion of the communication facilities in the increasingly densely populated suburban areas outside the Greater Colombo area, such as Gampaha area, was also a task of prime importance. This project (the Phase II Project) was put into motion in order to contribute to solving these problems. The necessity hereof was also pointed out in JICA's aforementioned master plan. It was one of the top priority projects in the development of the telecommunication sector.

1.3.4 History

1983	November	Completion of F/S for Phase I Project by JICA
1985	January	Phase I Project appraisal
	May	Loan Agreement signing of Phase I Project
	October	Completion of Master Plan (Targeted in 2000) by JICA
1987	November	Contract Agreement of the Phase I Project
1988		Start of structural adjustment by IMF/World Bank
1990	August	Phase II Project appraisal
1991		Conclusion of Telecommunication Act
	March	Completion of Phase I Project
		Loan Agreement signing of Phase II Project
	September	SLT, a public corporation, was established by reorganizing SLTD, a department under the Ministry of Posts and Telecommunications.
1993	June	Contract Agreement of the Phase II Project
1996	March	Implementation of Phase I Project Post-Evaluation
	August	Completion of Phase II Project
	September	SLT became a stock company and SLTL was established
1997	August	Nippon Telegraph & Telephone (NTT) gained 35% of the issued SLTL stocks

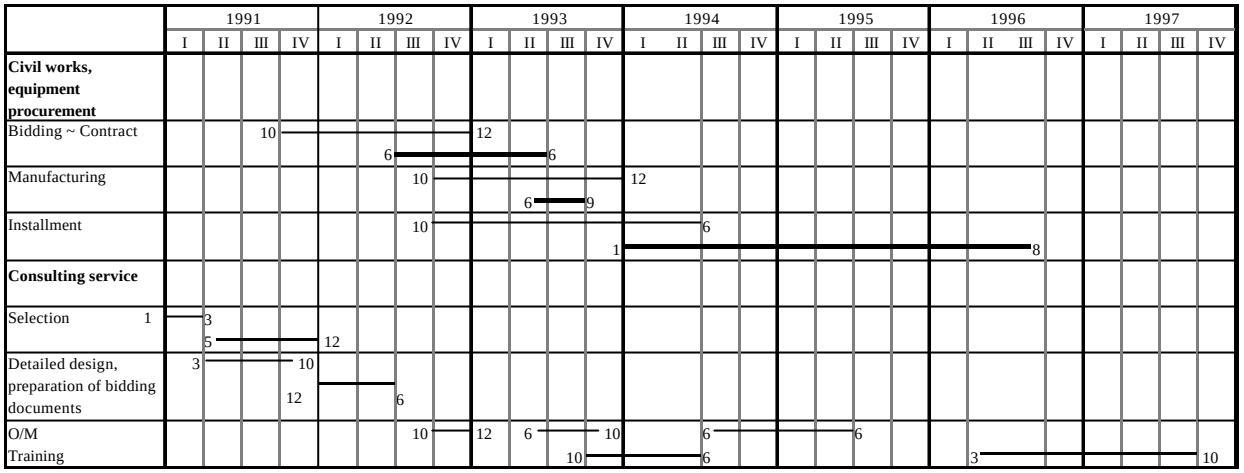
1.4 Comparison of Original Plan and Actual

1.4.1 Project Scope

Contents of facilities	Plan	Actual	Difference
Greater Colombo Area			
○Reinforcement of relay transmission lines:			
●Copper wire PCM(PCM-30)			
No. of sections	8 sections	0	-8 sections
Section distance	50.60km	0	-50.60km
●Optical fiber (140Mb/s)			
No. of sections	7 sections	15 sections	+8 sections
Section distance	62.60km	90.10km	+27.50km
○Improvement of subscriber cables: No. of switching equipment regions	23	18	-5
No. of pairs for primary cables	77,000 pairs	88,000 pairs	**+11,000 pairs**
Gampaha Area			
○Improvement of tall relay radio transmission system:			
No. of sections	1 section	1 section	—
Transmission system	Digital radio system (2GHz 34Mb/s)	Digital radio system (6GHz 140Mb/s)	Change of specification
Section distance	23.80km	23.80km	—
○Expansion of local relay radio transmission system:			
No. of sections	6 sections	5 sections	-1 section
Transmission system	Digital radio system (2GHz 17Mb/s)	Digital radio system (2GHz 34Mb/s)	Change of specification
Section distance	91.40km	68.20km	-23.20km
○ Reinforcement of local transmission line			
●Copper wire PCM(PCM-30)			
No. of sections	4 sections	0	-4 sections
Section distance	33.10km	0	-33.10km
●Optical fiber (34Mb/s)			
No. of sections	-	5 sections	+5 sections
Section distance	-	31.90km	+31.90km
○Improvement of subscriber cables:			
No. of switching equipment regions	12 regions	12 regions	—
No. of pairs for primary cables	11,150 pairs	26,300 pairs	**+15,150 pairs**
○Improvement of switching equipment			
No. of cables	6,984 cables	7,232 cables	+248 cables
No. of telephone offices	11	11	—
Consulting Service	230M/M	338.5 M/M	+108.5 M/M

Source: SLTL materials

1.4.2 Implementation Schedule



Estimate at the time of appraisal ——————
Actual ——————
Source: SLTL materials

1.4.3 Project Cost

Item	Plan		Actual		Difference	
	Total project cost	(ODA loan portion)	Total project cost	(ODA loan portion)	Total project cost	(ODA loan portion)
Improvement of facilities	8,886	8,886	10,605	7,960	1,719	-926
Land preparation of office buildings and road construction	735	441	1,724	857	989	416
Tax	1,573	0	512	0	-1,061	0
Consulting Services	670	670	950	934	280	264
Interest rate during construction	556	556	424	424	-132	-132
Total	12,420	10,553	14,215	10,175	1,795	-378
Contingency	483	415	—	—	—	—
Grand Total	12,903	10,968	14,215	10,175	+1,312	-793

At the time of appraisal (August 1990): 1Rs = ¥ 3.73
Actual: 1 Rs = ¥ 1.96 (weighted average at the time of disbursement between 1991 and 1997)
Source: SLTL materials

2. Analysis and Evaluation

2.1 Evaluation on Project Implementation

2.1.1 Project Scope

The scope of the project was altered from that at the time of appraisal. The main reasons for this alteration were:

1) A field survey conducted by the contractor in 1995 revealed a substantial increase in the demand compared to what was predicted at the detailed design phase (1992) due to the rapid development in the Greater Colombo area and the surrounding areas.[1]
2) It became possible to make the system more sophisticated because of technological innovation.

In order to respond to this increase in the demand, a policy that placed high priority on the expansion of the network of new subscriber cables was adopted. A total of 26,150 additional lines were installed, the specification of the relay transmission lines was changed from copper PCM (pulse code modulation) to optical fiber, and the transmission capacity of the digital radio system was increased.

This alteration was the result of a flexible response to the realities of the increased demands revealed at the project implementation stage. Since the purpose of the project is to shorten the waiting list, the alteration is judged to be reasonable.

2.1.2 Implementation Schedule

There is a total of 14 months of delay compared to the implementation schedule at the time of appraisal. The disbursement was completed within the loan disbursement period specified in the loan agreement. The main reasons for the delay were:

1) The procedure for obtaining approval of the alteration of the project scope and the coordination with the Road Development Agency (RDA), which is a necessity for the installation work (obtaining permission for road excavation), took long.
2) Restraints, such as a prohibition against blasting, were imposed on the installation work for reasons of public security given the political instability at that time.
3) The time period required for the installation work was extended as a consequence of the alteration of the project scope.

The coordination with RDA was also pointed out as a cause of delay of the implementation schedule in the Phase I Project. For this reason, at the time of appraisal of this project, Steering Committee consisting of representatives from the executing agency and RDA was established. Furthermore, the ODA loan consultant employed in this project also joined the committee to facilitate the coordination at the execution of the project. However, the committee could not function to its full potential due to lack of actual power.

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[1] The actual demand in the Greater Colombo area in 1995 was 113,571 lines while the estimated demand was only 57,578 lines. In Gampaha area, the actual demand was 28,870 lines while the estimation was only 12,248 lines.

2.1.3 Project Cost

The total project costs were increased by 1,312 million yen compared to that at the time of appraisal (regarding the ODA loan portion, however, the actual loan was 10,175 million yen although the estimation at the time of appraisal was 10,968 million yen). This increase was due to the alteration of the project description. Since the scope was changed to putting higher priority on building cables for new subscribers, it was mainly the civil work necessary for laying down the cables for new subscribers that increased. The increased portion of the cost was covered and paid for by the executing agency (see below) without delay.

2.1.4 Implementation Scheme

(1) Executing Agency

At the time of appraisal of this project, the executing agency was the Sri Lanka Telecommunications Department. However, after the loan agreement was signed, it was reorganized as Sri Lanka Telecom in September 1991 and became a public corporation with a self-supporting accounting system. Moreover, in September 1996, after the completion of this project work, it became a stock company, the Sri Lanka Telecom Limited (SLTL). During this period, there was no prominent reformation in the department in charge of the ODA loan projects and there were no special problems in the project implementation. In addition, a timely report was made to JBIC on the reorganization of the executing agency.

(2) Consultants

In consideration of the immediacy of the project, the consultants in the Phase I Project were re-employed on a direct contract. The SLTL side has evaluated the performance of the consultants at the time of project implementation as satisfactory, and no consultant-based problems were identified in the evaluation of this project either.

(3) Contractors

The procurement of equipment and materials and the installation work of this project were divided into three packages (Japanese enterprises received the orders). Sri Lanka enterprises took care of the building of the office and road preparation. The SLTL side has evaluated the performance of the contractors as satisfactory, and no contractor-based problems were identified in the evaluation of this project either.

2.2 Evaluation on Operations and Maintenance

2.2.1 Operations Scheme and Status

(1) Current Conditions and Development Policy of the Sri Lanka Telecommunication Sector

The main objectives of the telecommunication sector development policy formulated by the Sri Lanka government are:

1) Resolving the waiting list
2) Providing telecommunications services all over the country, including the rural areas
3) Improving the quality of telephone calls.

It aims to fulfill these development tasks through promoting participation from private enterprises. In accordance with this policy, the Sri Lanka Telecommunications Department (SLTD), which used to be a monopolistic government enterprise, first became a public corporation in 1991 (the establishment of SLT), and then became a stock company (the establishment of SLTL). Private enterprises also participate in various other fields besides international communications, as shown in Table 2-1 below.

In August 1997, 35% of the issued SLTL stocks, which at the time were owned 100% by the government, were sold out to NTT. The six-year development plan (1999 to 2004) announced in November 1998 also aims to promote the continued participation of private enterprises in the telecommunications market and to fulfill the above-mentioned development tasks. In addition to these initiatives, the government has announced that it is planning to sell out a further 10.5% of the SLTL stocks.

At the moment, two companies besides SLTL, Lanka Bell and Sun Tel, have as shown in Table 2-1 below entered the basic telephone service market[2], and private enterprises are actively invited to enter into the mobile communications and data transfer service markets. SLTL now only holds the monopoly on international communications, but private enterprises will also be permitted to enter into this market in 2002.

Table 2-1 Current Conditions of Sri Lanka Telecommunication Sector

Services		Licensed enterprise
○International communications		SLTL (Monopolized. Entry of other enterprises will be allowed in 2002.)
○Domestic communications	Basic telephone services	SLTL, Lanka Bell, Sun Tel (oligopoly)
	Mobile communications etc.	Approximately 20 private enterprises

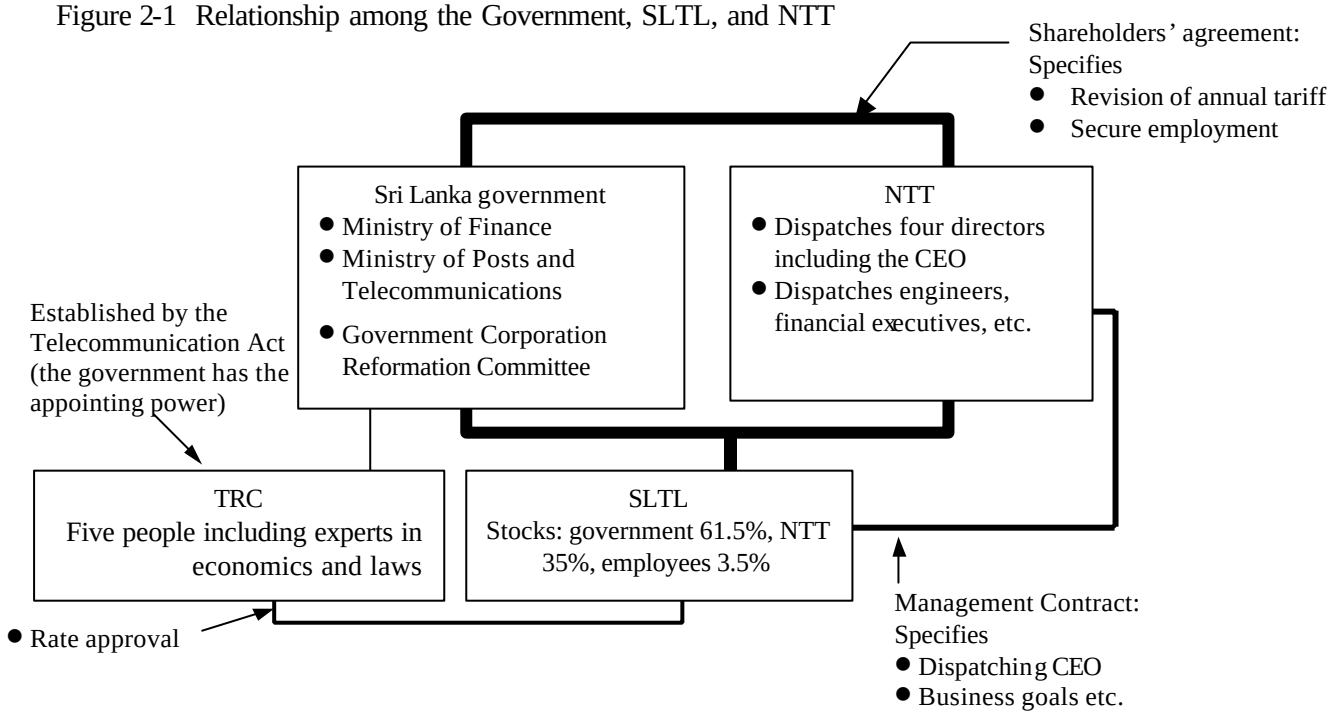
Source: Ministry of Posts and Telecommunications, SLTL materials

[2] The entry of these two companies was approved in 1995. As of the end of 1998, approximately 10% of the subscriber cables in the entire Sri Lanka is owned by these two companies.

(2) Partial Privatization of the Executing Agency

As mentioned earlier, the executing agency of this project has sold 35% of the issued stocks to a private enterprise (NTT). Figure 2-1 below summarizes the relationship among SLTL, NTT, and the government. The government is not only the largest stockholder, owning the majority of the issued stocks of SLTL, but also holds a supervisory right to approve tariff revisions by SLTL through the Telecom Regulatory Commission (TRC). The three parties, the government, SLTL, and NTT, have concluded an shareholders' agreement. This agreement specifies how to execute periodic tariff revisions and how to secure employment of the employees.

Figure 2-1 Relationship among the Government, SLTL, and NTT



In addition to the above, a five-year management contract has been concluded between SLTL and NTT. It prescribes that SLTL must accept four out of 10 directors including the CEO (Chief Executive Officer) from NTT in order to improve the management efficiency, and specifies certain business goals to fulfill tasks such as correcting regional differences and improving the quality of telephone calls. It specifies that NTT will gain parts of SLTL's earnings as a management fee, but if the above-mentioned business goals are not achieved, a fixed amount will be deducted from the incentive fee. In order to achieve these business goals, SLTL is actively building up telecommunication network in the rural areas as well.

Even though it has been only two years since NTT acquired part of SLTL's stocks, the effect of the partial privatization can already be seen. Significant improvements of the management efficiency can be felt, as explained later. It would be too early to attempt to measure the effect of the privatization in terms of fulfillment of the tasks specified by the policy at this point. Nonetheless, in the last two years the track record for the number of cables for new subscribers

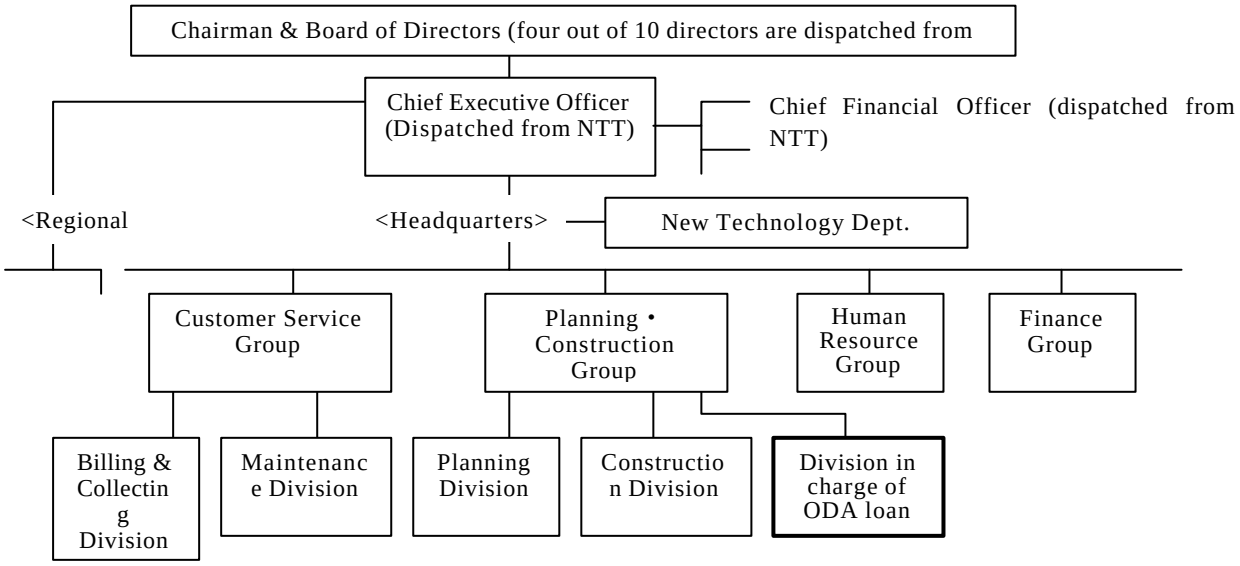
per year has been far outpacing the figure set in the business goals both in the city and rural areas[3].

(3) Organization Structure

Since NTT has become involved in the management, the organization has undergone a significant restructuring. The organization structure has been simplified, key operations have been narrowed down, and departments have been reorganized as necessary. Figure 2-2 shows an overview of the organization after the reorganization. In parallel with the organizational changes an achievement evaluation system and a wage system based on performance and ability have been implemented, and a reformation of the employees' awareness is being promoted. The shareholders' agreement prescribes that employees shall not be dismissed at the structural rationalization, so the corporate downsizing has been carried out through restriction of new employment (there were 8,755 employees in 1997, a figure that had been reduced to 8,569 employees as of May 1999). SLTL says that the decision power is increasingly being shared with the work front and that the organizational reformation has made the overall structure flatter, leading to a shortening of the time necessary for making important decisions.

Furthermore, the number of subscriber cables per employee, which can be considered as an index showing the effect of improving the organizational efficiency, has reached 60 lines as of April 1999 (in contrast to 31 lines in 1996).

Figure 2-2 Organization Chart of SLTL



(Note): This chart shows only a part of the whole organization.

[3] City areas: Colombo, Galle, Gampaha, Kalutara, Kandy, Matara, and Negoda areas
Rural areas: Areas other than above.

(4) Tariff Setting

The item that was pointed out in the post-evaluation for the Phase I Project (March 1996) as requiring improvement is the presence of cross subsidy. In the cross subsidy system, the deficit due to low rate domestic calls is covered by the surplus due to high rate international calls. For that reason, and in accordance with the decision in the shareholders'agreement, the domestic call rate was raised by 25% while the international call rate was lowered by 8% in both 1998 and 1999. The ratios of the international and domestic earnings in the gross earnings are shown in Table 2-2. In 1997, the international earnings and domestic earnings accounted for 65% and 32% of the total, respectively. In 1998, however, the former accounted for 60% while the latter accounted for 36%. In other words, as a result of revising the rate twice, the cross subsidy has being reduced. The ratio between the domestic and international earnings also supports this tendency: 1:2.04 in 1997, but only 1:1.65 in 1998.

The post-evaluation of the Phase I Project also pointed out the problem of the basic monthly subscription fee. The basic monthly subscription fee is important as a source of earning to cover the investment cost, but the rate level was far too low: 100 Rs/month regardless of whether the subscription was private or business. Hence, in the two rate revisions, the fee was increased to 180Rs/month for private use and 300Rs/month for business use.

In the shareholders' agreement concluded at the time of the sales of SLTL stocks, it was decided that the tariff should be revised annually from 1998 to 2002 in order to set the tariff system in accordance with the actual cost. An approval by TRC is required to revise the rate, but the Sri Lanka government has already agreed to this decision. However, a certain friction can be felt in the actual process of revising the rates (determining the set rate for each item): it takes long to obtain approval from TRC and the execution of the new rates is postponed half a year or more etc.

Table 2-2 Comparison of Earnings from the International and Domestic Calls

Unit: million Rs

	1998	Ratio	1997	Ratio
Earnings from domestic calls	6,209	36.3%	4,349	31.8%
Earnings from international calls	10,256	60.0%	8,880	64.9%
Other	617	3.6%	456	3.3%
Total earnings	17,082	100.0%	13,685	100.0%

Source: SLTL material

(5) Customer Service

The service level has steadily been expanded after the privatization process leading to the establishment of SLTL, via implementation of ISDN and other services. In addition, a customer relation improvement plan was formulated. The business hours were extended to 6:00 p.m., a series of service stations called Teleshops was newly introduced, and windows for dealing with

complaints were successfully integrated. Moreover, billing used to take 6 months on average; this was shortened to one month.

2.2.2 Maintenance Scheme and Status

According to SLTL, it is difficult to fully maintain the entire system due to the rapid increase of the number of telephone subscribers and the low maintenance level of the existing facilities before the Phase I Project. The management strongly recognizes the importance of reinforcing the maintenance activities. It has deployed additional maintenance equipment, among other things increasing the number of maintenance vehicles from 429 at the end of 1997 to 1,251 as of May 1999, and is taking actions to formulate maintenance guidelines to reform awareness of the site workers and to strengthen the field supervision etc. In addition, together with the increase of the maintenance budget from 477 million Rs in 1997 to 817 million Rs in 1998, the organizational structure is also being reviewed in order to improve the efficiency of the maintenance further.

2.2.3 SLTL Financial Status

The financial statement of SLTL in fiscal year 1998 is as shown below. Currently, SLTL is engaged in many financial projects not only self funding ones but also those involving private funds. Even if only counting the major ones, the company is still involved in more than 30 projects, among others additional improvement projects via the ODA loan and projects funded through supplier's credit etc. by export credit institutions in other countries. Consequently, the debt burden due to these large-scale projects has been increasing; the interest-bearing liabilities, for instance, reached 21,720 million Rs in 1998. The ratio of fixed assets to long-term capital[4] has thus been rising (see Table 2-3).

In order to secure a sound financial status for SLTL it is important that the Sri Lanka government observes the tariff revision level and schedule, since it has a great influence on the financial structure. This means a continuation of the periodical tariff increase in the coming three years in the same way it was done in the last two years, and this has already been agreed upon in the shareholders' agreement. Regarding the ODA loan projects, SLTL re-lends in Rs from the Ministry of Finance, who is the borrower of ODA loan. The interest rate is 13% a year and the repayment period is 12 years (with two-year grace period); compared to a commercial bank, the repayment period is longer but the interest rate is the same or slightly lower.

Considering the management indices of SLTL, it can be seen from Table 2-3 that the receivables turnover period in months, which was pointed out as a problem area in the evaluation of the Phase I Project, has been shortened by approximately 2.8 months compared to that of before the privatization. The effect of the implementation of the monthly billing system and the shortened time required for the billing can be recognized.

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[4] An index to show the long-term financial stability. It is calculated by <fixed assets ÷ (owned capital + fixed liabilities) x 100>. The lower the value, the higher the stability.

Table 2-3 Management Analysis Index

	1994	1996	1998
Receivables turnover period	8.4 months	8.98 months	6.13 months
Ratio of fixed assets to long-term capital	69.9%	92.64%	97.47%

Source: SLTL materials

Table 2-4 Balance Sheet

(Assets) (Liabilities, equity and reserves) Unit: million Rs

	Item	FY1998 Amount	FY1998 Ratio		Item	FY1998 Amount	FY1998 Ratio
Current assets	Cash balances	1,159	2%	Liabilities	Payables	6,178	10%
	Receivables due within one year	8,721	14%		Interest bearing loans	3,160	5%
	Inventories	1,255	2%		Deferred income	479	1%
	Total	11,135	18%		Total current liabilities	9,817	16%
Fixed assets	Tangible fixed assets	47,104	76%		Interest bearing loans	18,560	30%
	Intangible fixed assets	2063	3%		Provisions	5371	9%
	Investment etc.	739	1%		Deferred Income	4269	7%
	Receivables due after one year	809	1%		Total fixed liabilities	28,200	46%
	Total	50,715	82%			38,018	61%
Total assets		61,850	100%	Capital	Share capital	21,059	34%
					Capital reserves	188	0%
					Retained earnings	2,586	4%
					Total	23,833	39%
					Total liabilities, equity and reserves	61,850	100%

Source: SLTL materials

Table 2-5 Statement of Income

Unit: million Rs

	FY1998	
	Amount	Composite ratio
Revenue	17,082	100%
Costs	12,735	75%
Operating profit	4,347	25%
Non-operating income	256	1%
Non-operating costs	0	0%
Interest income	90	1%
Interest expense and related charges	1,899	11%
Profit before tax	2,794	16%
Taxation	1,260	7%
Profit after tax	1,534	9%
Transfer to reserves	1,534	9%

Source: SLTL materials

2.2.4 Impact on the Environment

No particular adverse effects due to the implementation of this project can be identified.

2.3 Project Effects and Impacts

2.3.1 Quantitative Effects

(1) Financial Internal Rate of Return

At the time of appraisal, the financial internal rate of return (FIRR) was estimated to be 10.1%. In this calculation, the earnings gained from telephone installation fees, subscription fees, and call charges are considered as the benefit, the building cost in this project and the operation and maintenance cost as the total cost, and the project life is assumed to be 20 years. The result of a re-calculation based on the most recent actual results available, shows that the FIRR of this project is actually 25.8% (see the Appendix).

(2) Effects of the Telecommunication Service Expansion[5]

① Effects of this project

The aim of this project was to respond to the communication demands in the telecommunication service and improve the overall communication quality. Table 2-6 shows the development of the number of subscriber cables and the waiting applicants in the Greater Colombo area and the Gampaha area. Multiple projects, such as maintenance of telephone switchboards and installation of subscriber cables, are carried out in parallel for the common purpose of improving the

[5] The figures below are data of SLTL only; portions of Lanka Bell and Sun Tel are excluded.

telecommunication network, and the effects manifest themselves as a whole. It is thus difficult to extract the contribution ratio of a single project, but the effect of the installation of primary cables for subscribers in this project will nonetheless be analyzed.

In this project, primary cables supporting 88,000 incoming lines were laid out in the Greater Colombo area. They are connected to the secondary cables that branch the network out from the main lines, which then branch further out into the incoming lines, which form the connections to each telephone subscriber. This is how the number of subscriber lines will increase. Out of 88,000 primary cables under this project, currently about 20,000 lines are connected to new telephone subscribers[6]. The number of total subscriber lines has increased by about 100,000 lines in the Greater Colombo area after the completion of this project (1996). This indicates that this project has contributed with approximately 20% of this increase. Furthermore, in Gampaha area the number of subscriber lines used to be only 6,713 in 1996, but this figure had increased to 16,611 in 1998 and the waiting list had also become longer. Primary cables supporting 26,300 incoming lines were laid out in the Gampaha area in this project, a development which is expected to contribute greatly to the increase in the number of subscriber cables in the future.

Furthermore, in the Greater Colombo area, the telephone density was improved from 6.1% in 1995 to 10.5% as of May 1999.

Table 2-6 Changes of Numbers of Subscriber Lines / Waiting List in the Greater Colombo Area and Gampaha Area

		1990	1995	1996	1997	1998	1999 (Note)
Greater Colombo Area	No. of subscriber lines	82,860	138,538	167,836	191,847	252,579	264,423
	No. of waiting applicants	30,974	109,857	118,291	110,716	108,649	52,741
Gampaha Area	No. of subscriber lines	1,453	n.a.	6,713	10,761	16,611	n.a.
	No. of waiting applicants	1,238	16,392	15,331	15,341	18,606	n.a.

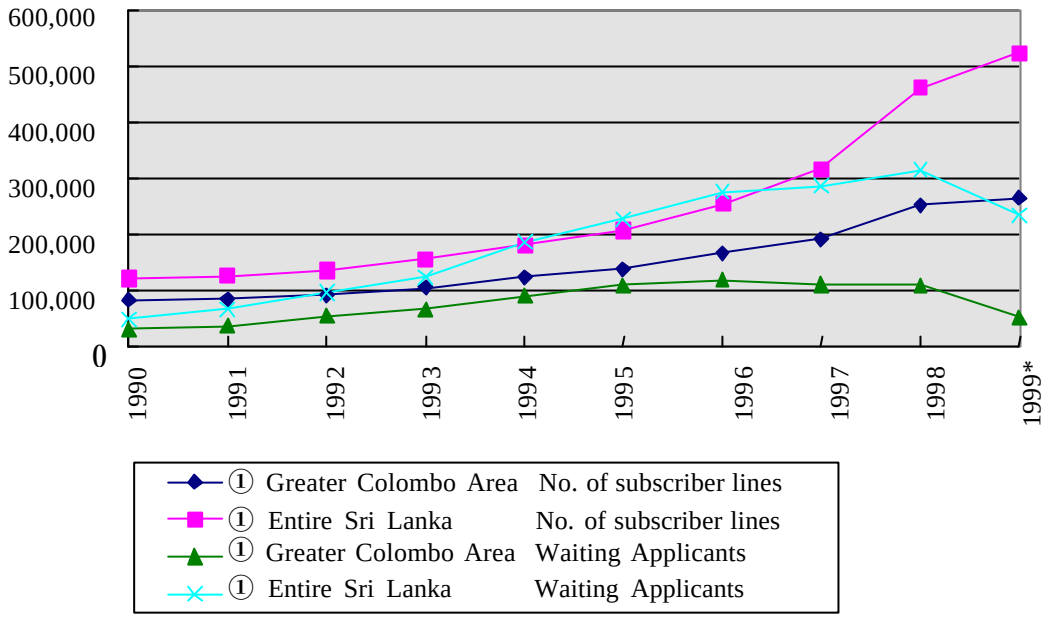
Source: SLTL materials
(Note): The data for 1999 is as of May.

②Communication Service Expansion in the Entire Sri Lanka

The telephone density improved from 1.1% in 1995 to 2.8% as of May 1999 in Sri Lanka as a whole. Furthermore, the call completion rate reached 34.5% in 1998, which is an improvement in the quality of the telephone calls compared to 28% in 1994. Figure 2-3 shows the development of the number of subscriber lines and the waiting applicants in the entire Sri Lanka and the Greater Colombo area. While the growth rate of the subscriber lines has been increasing, the growth rate of the waiting list is decreasing. It can thus be said that the gap between the waiting list and the number of subscriber lines in the telecommunication sector is being resolved in Sri Lanka as a whole. Furthermore, the number of subscriber lines in the Greater Colombo area constitutes smaller and smaller percentage in the entire Sri Lanka.

[6] 13,000 lines have already been used to improve the existing subscriber cables.

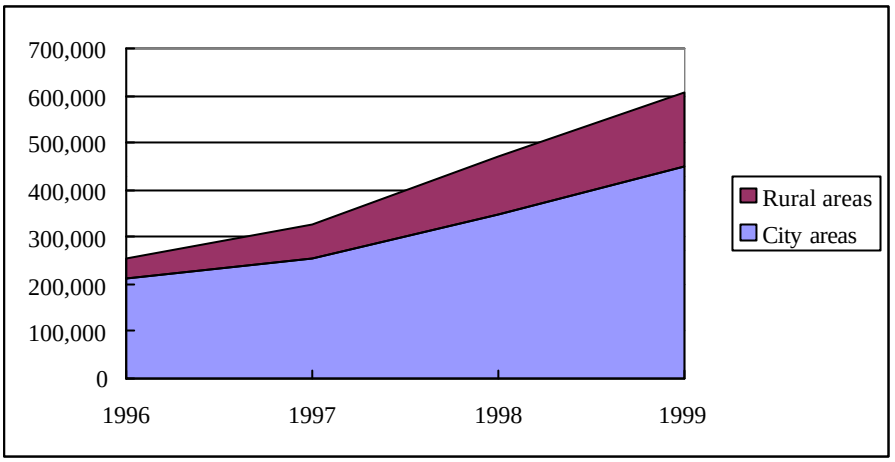
Figure 2-3 Changes of Numbers of Subscriber Lines and Wailing Applicants in Entire Sri Lanka and Greater Colombo Area



Source: SLTL materials
(Note): The data for 1999 is as of May.

As the next item for consideration, Figure 2-4 shows the development of the number of subscriber cables in the city and rural areas. After the sales of the stocks in 1997, the ratio of subscribers in the rural areas in the entire Sri Lanka increased from 17% in 1996 to 26% in 1999. Table 2-7 shows the number of increase in new subscriber lines each year. It can be seen that here as well, the ratio of subscribers in the rural areas has been increasing since 1997. One of the background factors for these developments is that the business goals set in the management contract are being achieved. In other words, the regional differences in the telecommunication levels between the city and rural areas are being corrected.

Figure 2-4 Changes of Number of Subscriber Lines in the City and Rural Areas



Source: SLTL materials
(Note): Data for 1999 is estimated value until December.

Table 2-7 Number of New Subscriber Lines for Each Year

	1996	1997	1998	1999
City areas	41,175 (82%)	43,593 (60%)	92,156 (64%)	102,900 (74%)
Rural areas	8,998 (18%)	28,864 (40%)	50,919 (36%)	35,600 (26%)
Nationwide	50,173	72,457	143,075	138,500

Source: SLTL materials
(Note): Data for 1999 is estimated value until December.

3. Lessons Learned

In the public service, where a certain profitability can be expected, a private enterprise's participation in the management may prove effective in order to promote efficient management of the executing agency. Methods such as management contracts can be employed to achieve a better coordination between pursuing profit on one hand and fulfillment of tasks given by the development policy on the other.

In case of the executing agency of this project, it was reorganized into a public corporation, and then into a stock company. At the same time as the part of the stocks owned by the government was sold to a private enterprise, the schedule for regulation relaxation was also determined; entry of other private enterprises will be allowed into the international communications field where high earnings was ensured by the monopolization. The management contract was concluded between the executing agency and the private enterprise at the sales of the stocks. It was done so in order to promote the management efficiency of the executing agency as well as to fulfill the development tasks at the same time.

Generally speaking, when participating in the management of a public service, a private enterprise tends to concentrate the investment in city areas where profitability is relatively high. In the management contract in question, the following scheme was adopted to achieve balance between such pursuits of profit and a fulfillment of the business goals set in line with the development policy. Those business goals include increasing the number of subscriber cables and resolving the problem of the waiting list in an early stage in both the city and rural areas, and the management fee is paid according to the achievement level of those goals. Thus, it is designed so that the regional differences are corrected while still providing an incentive to the participating private enterprise.

The effect of the partial privatization through the sales of stocks has already been recognized as a main cause for the improved efficiency of the management. The customer service was improved, the receivables turnover period was shortened, the number of cables per employee increased etc. It would be too early attempt to measure the effect of the partial privatization in terms of fulfillment of the tasks specified by the policy at this time, since it has only been two years since the sales of the stocks. Nonetheless, in the last two years the track record for the number of lines for new subscribers per year has been far outpacing the figure set in the business goals both in the city and rural areas, and the ratio of subscriber lines in rural areas in the entire Sri Lanka is also increasing.

In the public service, where a certain profitability can be expected, a private enterprise's participation in the management may prove effective in order to promote efficient management of the executing agency. In this case it becomes important to coordinate two contradicting pursuits, on one hand the fulfillment of tasks specified in the development policy as a public service, e.g. correction of regional differences, and on the other the pursuit of profit which is the principle of the enterprise activities. In some cases, the specification of business goals and payment schemes according to the achievement level of these goals can be combined through management contracts etc., so that the development tasks can be fulfilled while still giving the participating enterprise an incentive.