

**ESTIMATES COMMITTEE
(1972-73)**

(FIFTH LOK SABHA)
FORTY-FIRST REPORT

MINISTRY OF COMMUNICATIONS
(INDIAN POSTS & TELEGRAPHS DEPARTMENT)
' TELEPHONES '



**LOK SABHA SECRETARIAT
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ESTIMATES COMMITTEE

(1972-73)

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Shri M. S. Sundaresan—*Deputy Secretary.*

Shri Y. Sahai—*Under Secretary.*

INTRODUCTION

1. The Chairman, Estimates Committee, having been authorised by the Committee to submit the Report on their behalf, present this Forty-First Report on the Ministry of Communications (Indian Posts and Telegraphs Department)—Telephones.

2. The Committee took evidence of the representatives of the Ministry of Communications (Indian Posts & Telegraphs Department) on the 15th and 16th December, 1972. The Committee wish to express their thanks to the Officers of the Ministry and the Indian Posts & Telegraphs Department for placing before them the material and information which they desired in connection with the examination of the subject and for giving evidence before the Committee.

3. The Committee also wish to express their thanks to all the Associations and Bodies of Trade and Industry and Individuals who furnished Memoranda to the Committee.

4. The Report was considered and adopted by the Committee on the 18th April, 1973.

5. A statement showing the analysis of recommendations/conclusions contained in the Report is also appended to the Report (Appendix VI).

KAMAL NATH TEWARI,
Chairman,
Estimates Committee

NEW DELHI ;
April 23, 1973.
Vaisakha 3, 1895 (S).

CHAPTER I

INTRODUCTORY

1.1. Telephone is a vital communication link in modern business and industry and demand for this facility is directly related to the growth of economy. An efficient telecommunication system is the *sine-qua-non* of a modern society. Telephones play a significant role in the communication net-work of any nation and particularly in a vast country like India with a vast developing economy.

1.2. The demand for telephones in any country is related to the scale of economic activity, prosperity of business and average income levels of its citizens. In fact, international studies have established a close relationship between per capita income and the demand for telephones.

1.3. If the national economy is to have an overall annual growth of 5.5 per cent, as envisaged in the Fourth Five Year Plan (1969-74), the growth in communication according to experts should be over 25 per cent.

1.4. During the course of evidence the Secretary of the Ministry of Communication informed the Committee as follows :—

“We had made our projections based on 25% average growth but unfortunately, this growth has not materialised. Our growth rate has been less than 25%, our growth rate is now 13% and we have been maintaining it consistently with slight ups and downs.”

1.5. The Committee were further informed :—

“We have not anticipated the rate of 25% at all. Even in the beginning when we made the projection, we said that if the country's growth of economy is at the rate of 25% and if we have to liquidate all the waiting list, then we have to achieve 25%. But the country's growth rate is not 25% and we have not planned to liquidate it by 1980; and the money given to us is hardly sufficient to meet a growth rate of 13%.”

1.6. The Committee feel that advance planning for telephones is important, no less than that for industrial projects. Unless necessary infra-structure is built up in advance, it cannot be possible to meet even a reasonable portion of the rising demand for telephone facilities in the coming years. If the annual growth rate is to expand at the rate of 5 to 6 per cent as envisaged in the Fourth Five Year Plan, the additional demand for telephones is bound to be higher. To build up necessary capacity for providing this additional facility, the Posts and Telegraphs Department will have to make a larger investment in Cables, Equipments, telephone instruments, spares, microwave links etc. The Committee, therefore, feel that it is important that a 'Perspective Plan' for 10 to 15 years is drawn up in regard to the development of telephone services in the country to meet the needs of developing economy.

CHAPTER II

PLANNING AND PLAN TARGETS

(i) Plan Provisions for Telephones

2.1. In the First Five Year Plan a sum of Rs. 3962 lakhs was provided for telephones (both Local and Trunk) while a sum of Rs. 3419 lakhs was spent thus resulting in a shortfall of Rs. 543 lakhs. In the Second Five Year Plan a sum of Rs. 6067 lakhs was allotted (for Local, Trunk and Coaxial Cables) of which a sum of Rs. 5171 lakhs was spent resulting in a shortfall of Rs. 896 lakhs. In the Third Five Year Plan a sum of Rs. 12441 lakhs was allotted of which a sum of Rs. 12374 lakhs was spent resulting in a shortfall of Rs. 67 lakhs. In the Fourth Five Year Plan a sum of Rs. 38471 lakhs has been allotted. These provision are exclusive of money allotted for lands and buildings.

2.2. The details of the financial targets and achievements during the various Plan periods in respect of these telephone services viz. Local, Trunk and Coaxial Cable, as furnished by Government are as follows :

(Figures in Rupees—lakhs)

Scheme	1st Plan		2nd Plan		3rd Plan		4th Plan	
	(1951-56)		(1956-61)		(1961-66)		(1969-74)	
	Tar-gets	Achi-vement	Tar-gets	Achi-vement	Tar-gets	Achi-vement	Tar-gets	Achi-vement
1. Local Telephone Service	3315	2968	4244	4006	7765	8583	25340	5463*
2. Trunk Telephone (LD-PCOs, Manual Trunks, TAX, Cable Carriers, Open-wire carriers systems O/W line WHF etc.	647	442	1823	832	2107	1961	4309	837*
3. Coaxial Cable	—	9	—	333	2569	1830	8822	1183*
TOTAL	3962	3419	6067	5171	12441	12374	38471	7483

2.3. The Plan-wise physical achievements against the targets for the various schemes are stated to be as follows :

	1st Plan (1951-56)		2nd Plan (1956-61)		3rd Plan (1961-66)		4th Plan (1969-72)		(1972-74)
	Target	Achievement	Target	Achievement	Target	Achievement	Target (69-74)	Actual Estimated	
I. <i>Local Telephone Service</i>									
(a) No. of Telephone Exchanges	236	347	N.A.	564	1200	1327	1500	773	650
(b) No. of Telephones	132,000	109,600	180000	183400	300000	396415	700000	312144	335000

*Actual expenditure for the year 1969-70 and 1970-71 only.

II. *Trunk Telephones Service*

(a) Long distance PCOs	662	916	1200	1046	2000	1660	2000	1157	600
(b) Open wire carrier net work No. of Channels	495	425	712	631	3000	2790	5040	2030	1500
(c) Coaxial & Other Trunk Cable — Route in Kms.	760	523	3200	712	4545	7327	7509	1914	2847
(d) Microwave Systems—Route Km	Nil	..	Nil	2500	190	12050	1330	4205	

2.4. In a written reply about the minimum monetary requirements against the requirements for telephones in the Fourth Five Year Plan, the Ministry stated as follows :—

“The three alternative estimates of monetary requirements of the Department for the Fourth Five Year Plan and the corresponding Targets were made.

Waiting period as estimated before the beginning of the Plan	Aggregate requirement of resources (In crores of Rupees)
3·8 years by end of 4th Plan	846
4·5 years by end of 4th Plan	700
4·8 years by end of 4th Plan	649

Against the above requirements, it was however, possible to obtain an allocation of Rs. 466·25 crores only. While requesting for the above funds, we had also stressed the immediate need for setting up increased production capacity both for telephone equipments and cables.”

2.5. In the Fourth Plan Mid-Term Appraisal, it has been stated:—

“At the beginning of the Plan the number of telephones was about 1·1 million. An addition of 7,60,000 telephone connections during the Plan period was envisaged and the revised target is 7,00,000 additional telephones. The annual targets for the first two years have been exceeded. It is expected that about 3,50,000 telephone connections will be provided during the first three years.”

In financial terms the plan requirements are proposed by the Ministry to be revised upwards from Rs. 466·25 crores to Rs. 488·76 crores.”

2.6 About the funds for the Fourth Five Year Plan, the Secretary of the Ministry, during the course of evidence informed the Committee as follows :—

“As far as fund is concerned, of course, we are not so much limited. Today the limiting factor is the material resources. As far as material is concerned, we do feel the pinch. But as far as foreign exchange is concerned, we used to have a very great difficulty in getting foreign exchange. But in the last few years, we have been getting a lot of assistance from the World Bank. In the last two years, we have got a fairly large assistance from the Canadian Government by way of their Canadian Development Assistance. This has more or less overcome our difficulty as far as foreign exchange is concerned. Today, the main trouble is that we do not get enough material”.

2.7 In a written note, the Ministry has informed the Committee that the limitations in fulfilling the future demands and building the infrastructure are two fold—

- (a) Financial constraints, and
- (b) Material constraints.

(a) *Financial Constraints*

It has been stated that the development of telecommunications had been largely dictated by the limited availability of resources both financial and material. During the first 3 Five Year Plans, though the economically active sectors grew rapidly through large investments and generated a high demand for telecommunication services, the development of the latter was constrained by limited resources. The large gap

between the demand for telecommunication facilities and their provision itself indicate the relative imbalance in growth in the demand sector and the providing sector. This could be corrected only if the Government policy towards assignments of priority to telecommunications is changed.

(b) *Material Constraints*

A major constraint lay in the shortage of material resources. The main sources of indigenous supply of telecommunications stores and equipment were the three Government factories, *viz.* (a) Indian Telephone Industries—for switching & transmission equipment, (b) Hindustan Cables Ltd.—for local & coaxial cables and (c) Hindustan Teleprinters Ltd.—for teleprinter and accessories and the P & T Telecommunication factories—for hardware for open wire routes, manual exchange systems, etc. It had been found that the I. T. I. & HCL are not able to supply telecommunication equipment and stores in adequate quantities to meet the plant targets. Further there was an acute shortage of items like switch board, cables and plugs, battery and power plant, subscribers meters, transmission wires, insulators, microwave towers, high frequency measuring instruments, etc. which were procured from various sources, public and private.

2·8 To augment the indigenous supply of telecommunication stores and equipment the following steps are stated to have been taken by the Government :

- “(i) A second Cable factory is being set up at Hyderabad with a production capacity of 5000 standard kilometres of cables per year (on 3 shift basis).
- (ii) The production capacity of the existing cable factory at Rупnarainpur is being augmented from 3200 standard Kilometres to 8000 Standard Kilometres of cable per year (2 shift basis).
- (iii) A second Transmission Factory under I.T.I. has been set up at Naini.
- (iv) A telephone instruments factory with an ultimate capacity of 5 lakh instruments is being set up under I.T.I. at Naini.
- (v) A second switching factory under ITI capable of producing 3 lakh lines per year had been approved.”

2·9 The Government had also appointed two High Power Committees, one under the Chairmanship of Shri G. S. Pathak, Member, Planning Commission, to assess the long-term needs of telecommunication stores and equipment and draw up suitable plans for increase of indigenous production

capacity and the other under the Chairmanship of Prof. M. G. K. Menon, Chairman, Electronics Commission to review the position in respect of research and development work and for suggesting measures for strengthening and advancement of research.

2·10 It has been suggested to the Committee that “advance planning for telephones is important, no less than for industrial projects. Unless necessary infra-structure is built-up in advance, it cannot be possible to meet even a reasonable proportion of the rising demand for telephone facilities in the coming years. It is, therefore, important that a “Perspective Plan” for 10 to 15 years is drawn up in regard to the development of telephone services in the country.”

2·11 Commenting on the suggestion, the Secretary, Ministry of Communications during evidence stated :

“In fact we have done this. We have taken 10 years, 15 years projections and we have used this for preparing our Fifth Five Year Plan. Though the Plan covers 5 years but our projection is up to 1981 and subsequent projections is upto 1986. This projection is absolutely essential because we have to plan production capacity. This is not the provision of telephone connection but production capability well in time before the Plan starts.”

2·12 When asked whether advance planning did not mean building of infra-structure in Five Year Plans and making provision for equipments, instruments, wires, poles etc. which form part of infra-structure of which there is complaint of shortage, the Secretary explained :

“When the Fourth Plan was envisaged we had planned this on the lines suggested by you. But it was not done effectively. In other words only the implementation side was there as per plans but the production capability we did not bring up as per plans.”

2·13 Further on being pointed out that unless there was production capacity for materials that were required for telephones, planning could not be considered complete and successful, the Secretary stated :

“We have realised this. That is why we have to manufacture more than we did in the Fourth Plan. * * * *
We have taken Naini factory near Allahabad and Switching Factory at Raibareilly. We have a feeling that this may not be enough. We have set up a Committee under the Chairmanship of Mr. Pathak, Member, Planning Commission to make prospective planning and take the requirements of 10

or 15 years and suggest how many factories are required. The report was expected by the end of this month and it may be ready by next month. On this report we may have to make another addition to Raibareilly factory which is going to make 300000 lines. **** What we did was that first we forecast our requirements on scientific basis right upto 1981. We took the Fifth Plan period 1974-79. For providing equipment for this period, we can depend on factories already in existence or the one which is going to come up at Raibareilly. We have taken into account our total production and have trimmed our Fifth Plan size. Based on this we have gone up with subsidiary factors. The Pathak Committee which has been set up will take into view the requirements right upto 1986 and is going to advise as to how many factories are required for this.

He also stated that their plans for the Fourth Plan were much larger but the Planning Commission taking into account the total availability of resources, trimmed "our plan to about Rs. 400 and odd crores." We had earlier planned for much larger net work, so that the waiting list could be liquidated and waiting time could be reduced to a few months by 1980 or so. The Planning Commission could not find resources and they reduced the size of the plan."

2.14 Speaking about the position of resources in the Fifth Plan, he stated :

"The position is much better in the Fifth Plan. We have asked roughly 1200 crores. The Planning Commission may give us little less. One very redeeming feature in the Fifth Plan is that our own contribution is going to be of the order of 70 per cent. It was not there in the Fourth Plan. Our generating resources are much higher in the Fifth Plan."

2.15 In reply to a question in the Lok Sabha on 24-5-72 enquiring whether a study of the development made in the telecommunications field has revealed that inadequate understanding of the country's requirements and faulty planning have created a big gap between demand and supply of telephones and what action, if any, has been or is being taken on these findings, the Ministry of Communications replied :

"The development of telecommunications has been constantly under review and in the 25 years since Independence, the growth in telephone service has been more than 11 times. Efforts have

continuously been made to reduce the gap between demand and supply by executing successive Five Year Plans, each about $2\frac{1}{2}$ times the former but some gap is inevitable due to shortage of resources both financial and material. The position year by year of progress made and the waiting list is shown below:

Date	No. of Tele. Exchange	Tele-exchange capacity (in lakh)	Direct exchange lines (in lakhs)	Waiting list (unfilled demand in lakhs)
1-4-48	321	1·000	0·830	Not available
1-4-51 . . .	540	1·225	1·022	Do.
1-4-56 . . .	831	2·384	1·730	0·29
1-4-61	1374	4·126	3·320	1·65
1-4-66 . . .	2711	7·719	6·23	3·49
1-4-69 . . .	3432	10·324	8·138	4·28
Start of Fourth Plan				
1-4-71 . . .	3967	11·938	9·814	3·10

“The Planning Commission has been allotting larger financial resources for the successive 5 years Plans and actions have already been taken to augment the indigenous production capacity of telecommunication stores and equipment. Two high power Committees have recently been appointed to frame perspective plans and suggestions to progressively bridge the gap between requirement and availability of material and equipment and to modernise the telecommunication technology.”

The Telephone Density

2.16 One of the standard index by which the development of tele-communications is judged internationally is the telephone density measured as the number of telephones per 100 of population. This is a measure of penetration of telephone service to the various social strata. A study by ECAFE in 1970 revealed that the telephone density in India is one of the

lowest in South East Asia and lower even than such smaller countries as Ceylon, Thailand and Phillipines. The relevant statistics are as below:

Telecommunication Development in ECAFE Region

Countries	No. of tele- phone 1st Jan. 1969	Estimated population in million	Telephone Density (per 100 people)
1 New Zealand	11,55,465	2.70	41.56
2 Australia	3,392,436	12.00	48.20
3 Japan .	20,525,211	102.00	20.12
4 Hongkong	426,540	3.96	10.74
5 Singapore	119,184	2.00	5.95
6 Fiji	14,507	0.51	2.83
7 Brunei . . .	2,681	0.14	2.35
8 China (Taiwan)	280,192	13.60	2.05
9 Korea Republic of .	489,912	30.60	1.06
10 Malayasia	156,354	10.40	1.50
11 Mangolia. .	16,220	1.24	1.32
12 Western Samoa	1,800	0.14	1.29
13 Iran	250,300	27.30	0.92
14 Philippines	241,496	36.40	0.66
15 Ceylon .	57,146	12.00	0.48
16 Thailand .	114,419	38.80	0.34
17 India . . .	1,047,000	523.50	0.20
18 Vietnam (Republic)	30,964	17.20	0.18
19 Pakistan .	184,488	110.00	0.16
20 Indonesia .	181,377	118.00	0.15
21 Combodia	7,315	6.65	0.11
22 Burma .	22,080	27.70	0.08
23 Afghanistan	10,000	16.70	0.06
24 Nepal	5,400	10.80	0.05
25 Laos	1,081	2.70	0.04

2.17 The Committee regret to note continuous shortfalls in the successive Plan periods viz. First, Second and Third Plan periods to the tune of Rs. 543 lakhs, 896 lakhs and 67 lakhs respectively in the

actual expenditure incurred on telephone services against the targetted amount of Rs. 3419 lakhs, 6067 lakhs and 12441 lakhs. This is all the more regrettable in the context of increasing demand for telephones, consequent increase in waiting list and inability of Government to cope with it. The Committee are unable to appreciate the stand of Government that one of the limitations in fulfilling the future demands and building infrastructure for telephones has been financial constraints, as they find that Government have not been able to utilise even the amounts allocated in the Plans. The Committee are constrained to observe that wide gaps between Plan provision and the actual expenditure indicate not only faulty and unrealistic planning but also tardy implementation of the schemes. They hope that Government would in future frame more realistic estimates as far as possible keeping in view the various factors likely to affect the implementation of the programme.

2.18. The Committee note from the Mid-Term Fourth Plan Appraisal, that while the financial allocations for telephones has been increased from Rs. 466 crores to Rs. 488 crores, the physical target has been reduced from 7.6 lakhs additional telephone connections to 7 lakhs additional telephone connections. From the information supplied by the Department, it appears that even this reduced target will not be fulfilled and the actual achievement will be 6.47 lakhs additional telephones by the end of the Fourth Plan. The Committee have commented on this subsequently in para 2.33 also. The Committee attach the highest importance to the achievement of the physical target, for, it is well known that there are very long lists of persons waiting for several years for provision of telephones in metropolitan and other cities. The Committee see no reason why material management, was not taken care of by the telephone authorities, in the light of experience gained in the earlier Plan periods.

2.19. The Committee note that Government have belatedly set up a Committee under the Chairmanship of Shri M. S. Pathak, Member, Planning Commission, to go into all aspects of manufacture of tele-communication equipment and to prepare a perspective Plan for stepping up of indigenous capacity for manufacture of telecommunication equipment of all types. The Committee, however, find that the report of the high-powered Committee is still awaited. As the setting up of facilities for manufacture of equipment etc. takes several years, the Committee would like to stress that this report should be expedited and Government should draw up a working plan of action to ensure that the targets to be set out in the next Plan are achieved in time.

(ii) *Waiting List*

2.20. The Public Accounts Committee (1968-69) in their Fortieth Report (Fourth Lok Sabha) dealing with the subject of waiting list for tele-
pnes had made the following recommendations:—

“The Committee note with concern the progressively widening gap between the demand and the supply of telephones. As on 31st March, 1968, the number of people on the waiting list for tele-
phones was fifteen times what it was on 31st March, 1956, the supply being about four years behind the demand for the country as a whole. The Committee also note that the Department expects more than a doubling of the demand for telephones every five years hereafter till 1980-81, and that, during the Fourth Plan Period, 15 lakhs of telephones would be necessary just to maintain the *status quo* in the matter of waiting lists. Even this limited plan for expansion would, on the Department’s estimates, call for an investment of Rs. 846 crores which, on current indications, may not be available due to the dearth of foreign exchange and the limitations of internal resources caused largely by the diversion in recent years of the profits made on the telephone services to the postal and telegraph services.”

“The Committee note with concern that the waiting lists for tele-
phones in metropolitan cities like Calcutta, Bombay and Delhi are alarming, the average waiting period in Calcutta being 6 year^s Bombay 5 years, and Delhi 6·5 years. The Committee also note that in the case of Bombay, the waiting list has been maintained only under the category of the ‘OYT’ scheme and the Department had arbitrarily given up the registration of applications under the non-OYT category since 1962. It is needless to point out that such arbitrary action in stopping registration for tele-
phones under the larger category of non-OYT has not only seriously depressed the figure of out-standing demand for telephone, in Bombay but has also obviously distracted the equitable allocation of scarce resources to that metropolitan city.”

“A uniform procedure for the maintenance of waiting lists for the non-OYT category should be evolved and enforced without delay so as to reflect the true position. The Committee also suggest that the Department should lay down precise guidelines for determining priorities for the allocation of additional lines keeping in view the number on the waiting list and the duration of waiting.”

“The Committee cannot too strongly stress that the P&T Department should not only correct the injustice done to Bombay in the matter of the correct estimation of outstanding demand but also ensure that in any allocation of telephone resources in the next Plan Period this aspect is kept in view so as to correct the inequity that has taken place.”

“The Committee also consider that if the acute telephone position in the metropolitan centres of commerce and industry like Calcutta, Bombay and Delhi is to be eased to a reasonable extent, it is imperative that a crash programme for the installation of 1·62 lakh telephones at a cost of Rs. 62 crores, proposed by the Department, is accorded high priority and is implemented in all earnestness.”

2.21. In the material supplied to the Public Accounts Committee it had been stated :

“They were informed that the Department had estimated the requirements of telephones for the period 1969—74 as 35 lakhs, but that, in view of the constraint on resources, a plan for provision of 15 lakhs telephones had been prepared and submitted to the Planning Commission.”

“The number of working connections (DELs) on 31-3-68 was 7.45 lakhs. The telephone demand was of this order sometime in May/June, 1964. It would thus appear that the number of telephone connections on 31-3-68 was about 3—8 years behind the telephone demand.....”

2.22. The following is the statement of figures of long-term forecast of telephone requirements arrived at by projection of trend curves which formed the basis of the Department’s proposals for the draft Fourth Plan.

Forecast of Telephone Demand

Sl.No.	End of the year	Demand in lakhs of D.E.Ls. *	Demand in lakhs of telephone sets
1	2	3	4
<i>Base Year</i>			
1	1968-69 .	15·49	21·19
2	1969-70	18·03	25·50
3	1970-71	20·79	29·66

1	2	3	4
4	1971-72	24.41	34.52
5	1972-73	28.40	40.16
6	1973-74	33.05	46.74
7	1974-75	38.45	54.38
8	1975-76	44.74	63.27
9	1976-77	52.06	73.62
10	1977-78	60.57	85.65
11	1978-79	70.49	99.68
12	1979-80	82.02	115.98
13	1980-81	95.43	134.94

2.23. The position with regard to the gap between demand and supply of telephones as on 31-3-1968 in respect of Calcutta, Bombay, Delhi and Madras is as below:—

Sl. No.	Name of Towns	Tele- phone Demand (In thou- sands)	Working Connec- tions		Wai- ting List As% of Total De- mand	Average waiting period in year	8
			In Thou- sands	As% of total Demand			
1	2	3	4	5	6	7	8
1	Calcutta	186.763	98.208	53%	88.555	47%	6.0
2	Bombay	164.524	92.253	56%	72.271**	44%	5.0
3	Delhi	127.106	63.156	50%	63.950	50%	6.5
4	Madras	54.306	40.818	74%	13.488	26%	3.5

*Direct Exchange Lines.

**The waiting list in Bombay relates exclusively to OYT.

2.24. In the draft Fifth Year Plan—Tele-communications of the Ministry of Communications under the heading 'The Gap Between Demand and Provision of Tele-communication Services' the following information has been given:

“Though in absolute terms the growth of telecommunications has been quite remarkable, the demand for services has grown faster resulting in a widening gap between the demand and provision since sometime. The following gives the position in respect of Waiting Periods for obtaining telephone connections on an All India basis :—

Plan	Date	Working connections (DEL's in lakhs)	Waiting List (unfilled demand in lakhs)	Total Demand in lakhs	Average Waiting period (in years)
2nd Plan	1-4-56	1.73	0.29	2.02	0.9
	1-4-61	3.32	1.65	4.97	1.8
3rd Plan	1-4-66	6.51	3.49	10.00	3.2
4th Plan	1-4-69	8.14	4.28	12.42	3.5
	1-4-74	13.06*	3.70*	16.76*	2.8*

*Projected figures.

It would be seen that the Waiting Period had steadily increased from 1 year at the beginning of the 2nd Plan to about 4 years at the beginning of the 4th Plan. Due to the large programmes of the 4th Plan and the regression in the growth of demand in the late '60s due to economic depression caused by abnormal factors, the average Waiting Period is expected to reduce to about 3 years at the end of the 4th Plan. Even then, the position will remain unsatisfactory as the Waiting Periods in large metropolitan areas with heavy concentration of demand will continue to remain fairly long. The long waiting periods for obtaining telephone connections has given rise to strong public criticism and considerable public inconvenience.”

2.29. Further asked to state the pending demand for telephones in the country at the beginning of Fourth Plan, likely demand at the end of the Fourth Plan and Fifth Plan and the targets laid down for achieving these demands Government in a written note have stated :

“ (a) The pending registered telephone demand in the country at the beginning (1-4-69) of the 4th Fifth Year Plan was 4.27 lakhs. The likely pending demand at the end of the Fourth Plan (39-3-1974) is likely to be about 4.00 lakhs)

The estimated increase in the total telephone demand during the Fifth Plan period (74—79) is about 7.67 lakhs.

A perspective Fifth Five Year Plan has been prepared with an outlay of about Rs. 1150 crores on Tele-communications in the P&T Department so that by end of Fifth Plan (*i.e.*, 1979) the average waiting period for getting a telephone connection is reduced to about 2 years as compared to the present *i.e.*, 1972 average waiting period of about three to four years. During the Fifth Plan it is proposed to provide additional 6.84 lakhs direct Telephone Exchange lines. ”

2.30. The total telephone working all over India and separately in Bombay, Madras, Calcutta, Delhi on 31-3-1972 are indicated below:

(i) Whole of India.	13,97,291
(ii) Bombay	2,09,645
(iii) Calcutta	1,60,362
(iv) Delhi	1,36,920
(v) Madras	72,352

2.31. During the course of evidence the Committee were informed by the representative of the Ministry :

“ We expect that the demand of telephones by the end of the Fourth Plan would be 16.70 lakhs. That is inclusive of telephones working. By the end of Fifth Plan, it is expected to be 23.5 lakhs. We have taken the increased demand into account while arriving at this figure. ”

2.32. To a question what has been the rate of growth and by what percentage the demand has increased, the Secretary, Ministry of Communications stated:

“ The demand is also of the same size—because, the waiting list is continuing to be the same. For example, we started the Fourth Plan with a waiting list of about 4·28 lakhs and at the end of the Fourth Plan we expect that the waiting list will be 3·7 lakhs. With all this 1200 crores of investment we envisage for the Fifth Plan will continue to be 3·6 lakhs, which means that the waiting list would be a ‘supressed’ waiting list. . . .because a lot of people do not apply for telephone nowadays.”

He confirmed the statement that in metropolitan cities in particular, people have been on the waiting list for as long as 9 to 10 years including persons in special categories. It was stated that they had submitted a plan to the Planning Commission suggesting the outlay of a little over than Rs. 1350 crores. Their objective was to reduce the waiting period at the end of the Fifth Plan from 1·5 to 2 years and to meet all the demands without any period by 1986. He however, added, that there would be pockets where persons would still remain on waiting list for long periods. He further stated :

“ The Planning Commission gave us a broad outline that our Plan could be double the Fourth Plan. The Fourth Plan allocation was 470 crores. We worked out our plans and our proposals were for 1350 crores.

With regard to the question as to what will be the total allocation, if we have to wipe out the waiting list, I would like to submit that for wiping out the waiting list completely, it would be necessary to expand the manufacturing capacity. This will not be possible within the Fifth Plan. Even if all the allocations are made to us, we will not be able to do so within the time of five years. Time will be required for setting up the additional capacity. It will be 1986, when the waiting list can be liquidated.”

2.33. The Committee are concerned to note that Government will not be in a position to supply telephone connections without any waiting period till 1986, inspite of the fact that it is considered a basic infra-structure for a developing economy. In this connection they would like to point out that during the First three years of the Fourth Plan, i.e. till the end of March, 1972, Government were able to provide

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2.33. The Committee are concerned to note that Government will not be in a position to supply telephone connections without any waiting period till 1986, inspite of the fact that it is considered a basic infra-structure for a developing economy. In [this connection they would like to point out that during the First three years of the Fourth Plan, i.e. till the end of March, 1972, Government were able to provide

only 3,12,144 additional telephones and the estimated additional number of telephone connections to be installed during the remaining two years of the Fourth Plan is 3,35,000. This indicates that there would be shortfall of 52,856 telephone connections against the revised estimate of 7,00,000 telephone connections and 1,17,856 telephone connections against the Original estimates of 7,60,000 connections. This is all the more distressing, considering the fact that the total number of persons/organisations on the waiting list all over India as on 31-3-1972 was 3,41,109 and is likely to be about 4 lakhs at the end of the Fourth Plan. *i.e.* by 31st March, 1974. Further it is a matter of great concern to note that the problems of providing new telephone connections in the Metropolitan cities of Bombay, Delhi and Calcutta is getting more and more acute from year to year. At the end of 31st March, 1971, the number of persons/organisations on the waiting list in Bombay, Delhi and Calcutta was 79,648, 45,000 and 34,187 respectively which increased to 91,644, 57,596 and 37,924 respectively as on 30-6-1972.

2.34. Government have also admitted that people have been on the waiting list for as long as 9 to 10 years in these metropolitan cities. The Committee regret to observe that there is a wide disparity between the projections for demand for telephones and the actual achievement envisaged in providing telephone connections during Fourth Five Year Plan. Original projection for telephones demand during the Fourth Plan was to the tune of 16.5 lakhs while the actual telephone connections proposed to be provided by the end of the Fourth Plan are only 6,47,144 as against the revised target of 7,00,000. This is indicative of the fact that the effort made is far from being commensurate with the demand projection.

2.35. The Committee, therefore, feel that the whole planning has been unrealistic. They would, therefore, like to emphasise that Plan projection should be based on a sound scientific forecast of unsatisfied demand of telephones and the capability of Government to provide telephone connections on the basis of their production capacity as well as all other related machinery and equipment etc. required for the same. The Committee, however, hope that it should be possible for Government to draw up realistic assessments for the Fifth Plan period based on their experience of Fourth Plan period.

2.36. The Committee take note of the fact that the Pathak Committee has been set up to estimate the demand for the next 10 to 20

years and also suggest concerted measures for its implementation and would like to reiterate that the Pathak Committee should give its recommendation without further delay and Government should draw up a White paper setting out the dimensions of the problem and how they propose to meet it during the next decade. This should be laid on the Table of the House so as to give an opportunity to [the elected representatives of the people and the public to give their suggestions before it is adopted as a plan for action.

2.37. The Committee would also like to point out that provision of telephone is an essential infra-structure facility for development and is largely self-paying particularly in sectors of growth. Government, therefore, should see that all the requisite materials are made available for timely implementation of the programme.

2.38. The Committee can hardly emphasise that there should be a well thought-out Plan so as to ensure that at least in the next ten years, we will be reaching a position where telephone connections would be available readily on demand at least for all essential requirements.

(iii) (a) Cables

2.39. The position about the physical achievement against the targets in respect of co-axial and other trunk cables and micro-wave systems during the Fourth Plan period is stated to be as follows :—

	Ist Plan 1951-56	II Plan 1956-61	III Plan 1961-66	IV Plan 1969-72 1972-74	
Coaxial & Other Trunk Cables Route Kms.					
Targets	760	3200	4545	1914	(7509)
Achievements	523	712	7327		2847
Microwave Systems Route Kms.					
Targets	Nil	Nil	2500		(12050)
Achievement			190	1330	4205

Giving the reasons for the short fall it was stated that during the First Plan Period Trunk cables were used for the first time in the country. These cables were imported.

2.40. During the Second Five Year Plan, there was no indigenous production of the coaxial cables and it was envisaged that necessary materials would be imported. However, due to restrictions on the import of materials (due to foreign exchange difficulties) the progress of the schemes, as planned could not be achieved.

A new factory for production of coaxial cable has since been set up at Rupnarainpur. The first supply of coaxial cables from this factory started on the year 1963-64. Substantial quantities of cables were imported during the Third Plan. The achievement shown as 7327 kms. represents the cables laid. However, the actual cables commissioned during the Third Plan period worked to about 500 route kms. During the Fourth Plan period, target of 7509 route kms of coaxial cables was fixed. This target also takes into account the cables laid during the previous years, but not commissioned. Further the target was based on the production capacity of the cables by Hindustan Cables Ltd., Rupnarainpur. But due to repeated labour trouble in West Bengal, the production of coaxial cables by HCL has been far below their rated capacity. In order to meet the targets laid down for the Plan, it took some time to arrange for the foreign exchange and in this process a lot of lead time has been lost. The foreign exchange has since been arranged and some cables are being imported, but this will result in spill over of commissioning of the schemes for the year 1973-74 to 1974-75.

2.41. Giving information about the shortfalls in supply from the Hindustan Cables at Rupnarainpur, the Secretary during the course of evidence informed the Committee :

“their supply was roughly of the order of 450 . There was very serious shortfall actually supplied. This is mainly due to the various labour troubles they were facing in the past three or four years. This year, the production has really shown an upward trend and their supply by November end was as much as they supplied in the whole of last year. The actual supply in 1960-70 was 2600 kilometers against a target of 4700 kilometers, in 1970-71 it was 2500 and in 1971-72 it was 1940 against a target of 4500. Our imports in the Fourth Five Year Plan are of the order of Rs. 29.85 crores approximately”.

2.42. In a written note to the Committee it has been stated that to meet the increased demand the production capacity of the existing cable factory at Rupnarainpur is being augmented from 3200 Standard Kilometers to 8000 Standard Kilometers of cable per year (2 shift basis). However in reply to another question Government have stated that HCL Rupnarainpur are expanding their production capacity from 4000 SKMs to 10,000 SKMs on three shift basis by 1976-77.

With regard to the setting up of a cable factory at Hyderabad, in a written note to the Committee, it has been stated :

“It is learnt that it is likely to commence production in 1974-75 and the rated capacity of 10 lakhs CKMs is to be reached progressively by 1976-77 beginning from 1.4 lakh CKMs in 1974-75”.

2.43. Asked to state the time needed in installing the cable factory, the Secretary during evidence stated “After the decision is taken today to set up a factory and after knowing the size and type, in three years time you can start. It is the minimum time.”

2.44. To a question what was the total amount of foreign exchange spent on import of cables during the past three years and the likely imports during the next five years Government have stated—

(a) “The year-wise expenditure on the import of underground cables during the past three years is as follows :—

	Rs. Lakhs
1970-71	9
1971-72	1,172
1972-73	1,653

Besides the above imports under World Bank and CIDA Loans, cables to the extent of Rs. 175 lakhs were ordered under various bilateral credits in 1969-71. These cables were received from 1970-71 onwards,

(b) The likely imports of telephone cables during the next five years are as under:—

(Figures in Rs. lakhs)

Year	Imports of Telephone Underground cables	Imports of Co-axial cables	Total
1973-74	131*	326*	457
1974-75	—	326	326
1975-76	—	..	..
1976-77		158	158
1977-78	..	227	227
	131	1037	1168

*These are against orders already placed.

2.45. The Committee wanted to know whether Government explored the possibilities of manufacturing telephone cables in the private sector to supplement the public sector production. The Secretary during evidence informed the Committee :—

“As far as cables are concerned, under the Industrial Policy Resolution the manufacture of cables is only in the public sector industry”.

2.46. When asked whether it would have been possible to buy the required amount of cables from the open market; the Secretary stated :

“Not directly. But, if they had put in some additional machinery and got the knowhow for making the telephone cables, it would have been possible.”

2.47. To a further question whether Government were approached to change the policy, the Secretary explained :

“Of course, we do not control Hindustan Cables. As a user department, we have taken up with the Government to examine whether these cables can be manufactured by others, other than Hindustan Cables and some years ago, in 1969, the Government have set up a Committee to examine the available manufacturing capacity in the country. Finally, they arrived at a decision that Industrial Policy Resolution should be continued.”

2.48. In reply to another question, the Committee were informed that the Ministry of Communications were consuming about 90% of the total production of Hindustan Cables Ltd. When asked to state the reasons for the cable factories being under the control of Ministry of Industrial Development and should not that be under the control of Ministry of Communications, the Secretary during evidence stated:—

“As far as management of the factory is concerned, I do not think there is any difference whether it is Ministry of Industry or Ministry of Communications because both are Government Departments. But my personal feeling is that if it is within the management of Ministry of Communications, lot of time in dialogue would have been saved. The Administrative Reforms Commission has also recommended that the control of the Hindustan Cables should vest with the Ministry of Communications.”

The Committee were informed that the proposal for transfer of the Hindustan Cables Ltd. was under examination of the Government and at present was under consideration of the Committee of Secretaries.

2.49. The Public Accounts Committee (1968-69) commenting on the audit paragraph "loss of potential revenue through adequate utilisation of expanded capacity of telephone exchange" had observed that this was primarily due to a shortage of cables.

2.50. With regard to the expansion of indigenous production of cables the P&T Board, in a note to the Public Accounts Committee, had explained the position as under :—

- (i) Hindustan Cables Ltd., the existing public sector factory at Rupnarainpur was planned for the manufacture of 3,200 kilometres of cables on two shifts basis. A project for expansion of this capacity from 3,200 kms. to 8,000 kms. at a cost of Rs. 477 lakhs excluding township, was approved by Government in April 1966. As on 31st March, 1968, "71 per cent of expenditure, on Plant and Machinery has already been committed and it is expected that trial production will start during 1969-70."
- (ii) To plan indigenous manufacture of cables, a working group consisting of representatives of Hindustan Cables and P&T was set up by the Planning Commission in February, 1962. This group, which reported in September, 1962, recommended setting up of a second unit. "The case is being processed by the Ministry of Industry. Various sites in India were examined for the location of this factory and it was decided in December, 1966 to locate the factory at Hyderabad. Since then the project has been under examination."
- (iii) "There have also been requests from some of the manufacturers of power cables in the private sector to permit them to manufacture telephone cables utilising their spare capacities. This case is also under consideration."

2.51. Further explaining the overall position regarding requirements of cables for the Fourth Plan in the light of a tentative target of 15 lakh telephone connections, the Department had stated the position as under :—

Requirements of cables—Requirements of telephones cable during the Fourth Five Year Plan are expected to be the order of 80,000 kms.

The likely production of dry core cables from the Rupnarainpur factory taking into account the sanctioned expansion is likely to be of the order of 42,000 kms., out of which P&T is expected to be supplied with 38,000 kms. of this cable. The setting up of the second cable factory is under finalisation. Provided this fac-

tory is set up early in the Plan, production of about 10,000 kms. can be expected from the same. Thus the total supplies of dry core cables available to the P&T stores, from HCL would be of the order of 48,000 kms. In view of this, it is essential that the setting up of the second factory is expedited, and production in the two factories stepped up considerably to reduce the gap between supplies and requirements of cables as envisaged in the Plan."

The shortfall in the requirements of dry core cables would be of the order of 32,000 kms. during the Plan itself. Taking into account the earlier shortages, resources would have to be found for import of about 40,000 kms. of underground subscriber cables. This is likely to cost Rs. 50 crores in foreign exchange (on f.o.b. basis)

2.52. The Public Accounts Committee in its 40th Report presented in January, 1969 had made the following recommendations regarding shortage of cables and the steps to be taken to increase indigenous production :—

"The Committee note that as much as 13 per cent of the connectable capacity of telephone exchanges in the country with 1,000 lines or above remained unutilised as on 30th June, 1968, due primarily to a shorage of cables. They further note that the shortage of cables has assumed such proportions that the Department anticipate as much as two-thirds of their requirements of cables remaining unfulfilled as at the end of 1968-69, with no assured prospect of any foreign aid for the import of cables to meet at least a part of the pressing demand. It is strange that, in the face of such a glaring shorage, Government have still not come to a decision on a proposal made by a Working Group of the Planning Commission as early as September, 1962, for setting up a new unit for the manufacture of cables. The Committee cannot help feeling that the proposal has been processed in a very leisurely fashion. How leisurely the process of examination has been would be evident from the fact that Government took over four years after the submission of the report of the Working Group to come to a decision on the location of the project. Two years after this decision, the project still remains "under consideration." The Committee would urge that a decision on the project be taken without delay."

“The Committee note that Government have also embarked on a project for expansion of the capacity of Hindustan Cables Ltd. and that trial production is expected to start during 1969-70. They hope that the project will proceed according to schedule.”

“The Committee also observe that the Department have proposed a tentative target of 15 lakh telephone connections for the Fourth Plan and that the requirements of cables for such a programme would amount to 80,000 kms. of which only 48,000 Kms. will be met by Hindustan Cables and the proposed new unit. In view of the large gap thus left and the current indications regarding non-availability of foreign assistance for imports, the Committee would like Government to consider how best the gap could be bridged indigenously by encouraging private manufacturers to undertake the manufacture of cables. The Committee would like a speedy decision to be taken by Government on requests already stated to have been received from units in the private sector for permission to manufacture these cables by utilisation of spare capacity.”

At the action taken stage, the Public Accounts Committee in its 85th Report (Fourth Lok Sabha) presented in December, 1969 had not accepted the replies furnished by the Government and had reiterated its earlier recommendations.

2.53. The Committee note that as against the requirement of 7509 Kms. of cables, for implementation of the Fourth Plan target of 7,60,000 additional telephones, the actual availability of cables from the only indigenous manufacturers, namely, Hindustan Cables Ltd., Roopnarainpur, in the public sector was 1914 Kms. till 31st March, 1972 and it is expected to be 2847 Kms. more till the end of the Fourth Plan. This has perforce necessitated the import of cables worth Rs. 29.85 crores under a World Bank loan. The Committee would like to point out that the requirements of cables had been projected by the Working Group of the Planning Commission, as early as September 1962 and they recommended not only the augmentation of the capacity at Roopnarainpur from the existing 3,000 Kms to 6,000 Kms. but also the setting up of a new unit for manufacture of cables at Hyderabad. The Committee are greatly disappointed that the plan for expansion of the capacity of Hindustan Cables Ltd., at Roopnarainpur, which was taken in hand in April 1966 and trial production of which was expected to start by 1969-70 has not yet fructified. In fact, according to the latest information

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available, the production capacity of Hindustan Cables Ltd., has come down from 2600 Kms. in 1969-70 to 2500 Kms. and 1940 Kms. in 1970-71 and 1971-72 respectively. The Committee are at a loss to understand why Government have felt so helpless in ensuring that at least the existing capacity was put to full productive use and that the expanded capacity was also brought into commission as per scheduled programme, instead of the date being postponed to 1976-77. The Committee cannot too strongly deprecate the leisurely manner in which the decision about the setting up of the second factory to manufacture cables was handled with the result that the factory which was essential for meeting Plan requirements, has not actually started production even in the fourth year of the current Plan, though the need for it was recognised as early as 1962. The Committee would like Government to examine at the highest level as to how a key project of this nature, has been allowed to be delayed thus greatly retarding the programme for achieving self-reliance in this vital field of communications, and forcing the country to incur a loan liability of as much as Rs. 29.85 crores to finance the import of cables. At a time, when there is a pressing demand for creating productive avenues to relieve the problem of unemployment, the Committee are at a loss to understand why the second unit of the requisite capacity could not be set up in time and commissioned to produce the requisite cables for the telephone industry and also incidentally provide acutely needed opportunities for productive employment.

(ii) *Switching Equipment, Telephone instruments and Spares.*

2.54. Switching equipment and Telephone instruments are manufactured by the Indian Telephone Industries Ltd., Bangalore, which is a public sector undertaking under the Ministry of Communications. The factory which was set up in July, 1948 with an estimated capacity for the manufacture of 25,000 exchange lines and 25,000 telephone instruments per annum has, over the years, expanded that capacity several-fold. The factory has three main manufacturing divisions, viz. Strowger(MAX), Transmission and Crossbar. The capacity of the Main Automatic Exchange(MAX) and Transmission Divisions in terms of the main products is not capable of precise determination due to the large and varying product-mix from year to year and due to the fact that they are produced to meet varying requirements.

2.55. The following table indicates the capacity (estimated by I.T.I on the basis of rincipitems of manufacture) of the MAX for the last three

years along with the targets and achievements for these years (including supplies to Non-P&T customers also) :—

Division	Year	Capacity in lines	Revised targets in lines	Achievements in lines.
A. MAX Division				
(a) Telephones	1969-70	2,75,000	2,75,000	2,44,73
including	1970-71	2,75,000	3,11,200	2,73,120
head-gear sets. . . .	1971-72	2,73,000	2,67,500	2,67,249
(b) Exchange lines (No. of lines)				
(i) MAX—I				
Main Automatic	1969-70	40,000	43,680	39,360
Exchange. . . .	1970-71	40,000	54,000	46,710
	1971-72	*	*	36,495
(ii) MAX—II				
Medium size	1969-70	30,000	30,000	25,680
Automatic	1970-71	30,000	30,000	31,680
Exchanges	1971-72	*	*	52,090
(iii) MAX—III				
Small	1969-70	50,000	45,800	32,896
Automatic	1970-71	50,000	55,247	38,152
Exchanges. . . .	1971-72	*	42,741	44,785
B. Crossbar Division (in exchange lines)				
	1969-70	(Being com- piled by	*	**52,500
	1970-71	ITI)		60,000
	1971-72			80,000

*Not available.

**Achieved production (Lines) represents effort contant in terms of Jorbagh Pattern.

It has been stated that during the past three years, there had been no imports of switching equipment and telephone instruments.

2.56. In reply to question whether I.T.I. Bangalore was able to meet the entire demand of the country in respect of all types of automatic telephone equipment, the Ministry, in a written note stated as follows:—

“The Indian Telephone Industries Ltd., is at present, not able to meet the entire demands of the country in respect of all types of automatic telephone equipment, long distance transmission equipment etc.

We are importing some items of transmission equipments and the total import during the Fourth Plan would be about Rs. 11.32 crores.”

2.57. The steps taken to make the country self-reliant in telecommunication equipment are stated to include the following :—

- (i) Expansion of the capacity of the Bangalore factory for the manufacture of telephone instruments, telephone exchange lines of the strowger and crossbar types, long distance transmission equipment and electronic measuring instruments ;
- (ii) Attainment of the full rated capacity of the crossbar unit of the Bangalore factory ;
- (iii) setting up of a new factory at Naini (near Allahabad) for the manufacture of long distance transmission equipment, telephone instruments and certain allied items ;
- (iv) setting up of a new factory at Rae Bareli for the manufacture of telephone switching equipment;
- (v) setting up of a new factory for the manufacture of PAX. etc. of strowger type.

2.58. In the Fifth Five Year Plan, the following proposals are stated to have been included:—

- (i) setting up of a third telephone switching equipment factory ;
- (ii) setting up of a new factory for the manufacture of special purpose electronic measuring and testing instruments.

2.59. The targetted supplies from M/s. I.T.I. to Post & Telegraphs and the actual supplies have been as under :—

	1969-70	1970-71	1971-72
	Target/ Actual	Target/ Actual	Target/ Actual
1. Switching Equipments in lakhs of lines.	1·15/1·06	1·53/1·20	1·77/1·64
2. Telephone instruments in lakhs.	1·90/1·90	2·55/1·98	2·55/2·00
3. Transmission Equipment in crores of rupees.	3·30/3·30	3·63/3·54	5·00/4·18

2.60. Giving a general assessment of the working of Telephone system in the country, the Secretary of the Ministry, during the course of evidence informed the Committee as follows:—

“Over the past two decades there has been substantial expansion in the telephone system in the country. The efficiency has gone up. The number of calls both local and trunk have gone up considerably. We started with 100,000 lines at the time of

independence. To-day we have 1·3 million and every year we are adding nearly 100,000 lines to our net-work. We also have manufacturing capacity of nearly 200,000 lines of telephone equipment apart from telephone sets and long distance carrier equipment. Considering the net work as a whole it is quite a good one and has shown a high rate of sustained expansion over the years. But this is the positive side of the picture.

We have also a negative side. When we have so much stress on self-reliance and on indigenisation of production, our production of telephone equipment really does not meet the total requirement of the P&T Department. That is one thing. Arising from this inadequacy to manufacture, we have not been able to provide as many telephone connections to the waiting public as we should have normally done. On account of this inadequacy, what has happened is the traffic per telephone subscriber has shot up and as a result of this excessive and inordinately high rate of telephone traffic the wear and tear on the telephone system has increased and the number of faults has been much more than what it would be. We are short of spares because spares come from the same factory which makes the equipment and for want of spares quicker restoration of faults has been delayed. Extreme shortage of telephones in the country has created considerable public unrest about our telephone system. There are more complaints about it and in fact we are spending more time in meeting public complaints than we should and this time could have been used much more positively in improving the service."

2.61. In reply to another question as to what measures had been taken by Government to meet the demand for spares for telephones, the Ministry, in a written note informed the Committee as follows:—

- “(i) The forecasting of requirements of spares is now being done on a three years horizon. Necessary steps are being taken to step up the production of essential spares by I.T.I., Telcom. Factories etc.
- “(ii) I.T.I. are farming out more and more items to ancillary industries in the coming years.
- “(iii) I.T.I. is being addressed to earmark a part of their manufacturing capacity for spares only and highest priority has been allotted for manufacture of essential spares.
- “(iv) As an incentive to step up production, I.T.I., have been offered higher profit margin on manufacture of spares as per the revised agreement concluded between the P&T and I.T.I. in June, 1972.”

2.62. (a) The year-wise expenditure on the import of spares during the last four years is as follows :—

1969 . . . . .	. Rs. 4·03 lakhs
1970 . . . . .	. Rs. 7·30 lakhs
1971 . . . . .	. Rs. 4·00 lakhs
1972 . . . . .	. Rs. 5·00 lakhs

(b) Except for the maintenance spares required for equipments already imported, it was expected to procure all other items of spares from indigenous sources during the Fifth Plan.

2.63. During the course of evidence of the Ministry when asked to state what positive steps were being taken to overcome the shortage of equipments and thus improve the efficiency of the system, the Secretary stated:—

“The fundamental reason for the present inefficiency is the lack of adequate number of telephone instruments. In other words, our output from the ITI has to be increased. Unless there are adequate number of connections in any telephone network we will always be faced with inefficient situations. The primary action that we have to take is to increase the total number of telephone equipment in the country. There has to be more of this equipment.

* * * *

At present, we have got the Indian Telephone Industries at Bangalore which is the primary manufacturer of telephone equipment and telephone set. The production in this factory is not adequate. We have set up new factory at Naini, near Allahabad, one for long distance equipment and the other is for making telephone instruments. The second part has not yet started production. It will take a year or two. As far as telephone equipment is concerned, a factory is going to be established at Rae Bareli at an investment of 17·18 crores of rupees. 300,000 telephone lines will be manufactured here per year. At ITI, Bangalore, we are trying to increase the production with the present set up. For example, cross-bar production is done on a single shift basis. We want to go round the clock, or at least two shifts and thereby increase the production. The second step that we have taken is to farm out many of the components, that are being manufactured at the ITI, so that the available capacity can be utilised for making more essential components. At Bangalore,

we are making screws and nuts in a huge shop. Now in the country in the recent years, this capacity has been set up by many private industries. This item can very easily be farmed out and obtained from them. Similarly fabrication work can be got done from them. There are a lot of industries who can do this for us: ITI has gone in a very large way for farming out such items so that the available capacity can be used for more sophisticated equipment, thereby increasing the production.

* * * *

“As far as ITI is concerned, for the past three years, they had supplied us what they had originally forecast with minor difference. But in actual equipment, we have had some trouble. We have got some parts and some other parts, we do not get with the result we could not utilize substantially or much less than what the value justified. Of course, there was a downward trend in transmission. We are taking up this matter with the ITI and they have expressed some difficulty. There was one difficulty that they could not get the imported components in time because they had to be ordered one year in advance. There was some difficulty in foreign exchange. They felt some difficulty about indigenous raw-material like steel-section and so on. We are trying to overcome all these difficulties this year. We are making some headway in trying to keep up these targets.”

2.64. Further during the course of evidence with regard to the shortage of equipment and the spares, following points were made:—

“Earlier we decided to convert as many manual exchanges as possible into automatic exchanges during the Fourth Plan but on account of shortage of the automatic exchange equipment we have limited our conversion programme and only larger manual exchanges of 1000 lines are being considered for conversion.

2.65. With regard to the question of utilisation of exchange Capacity the Secretary, Ministry of Communications explained:—

“I can completely utilize a 10,000 line exchange only when there is enough equipment inside it to carry the traffic. But if the traffic equipment is not enough, then the number of subscribers is limited to what the equipment inside can carry. For example, in Bombay we have got an exchange. To-day we have got 6,000 subscribers but the exchange has got 10,000 lines. If we put

common control equipment which can handle additional equipment we can go upto 10,000, Capacity of the exchange has nothing to do with the defects in the exchange. *** It has relevance with the common control equipment. *** We have to provide common control equipment but the total amount of equipment manufactured in Bangalore is limited. This is a common thing both in strowger and cross bar. In Calcutta we could give 6,000 connections in the existing strowger system, but I could not give the same because inside equipment is not in a position to take the additional load.”

2.66. To a question how does it happen that when a person is talking to ‘A’ he listens to the voice of ‘B’ talking to ‘C’, the Secretary, Ministry of Communications explained:—

“This is not necessarily due to the cross-bar system. It happened in our earlier systems also. There are certain equipments which have to be replaced after utilization for some time. In the strowger system, we found that there was the difficulty of bunching up, especially in two or three exchanges. You cannot get out of such conversion, unless the original speaker puts down the receiver. This is a maintenance problem. In the matter of maintenance, we do not have adequate number of spare parts.”

2.67. With regard to the equipment procured through imports it was pointed out by the Secretary that as far as quality was concerned there was no difference between the imported and the indigenous material. When asked what are the comparative costs of the imported equipment as compared to what we have got from I.T.I. *i.e.* total cost for 35,000 lines, the Secretary explained:—

“The imported equipment is much more expensive than what the ITI is charging up.***The total cost I may not be able to give. But we have calculated cost per line, I understand the imported cost is nearly double the cost of indigenous one. He also stated that the life of these two exchanges was same.”

2.68. When asked why we do not manufacture in our country so that we do not run for imports, the Secretary explained :

“We are not importing all the equipment. In a large plan if we are to keep up plan targets it is sometimes necessary to import equipment. For example, now in this plan we are importing 35,000 lines. We have compared this with the total number of exchange lines *i.e.* round about 5 lakh lines. In the next plan also we have

provided for imports, We are going to have 1.3 million lines from I.T.I. and we are providing for import 3 lakhs. It is not always possible that the local production capacity at a particular time should be in a position to give 100% requirement."

He assured the Committee that imports will not be more than the marginal imports.

2.69. With regard to the supply of spares, the Secretary explained:—

"As far as the equipment itself is concerned, we are trying to maintain it as far as possible but we are very much short of spare parts and we have taken up this matter with the I.T.I. In the last two or three years, the I.T.I. has increased the supply of spare parts but even now it is not adequate. For example, the trouble mainly starts with the telephone instruments, the dials and the transmitters. What the I.T.I. supply to us is not adequate and we have been requesting them to increase their supply of dial and transmitters. What I.T.I. in turn have done is that they have started a number of ancillaries but my own feeling is that it will take sometime before they start responding to all our orders on them. And we have been saying to supply all these spare parts. This is the main trouble.

The second thing is about inter-exchange connections that is called junction lines we are putting them as fast as is feasible and now we have got a large quantity of imported cables also to increase the number of lines. They will involve certain amount of imported raw material but it is not the raw material today that affects our scheme but the capacity of the firm to make available these spare parts is lacking. Actually the capacity itself was much less than our demand and we also never anticipated that we would reach a point when we would require such a large quantity of spare parts. Now, I.T.I. has already difficulties in making complete telephone instruments which have got dials, etc. So they preferred to give a complete instrument. We have told them to set aside 10% of their capacity only for giving us spare parts. Even that item is not adequate."

2.70. The Committee desired to know the reasons for not meeting the minimum demands of the subscribers like Plug, Sockets, long cords, extensions which are necessary accessories, the Secretary explained:—

"We have really no justification in delaying in giving plugs, sockets and long chords but as far as extensions are concerned, we are very short of telephone instruments. Our requirement of instruments is about 3,00,000 per year and we are getting hardly 2,00,000 instruments from the I.T.I."

2.71. In the Demands for Grants for 1973-74 of the Indian Posts and Telegraphs Department, under the heading 'Notes on Important Projects and scheme', it has been stated :—

“Additions to switching equipment capacity would be lagging behind the revised targets for the two years 1970-71 and 1971-72. While this will affect provision of telephone connections upto end of 1972-73 only nominally the expansion of connections is likely to be affected in future as the building up of additional capacity is being delayed due to slippages in supply of crossbar equipment and supporting equipment for MAXs II and MAXs III, such as power Plants, Batteries and also iron work, test desks meters etc. To help closer coordination with I.T.I. to regulate the supply of critical items to different projects, the Member (Telecom Development) has been appointed a Director of the company. The I.T.I. is also examining the report of a production consultant and of the Administrative Staff College on systems and Procedures for procurement of material for further implementation. These steps will help towards improvement of the production of equipment in I.T.I. and as a direct result may improve the commissioning of exchange equipment, this will help in building up of the exchange capacity in the last year of the Plan to meet pending demands.”

2.72. In the Technical Progress Reports: Fourth Five Year Plan the position about the actual or likely achievements/targets (in brackets) in the Forth Plan Period and spill over in the Fifth Plan period in respect of some of the items are as below:—

2.73. The Committee note that the main reason for the failure of Government to meet the projected demands for telephones has been the consistent shortfall in the production of Exchange lines telephone instruments and the manufacture of spares required for equipments. The demand for telephone instrument is about 3 lakhs per annum while the Indian Telephone Industry, Bangalore are able to supply hardly two lakhs. The shortfall of exchange lines, both local and trunk would be to the extent of 10 per cent and 36 per cent respectively at the end of the Fourth Plan. One of the reasons for shortfall in the production of cross bar exchange has also been its faulty design and its unsuitability to the Indian conditions. Some items of transmission equipment are being imported and the total imports during the Fourth Plan period would be of the value of Rs. 11.32 crores. The position of spares is very acute resulting in inadequate maintenance of telephone equipments and consequent faulty service. Ten per cent of the I.T.I.'s capacity has been set apart for the manufacture of spare parts with the result that the production of sophisticated equipment is affected to that extent.

2.74. The Committee, while noting that the new factories at Naini and Rae Bareilly are coming up for the manufacture of telephone equipments would like to emphasise that in order to accelerate the tempo of production to meet the projected demands of telephone equipments atleast in the Fifth Plan period, concerted efforts have to be made in all fields of production as well as in providing all the necessary infrastructure in advance for the same.

2.75. The Committee understand that in advanced countries the main products unit concentrates on production of sophisticated equipments only while the other ancillary parts are produced in ancillary units. The Committee need hardly emphasise that there is imperative need to develop ancillary industries by factories like I.T.I. and other similar factories in the process of being set up. This would, apart from releasing the capacity now being used for producing ancillary parts and spares, would generate more employment opportunities.

(b) *Losses on account of theft etc.*

2.76. The Committee had desired to know the steps taken by Government to stop pilferage and thefts of cables, stores etc. Government in a written note have stated that the Circles have been maintaining close liaison with I. Gs of Police, arranging periodical meetings with the Police authorities and co-operating fully with them to fight this menace. Special investigation cells to tackle the copper wire thefts problems have been set up in

Andhra, Rajasthan, West Bengal, Gujarat and Orissa. Proposals are also underway to have such cells in Tamilnadu, Bihar, Punjab, Assam and Madhya Pradesh.

2.77. Necessary steps to replace the copper wire with copper-weld wire/ACSR wire on important routes are also being taken.

2.78. Certain amendments to be made in the "Telegraph Wire (Unlawful Possession) Act, 1950" are also under consideration to provide for enhanced punishment to the culprits.

2.79. To another question about the desirability of amending the Telegraph Wire (Unlawful Possession) Act, 1950 so as to avoid loss on account of copper wire, the Ministry in a written reply stated that an amendment to the Telegraph Wire (Unlawful Possession) Act, 1950 to check the theft of copper wire has already been finalised by the Department. The amendment was passed by the Rajya Sabha on the 23rd March, 1966 but could not be passed by Lok Sabha due to dissolution of the Third Lok Sabha. The Telegraph Wire (Unlawful Possession) Act 1950 is proposed to be amended to make the punishment more deterrent and to provide for seizure by the police of the stolen Telegraph wires as well as confiscation of the stolen property and of the conveyance or vehicles used in such thefts by the Court. The existing provisions of this Act provide for punishment which may extend upto 5 years or with fine or both for the first offence. The proposed amendment provides for a minimum of one year's imprisonment and a fine of not less than Rs. 1,000. The amendment is now being taken up again.

2.80. The details of losses on account of theft during the last three years are furnished below:—

1. <i>Copper Wire</i>	No. of cases	Value
		Rs.
1969-70	24,187	168.71 lakhs
1970-71	38,817	297.09 lakhs
1971-72	30,137	229.00 lakhs
TOTAL		<u>694.80 lakhs</u>
2. <i>Stores</i>		
(i) <i>In stock</i>		
1968-69	373	3.02 lakhs
1969-70	76	1.57 lakhs
1970-71	128	1.75 lakhs
TOTAL		<u>6.34 lakhs</u>

	No. of cases	Value
(ii) <i>In Transit</i>		Rs.
1968-69	127	1.24 lakhs
1969-70	135	1.31 lakhs
1970-71	196	2.29 lakhs
	TOTAL :	4.84 lakhs

2.81. During evidence, the Secretary, Ministry of Communications made the following points with regard to the steps taken by Government to minimise the thefts and evolving suitable substitute for copper wire:—

- (i) Underground cables, if it is long distance, can be replaced by microwaves, but within town limits, there is no substitute. Replacing of copper wire with aluminium wire was tried but it was not successful. Hyderabad Cables are now trying new cables *i.e.* aluminium with copper coating.
- (ii) The Minister of Communications in this matter had addressed the Chief Minister of States but so far the results have not been very encouraging. The States have been asked to set up Police Cells exclusively for dealing with copper wire thefts. So far there has been no positive results.
- (iii) Now they were going in for aluminium instead of Copper. In starting supply, there was a delay of about 2 years. Steel wire with copper was also being used and large quantity of steel wire was imported. A plant for 1,000 tons of wire per year was received for being set up at Rupnarainpur in 1969 but it could not be installed because of litigation. The production would start coming soon. The actual requirements for this wire are about 4,000 tons per year. The Secretary, Ministry of Communications replying to the point whether private units may be allowed to manufacture it said, "I do not have any objection to the private sector taking it up."
- (iv) It was thought to have a protection force just as the Railways are having but this was of little use as P & T lines were extensive and widespread. It was difficult for the State police to watch the lines and stop thefts but it should be possible to catch the users of the metal who convert it into ingots for making copper vessels or brass items. There was need for taking concerted action by the State Governments.

2.82. The Committee note that the losses on account of theft of copper wire during 1969-70 to 1971-72 had been to the tune of about Rs. 7 crores. The Committee further note that even though Government realised the need to amend the Telegraph Wires (Unlawful Possession) Act, 1950 to make the punishment for stealing telegraph wires more deterrent and brought forth an amending Bill was passed by the Rajya Sabha on 27-3-1966 could not get it passed by the Third Lok Sabha due to its dissolution. The Committee regret to say that no further move has been initiated by Government since 1966 to amend the Telegraph Wire (Unlawful Possession) Act 1950 although seven years have elapsed since then. The Committee would urge Government to bring forth the amending Bill before Parliament at an early date.

2.83. The Committee further note that the Centre's request to the States to set up Police Cells exclusively for dealing with copper wire theft cases and the communication of the Minister of Communications to the Chief Ministers of States in the matter has not so far brought any positive results. They feel that with a view to impress upon the States to avoid losses which run into crores of rupees and also that all the State Governments take concerted action, Government may examine the desirability of bringing this matter before the Home Minister's Conference so as to highlight this problem which is essentially a problem of law and order.

2.84. The Committee note that the plant for manufacturing 1,000 tonnes of Copper-clad wire per year at Rupnarainpur which was received in 1969 and whose installation had been delayed for certain reasons would now be commissioned soon. They however find that this will not be sufficient to meet the total requirements of approximately 4000 tonnes of cable per year.

2.85. The Committee regret to note the delay in the installation of the plant. They see no reason why priority should not be given for commissioning of this plant and to increase its production capacity to meet the full requirement of Copper-clad wire. The Committee would also like to emphasise that urgent steps should be taken to concentrate on efforts to replace the copper wire by the Copper-clad wire at places where the incidence of thefts is high.

CHAPTER III

TELEPHONE EXCHANGES

(i) *Cross-bar and other Exchanges*

3.1. The Committee have been informed that the total number of telephone exchanges operating in the country as on March, 1972 was as follows :—

1. Manual exchanges	1034
2. Automatic Strowger exchanges	3153
3. Cross-bar exchanges	18

3.2. The Secretary of the Ministry of Communications during the course of evidence informed the Committee regarding conversion of Manual Exchanges into automatic Exchanges as follows :—

“Earlier we decided to convert as many manual exchanges as possible into automatic exchanges during the Fourth Plan, but on account of the shortage of the automatic exchanges equipment we have limited our conversion programme and only larger manual exchanges of 1000 lines are being considered for conversion. Out of the total 96 exchanges as in September, we are programming 26 in the Fourth Plan and in the Fifth Plan we are proposing to reduce the total manual lines from 2.95 lakhs to 1.39 lakhs and complete automatisisation by 1986.”

3.3. About the functioning of crossbar exchanges in Delhi, it has been reported in the Press as follows :—

“Basic defects in the designing and manufacture of crossbar exchanges have added to the harassment of the telephone subscribers in Delhi. The Delhi Telephone Department have now started a “modification” programme which means almost the same amount of effort as is required to install a new exchange.

The crossbar exchanges were installed in South, Central and West Delhi, over the past two years, in a bid to make the telephone system in the Capital more sophisticated and modern. The exchanges were designed and manufactured by the BTM, as Belgian subsidiary of the International Telephone and Telegraph Corporation of the United States and by the Indian Telephone Industries, Bangalore.

The three perpetually troublesome crossbar exchanges of Delhi are Janpath (31), Karol Bagh (58) and Okhla (63). There is a spate of complaints from subscribers regarding non-reception of incoming calls and dial tone delays.

Since the middle of last month a group of experts of BTM are engaged in "modification" of the '58' exchange. Another group of ITI experts is modifying the '31' exchange. While the authorities claim that these exchanges will begin to give satisfactory service in about six months' time, outsiders and subscribers have their misgivings. They fear that they might have to put up with continuously faulty service from these exchanges even after the modification.

* * * *

Many even challenge the justification of introduction of the crossbar system to add to the worries of the subscribers when the old Strowger system was providing a much better service. One critic has pointed out that in a new, 3,000 line crossbar exchange the cost of every line works to over Rs. 1,200 and the cost of an exchange is in the neighbourhood of between Rs. 36 lakhs and Rs. 40 lakhs. Modification could increase the cost by at least 20 per cent, if not more.

* * * *

Many have suggested that a way out of the present "telephone exchange crisis" in Delhi would be to combine the new crossbar and old Strowger system for service in heavy traffic areas. It is pointed out that while the old system is capable of withstanding a heavy pressure of traffic, the cross bar system wilts under it."

3.4 In a written note about the defects found in the crossbar exchanges, the Posts & Telegraphs Department stated as follows:—

"(a) The following main defects have been noticed :

- (i) Inadequate contact protection.
- (ii) Component failures.
- (iii) Instability of mechanical adjustments,
- (iv) Some minor circuit problems and
- (v) Corrosion.

All the telephone exchanges installed with crossbar type equipment are working and giving service. Only their performance has not been satisfactory due to the defects mentioned above. A programme of action is on hand to rectify these deficiencies.

- (b) The first order for the import of crossbar telephone exchanges was placed on the Bell Telephone Manufacturing Company, (BTM), Antwerp (Belgium) on 21st May, 1964, and the total cost was Rs. 2.55 crores. Later supplies have been manufactured in I.T.I. Bangalore.
- (c) Owing to inadequate supplies from M/S I.T.I. the Department has recently invited global tenders for the import of 35,000 lines of telephone automatic exchange equipment. A few firms including the B.T.M. have given the tenders and these are under examination.”

3.5. The main advantages of the Crossbar system over the Strowger system are stated to be as below :—

“(1) *Storage and Translation facilities*

In the crossbar system the dialled information is stored and then translated for the best routing of the call, thus dislinking selection and switching from the control of the subscriber. Further, due to the storage facilities, routing and charging functions could be diversified from the numbering thus providing much needed flexibility in multi-exchange net works and in routing of long distance calls. With the Strowger system costly tandem exchanges would have had to be installed. Further, conversion from 4 to 5, 5 to 6 or 6 to 7 digits of the numbering scheme in multi-exchange systems will not involve extra cost with the crossbar system.

(2) *Efficient use of Trunk Services :*

Unlike the Strowger system with its limited outlet capacity (20 for each stage) the crossbar system permits much larger outlet capacity. With the Pentaconta system this is as high as 1040 given scope for increased efficiency of utilisation of costly long distance trunk circuits.

(3) *Faster switching*

Once the dialled information is stored fully subsequent switching is done very fast by employing multi-frequency signalling between crossbar exchanges. In the case of long distance a calls, this cuts down the wasteful use of costly trunk circuits in setting up the calls.

- (4) The storage facility further permits alternative routing being adopted. Apart from resulting in greater economy in proof of trunk circuits, this enables advantage being taken of the likelihood of busy-hour being different in the alternate directions.
- (5) *Better quality of speech :*
With improved contacts and construction methods the Crossbar system provides for better quality of speech.
- (6) *Facilities for Automatic billing*
With facilities for calling line identification crossbar exchanges will permit further introduction of automatic methods for call charging and billing.
- (7) Malicious calls can be traced automatically in crossbar exchanges which is not possible in a Strowger exchange.
- (8) Crossbar exchanges can do with thinner conductor cables, compared to Strowger exchanges, to provide the same transmission and signalling performance.”

3.6. In reply to a question as to whether it was a fact that the Planning Branch, which was responsible for the technical work, in its final recommendation observed that the Penta Conta system was unsuitable particularly for the automatic trunk exchange, the Ministry on a written note stated as follows :—

“No such recommendation of the Planning Branch is traceable from available files. In a note summarising the report of the Technical Committee set up to evaluate the tenders, the then Member in charge of the Planning Branch had noted as below :—

“The report has also indicated the difficulty that would be experienced with the I.T.T. equipment if the capacity of the trunk exchange goes above 4000 lines. However, the Switching Systems Committee after a detailed study had found that the equipment of N.E.C., I.T.T. and L.M.E. was suitable and, therefore, the lowest tender should be accepted.”

3.7. In a detailed note about the circumstances leading to the purchase of the Pentaconta system of Equipment and its adoption, the Ministry stated as follows:—

“Tenders were invited in December, 1962, for the supply of 48,000 lines local exchange equipments and in March, 1963, for the

supply of 6,500 TAX equipments. The 1962 tender invitation also covered collaboration to set up manufacture of the crossbar type equipments in India and supply of know-how for the same.

- (ii) Prior to this tender, a Technical Committee, called the Telephone Switching Systems Committee, had been appointed to decide what system of equipment should be produced to meet the growing needs of the Department. This Committee after visiting different manufacturing countries and studying different systems, made a recommendation in favour of the crossbar system. The types of equipments called for in the tender were accordingly for crossbar system of equipment.
- (iii) Tenders were received from 5 different firms from all over the world. A Technical Committee, appointed for the purpose considered the lowest three offers from N.E.C. Japan, L.M.E. Sweden and I.T.T. U.S.A. (B.T.M. Company Belgium), in detail. These three companies had given their offers for supply as well as for manufacture. After a detailed examination, the Committee found that the offers of the three firms were generally satisfactory. The quotation of the N.E.C. was the lowest for the supply of local as well as for trunk exchanges. It was considered that the type of equipment to be purchased against the bids and the ones to be manufactured should be of the same type. For final choice, therefore, the factory proposals were to be taken into account. There were a number of points in the manufacturing proposals of the three companies requiring verification and negotiation. The Committee, therefore, recommended negotiations with all the three companies.
- (iv) A Negotiating Committee was formed in July 1963, for negotiating with foreign collaborators the undertaking of manufacture of crossbar equipment in India. A General preference in the course of the discussion in this Committee was in favour of L.M.E. then B.T.N and then N.E.C. This would have meant that the equipment to be purchased would be of one design while for manufacture it would be of another design. Considering all the relevant aspects, a recommendation was made to Government to place orders on M/S B.T.M. (a subsidiary of ITT) for supply of Pentaconta system of equipment and its manufacture in the Bangalore factory on the following reasoning:

“For the manufacture of equipment IME’s terms are somewhat stiff as compared to those offered by the other two. The NEC’s are the most advantageous while BTM’s are reasonable though not as good as the NEC’s. However, for reasons of high price and difficult terms of collaboration IME has to be ruled out.”

“The offer of NEC taking together both the supply of the equipment and the capital cost of setting up the factory is much cheaper than that of the BTM by Rs. 18 lacs, the offers being Rs. 446,22 lacs and Rs. 464,28 lacs respectively. However, there are many advantages in choosing BTM’s offer in preference to NEC’s for the following reasons:

- (a) BTM in conjunction with ITT (their Principals) have vast experience in the manufacture of varied types and have set up production units in different countries. NEC’s experience is limited to Japan.
- (b) BTM as part of the ITT Group have experience of compelled sequence type and their offer has been for this type of equipment. NEC have yet to develop it.
- (c) The process of manufacture of the BTM crossbar equipment is simpler than that of NEC according to the Indian Telephone Industries.
- (d) The BTM and ITT have a large experience in inter-working of crossbar equipment with different types of automatic exchanges in different countries including the Strowger which is the type at present in use in India. The NEC’s experience is limited largely to inter working with equipment in use in Japan.”
- (v) After Government’s approval, orders were placed on M/S BTM for both supply of equipment and for manufacture.”

3.8. In reply to another question as to whether the operation of this system in the country has justified its adoption, the Ministry stated as follows:—

“As far as system considerations and technical facilities afforded are concerned, the justification remains. Service performance of the Pentaconta exchanges has, however, not been upto the mark due to certain design deficiencies. These have been identified and steps are on hand to rectify these deficiencies with the participation of the collaborators. It is expected that with the implementation of these steps; the performance would be normal.”

3.9. Asked to state the amount that has been spent or is likely to be spent to make the exchanges working on this system perfect, the Ministry stated:—

“The Bell Telephone Manufacturing Company had supplied 48,000 lines of local exchange equipment and a programme of action to rectify the deficiencies in the equipment supplied by them is on hand. Materials required for modifying the circuitry to overcome the deficiencies are being supplied free of cost by M/s Bell Telephone Manufacturing Company and the question of their meeting the cost of executing the modifications, with departmental personnel, is still under correspondence with them. Solutions for a few of the deficiencies are still to be finalised. However, on a rough estimation, it may be estimated that the cost of executing the modifications for the 48,000 lines of such equipment supplied by M/s. BTM may be placed at about Rs. 45 lacs. Another about 56,000 lines of exchange equipment have been installed with the equipment manufactured and supplied by M/S. I.T.I. Limited., Bangalore. The rectification of deficiencies in equipment supplied by M/S ITI- is being taken up with the help of I.T.I.”

3.10. In reply to a question, the Committee, during the course of evidence, were informed as follows:—

“The defects which have come to our notice have been fully identified and solutions for these defects have been found out and BTM has agreed to rectify these defects at their cost.”

3.11. During the course of evidence the Secretary of the Ministry, about the Crossbar exchange, informed the Committee as follows :—

“As far as crossbar is concerned, it is still the most appropriate type of system for our country though the exchanges which were actually installed they have got certain defects. Now these defects have been identified and we are having a programme for rectification of these defects. And in the manufacturing which is taking place now in the ITI, all these defects have been taken into account and they have started making changes in the production and for a country like ours cross-bar system is the best system even to-day.”

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“There are about 16 cross-bar exchanges in the country and our main trouble is about the 3 exchanges in Bombay and 2 of the three exchanges in Delhi, particularly the Okhla exchange.

Our engineers have now traced and found out what the defect is. It is in a particular component called relay contact which has to be replaced; our investigation shows that if these are properly protected, then the performance should improve, by and large. As far as production in I.T.I. is concerned, we have asked them to change the production methods and to improve the contacts at the production point itself. We do not expect the present trouble to continue after about 12 months. As far as exchanges already commissioned *e.g.* those in Delhi and Bombay are concerned, we have to replace the components. The replacement work, especially at a live exchange, is very difficult, because we have to shut it down for some time. This is a very slow process.”

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“We have noticed the defects only now—that is, about three years ago, the contacts started burning out. What happens is, these defects burn out after a few million operations. If the load is small, it takes years before it is seen. In an exchange like Bombay, where the Calling rate is the highest in the world, it has come to light.”

3.12. In reply to another question whether Government knew the traffic of calls in Delhi and Bombay, before going in for cross-bar exchanges in collaboration with B.M.T. of Belgium, the Secretary, during the course of evidence stated as follows:—

“The data that we gave for designing the cross-bar exchange was based on our own old strowger practice and not what was required for cross-bar. At that time, we did not know. We actually placed the order for cross-bar exchange somewhere in 1964-65 or so. The data that we gave was according to the strowger practice by which we give the total time taken by all the speakers at one particular duration of the day. Whereas for crossbar design, actually it is the total number of calls that is very important. So, there is a lot of distinction. It is the number of call attempts which is very important for cross-bar. This is where we slipped up. At that time, we did not know; we did not give the correct information.”

3.13. Asked to state whether Government propose to import further crossbar equipment in the near future for their requirements and whether they propose to place orders with BTM for invite global tenders for the

same, the Secretary, Ministry of Communications stated during the course of evidence:

“Since the equipment output from the Indian Telephone Industry was not adequate, we decided to make up the shortfall, at least part of it by imports. We have called for global tenders for about 35,000 lines of exchange. It is not one exchange. It is a number of smaller exchanges. We received 3 tenders. Of course, on one tender we could not take any action, It was a cursory type of tender. We are examining the other two tenders, One is from BTM and one is from Ericssons, A Committee is examining these two tenders. We are awaiting their reports.”

3.14. It is understood that Government have sent three technical delegations abroad to assess the performance of BTM's Pentaconta type equipment and of IME's type equipment in different countries and to discuss the problems with foreign administrations. It is understood that these delegations have submitted their findings to Government.

3.15. In this regard it has been reported in the Press as follows:—

“A choice between the American giant—International Telephone and Telecommunications Corporation (ITT) and Ericsson, a Swedish firm, will soon be made for the award of a Rs. 7 crores contract for the supply of 35,000 lines of telephone equipment, sources in the Posts and Telegraphs department said. The decision, the sources said, will be based on the report of two technical delegations which had recently returned after studying the relative merits of the Ericsson and ITT telephone exchanges operating in a number of countries in the East and the West.

The World Bank loan for the purchase of this equipment for rural exchanges was provided two years ago,

It is said that ITT might have got the contract without competition had it not been for the furore created by the reported failure of the “pentaconta” cross bar equipment which India purchased from the Bell Manufacturing Company, an ITT subsidiary in Belgium.

BTM—supplied equipment installed in five “trunk” and six local exchanges in the country use the pentaconta system manufactured by the Indian Telephone Industry (ITI) with ITT collaboration and BTM specification.

But ever since 1970 both BTM and ITI—made crossbar equipment have come under fire following numerous complaints such as inability to handle load, wrong connections and wearing out of components before their guaranteed 24 year lifetime.

The crossbar controversy produced newspaper comments and heated debates in Parliament and delayed decision on the award of the contract. The controversy subsided, perhaps temporarily, with the despatch of two technical missions to the East and the West.

Back from their fact-finding trip the delegations have submitted their report, which, according to reliable sources tend to favour the Ericsson equipment,

Although Pentaconta and Ericsson equipment operate on the same principle, a P&T engineer said that purchase of Ericsson equipment would mean training a new crew and add to the inter-exchange confusion, when used along with existing exchanges. "If the Rae Bareilly factory also makes Ericsson equipment, it would ultimately lead to a situation where there would be four kinds of telephone exchanges in the 1980 when India would be ready for the all electronic exchange.

Electronic exchange would call for a new way of working, new computer-oriented staff, and radical changes in switching and maintenance philosophy.

The exchanges would be able to handle large and complicated traffic conditions and would provide new facilities such as abbreviated dialling, call transfer, and 'ring-back-on-busy-tone,

Some P & T engineers who doubt the wisdom of going for a second crossbar equipment argue that the failure of the Pentaconta system in some exchanges was caused by heavy traffic and change in calling practice of Indian subscribers.

ITT, the suppliers of the Pentaconta system argue that since the telephone traffic had increased 20 times, the 24-year guarantee based on the 1963 model had no meaning."

3.16. The Committee note that Government have decided to convert Manual Exchanges into automatic exchanges gradually and propose complete automisation by 1986. They further note that the main handicap in this regard is shortage of automatic exchanges equipment. The Committee hope that with the gradual stepping up of production capacity of equipments, Government would be able to adhere to the target date of automisation which is essential

for providing better telecommunication facilities to the telephone users. The Committee would like Government to prepare a programme for automisation for each year so that the target date could be adhered to.

3.17. The Committee are concerned to note that the B.T.M. crossbar exchange equipment which Government imported from Bell Telephone Manufacturing Company, Belgium is suffering from many defects with the result that the very purpose for providing efficient telecommunication service for which it was imported and installed has been defeated.

3.18. The main defects as brought to the notice of the Committee are inadequate contact protection, component failures, instability of mechanical adjustments, circuit problems and corrosion. The Committee cannot help but to point out that the Cross-bar technology imported from B.T.M. has in actual practice not been found to be fully suited to Indian conditions. It is not clear as to how such serious shortcomings occurred when a technical team of officers had gone round different countries to examine and recommend a suitable type of cross-bar equipment for manufacture in India. The Committee understand that the ITI indicated to the collaborators the pattern of traffic etc. only for Strowger system and did not have the adequate data about the periodicity of Calling which is an essential feature in this System. The Committee fail to understand why it was not possible to identify the basic requirement of periodicity of calls and special features of Indian conditions while going in for the B.T.M. Cross-bar equipment.

3.19. The Committee understand that Government have invited global tenders for import of 35,000 lines of crossbar exchange equipment and that offers have been received from three foreign firms including BTM (Penta Conta) with whom there is already an agreement for manufacture with ITI and L.M. Ericsson of Sweden. The Committee would like to impress upon Government the need for most careful scrutiny at the highest technical level so as to make sure that equipment which would give best service in Indian conditions would be imported and that the difficulties and shortcomings which were experienced in earlier years in the working of imported crossbar equipment from BTM are not allowed to recur.

(ii) Under-utilisation of Exchanges

The Utilisation of the equipped capacity of the various telephone exchanges in the country is stated to have been progressively increasing during

the 4th Five Year Plan period beginning from 77·1% utilisation on 1-4-68 to 83% on 1-4-72; this is, however, still to be improved. To achieve this the supply of requisite quantities of matching items of stores, mainly the underground telephone cables was being imported.

About underutilisation of the capacity of exchanges, the representative of the Ministry, during the course of evidence stated as follows:—

“If we take the entire country and starting from the smallest exchanges, we have got for rural areas exchanges of the size of 25 lines, 30 lines and 100 lines. In these sizes if you take a 25 line exchange, we have to start with about 15 subscribers and the growth after that is very slow because it is a rural area and the growth is not as fast as in the urban areas, So there is a low utilisation in the 25 line exchange. Similarly in 50 line and 100 line exchange, the utilisation is low. Then there is another phenomenon. After 1966 recession there have been some exchanges where after we installed the equipment the growth has been very much lower than what we had anticipated. So in some exchanges there is less utilisation.”

About the measures taken to utilise the capacity in full, the representative added:

“We started the drive 1½ years ago to have the utilisation improved and that has given us very good results and now on the 1st April, 1972, the utilisation capacity all over the country is about 83%. We shall continue the drive from the Headquarters.

It has been in Post Evidence replies stated that the utilisation of capacity of exchanges as on 1-4-72, 1-7-72 and 1-10-72 was as follows:—

Date	Equipped capacity	Working connections	Percentage utilisation.
1-4-72	12,75,610	10,56,659	83·00
1-7-72	12,88,276	10,71,874	83·20
1-10-72	13,09,452	10,92,855	83·51

In reply to another question whether the utilisation capacity can be pushed up from 83% to 100%, the Secretary of the Ministry stated:

“It will not be possible to come upto 100%. If you reach 93%, that is the maximum limit of reaching capacity, unless the service is allowed to deteriorate.”

In a detailed written note about the reasons for underutilisation of the capacity of exchanges in the country the Ministry stated as follows:—

1. At small places the demand is very poor and in many cases there is no waiting list though capacity is available for giving connections. This reduces the utilisation of the exchange capacity. In many cases it is of the order of 50%.
2. Exchanges are installed in certain fixed sizes such as SAXs of 25, 50 and 100 lines and MAX II in multiples of 100. This results in installing some spare capacity as compared to the available demand.
3. Shortage of underground cables has resulted in non-provision of connections in the areas where demand exists, because of non-availability of cable pairs. The production of H.C.L. is 30% of its capacity during the last 10 months.
4. Temporary shortage of stores delays the utilisation of the exchange capacity.
5. In some exchanges traffic has increased more than the designed figures and, therefore, the number of connections in those exchanges has to be restricted. This has been observed in many exchanges in Calcutta Telephone District where traffic relief equipment has been ordered on Messrs. I.T.I. but not received.

3.26. **The Committee note that there has been increase in the percentage of utilisation in the year 1972 and hope that the utilisation may reach 93% by the end of the Fourth Five Year Plan. To achieve the maximum utilisation, the Committee would like Government to issue instructions to all Heads of circles and Districts to review the spare capacity available in each Exchange and take concerted measures to bring it into utilisation. The P&T Board should in particular review regularly the utilisation of capacities in exchanges having 1000 lines and more so as to ensure that these are pressed into service at the earliest.**

3.27. **The Committee hope that concerted efforts will be taken to ensure that paucity of cables and other equipments are not allowed, to hold the full utilisation of capacity of telephone Exchanges.**

CHAPTER IV

TELEPHONE SERVICES

(i) *Trunk Calls*

4.1. Trunk Calls are stated to be established either on demand basis or on delay basis. In the 'demand trunk service' calls are stated to mature generally within 30-60 seconds. In the 'delay service', urgent calls are stated to mature within 30 minutes and ordinary calls within 60 minutes under normal conditions of trunk circuits. The reasons for not maturing Trunk Calls were always recorded. It has further been stated that when Trunk Calls are not expected to mature, subscribers are informed.

4.2. In a memorandum submitted to the Committee Chambers of Commerce has stated as follows about "Trunk Services" :—

"The efficiency of trunk service has reportedly declined sharply. Even 'lightning calls' are getting delayed by an hour, thus defeating the very purpose of booking such calls. In fact, the Chamber is receiving of late an increasing number of complaints about late response in booking trunk calls, non-materialisation of calls, disruption during conversation, etc.

Many subscribers also find it difficult to get 180 (Trunk booking) and 181 (Trunk Assistance). Sometimes it takes 30 minutes or more to get a line, particularly at night and in the morning. The Trunk Enquiry officer also is reportedly not very helpful in ascertaining the actual booking position. Regarding 'P. P.' call, it is reported that the operator generally gives the connection as soon as the called number starts ringing without waiting for the "P.P." to come on the line. All this is seriously affecting business activities while increasing the cost of communication services.

Since these defects are mainly due to human factor, the Chamber feels that they can be overcome with an improvement in the administration of the Department. To be useful, any call should be available within a short time and 180 operator should inform the subscriber of the actual number of calls pending under different category (such as lightning, urgent and ordinary) so that the latter can judge for himself at the time of booking in which category he should book the call according to his urgency."

4.3. Another Chamber of Commerce in a memorandum submitted to the Committee about "Trunk Call Services" have stated :

"Another major complaint is about the maturity of Trunk Calls, which inspite of so much of advancement take so long and do not materialise even after considerable time and in the process cause undue harassment and frustration to the person who books it. It takes hours and hours even for very small distance calls and if it is booked to places more than two hundred miles distant, then one considers himself lucky if the call materialises the very same day."

4.4. The All India Manufacturers Organisation, in a memorandum to the Committee about 'No Delay Service' have stated :—

"Recently, a "No Delay Service" has been started between Calcutta, Bombay and Delhi and some other important cities. While services are being appreciated to a great extend and helps the business, it is sometimes found that for 15 minutes the operator does not even pick up the phone and it takes more than 15 minutes to make a call on this "NO DELAY SERVICE".

4.5. During the course of evidence, the Secretary of the Ministry of Communications stated about the Operation of Trunk Services as follows :—

"There are complaints about delays in trunk calls; but by and large the trunk service has been considerably improved. In large cities till about 5 years ago, if a trunk call was booked, it was anybody's guess when it would materialize; but to-day, in metropolitan cities, the trunk service is much better. We have expanded the trunk service and extended it to remote areas. Sometimes they are on three or four links. The more remote the areas, the larger are the number of links. In such cases, there is delay. Whether the call is ordinary, urgent priority, it is no substitute for an impaired line. We are trying to improve the network. Originally, the high grade network was only between Calcutta, Delhi, Bombay and Madras; but now it has been extended to more or less all the capital cities; and we are further extending it through micro-wave linking into the interior. Still, there are a number of less important lines from the over-all point of views; I do not say they are less important to the subscriber. By and large, the efficiency is much

more than previously. Earlier, we could not get a call through from Delhi to Trivandrum for the whole day. Today there is a very reasonable chance that we will get it in about an hours time."

4.6. In a written reply to a question as to whether P&T Department had made any assessment for the losses that Department suffer for non-working of Telephones because of lines being out of order, the Ministry has informed the Committee as follows :—

"Calls lost due to Departmental reasons are assessed as a whole This includes the calls lost due to interruptions and inadequacy of trunk circuit. Loss due to lines being out of order is estimated to be Rs. 15 crores during the past three years.

Calls lost due to the Department have been taken into account for arriving at the estimate of Rs. 15 crores for the past 3 years. These include:—

- (a) Calls cancelled due to interruptions and
- (b) Calls cancelled by subscribers before they are tried due to :
 - (1) delay due to congestion on routes
 - (2) inadequacy of positions
 - (3) Shortage of operators
 - (4) an incoming call to the subscriber having being received and
 - (5) other personal reasons of the subscriber

4.7. About the 'NO DELAY SERVICE' the Secretary of the Ministry, during the course of evidence informed the Committee as follows :—

"At present, we have got 'No Delay Service' in 39 cities. It covers 41 routes. 'No Delay Service' is introduced wherever we have got a large number of circuits available and where we are not able to introduce STD services, because, the STD equipment has not yet arrived. Wherever such bunches of circuits are available we will be introducing 'No Delay Service'. About these complaints, either the 'No Delay Service' works or does not work at all, because if the line is down, for any reasons, we shut down the 'No Delay Service' and convert it into ordinary delayed or reverted services. As it is worked out, it is impossible for the operator to give a reply after, 15 minutes. She does not note down anybody's number and she has got to reply immediately on the line but, for any reason, the circuits are down, we actually shut down the 'No Delay Service'."

4.8. In reply to the complaint that while these 'No Delay Services' are being operated to a great extent to help the business, it is sometimes found that for 15 minutes the operator does not even pick up the phone and it take more than 15 minutes to make a call on this 'NO DELAY SERVICE', the Secretary, during the course of evidence informed the Committee as follows :—

'It is quite possible because sometimes, we have two or three operators on the 'No Delay Service' and as the calls appear on the board she takes up them and sometimes all of them may be busy. We can mitigate this by increasing this number of positions. We generally go for the peak hour traffic and for as many positions as possible. But, it is quite likely that in some cases, subscribers do not reach the operator at all for ten to fifteen minutes.

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'No Delay Service' must work only as 'No Delay Service'. But if the operator finds that the line is down, and she cannot put through the call, she straightway asks whether this can be booked as an ordinary or as an urgent call. She then books and this is passed on to a position where the Delayed Service is operated. We have got Delay and No Delay Services."

4.9. **The Committee note that while there is considerable improvement in the operation of 'Trunk Call Services' yet there is persistent feeling among business and other quarters that it requires further toning up to give the maximum satisfaction to the subscribers.**

4.10 **The Committee would, therefore, urge that Government should analyse the factors, both human as well as material, responsible for the operational shortcomings of Trunk Services and take suitable remedial measures to ensure maximum efficient service possible. This is all the more necessary in view of huge losses suffered by Government due to non-maturing of calls.**

(ii) *Self Trunk Dialling*

4.11. During the course of evidence, the Committee were informed that at present there were 35 stations with Self Trunk Dialling (STD) facilities, which cover 49 STD links. The Secretary of the Ministry further informed "We expect to cover another 59 stations by 1974. *i.e.*, another 161 routes and in the Fifth Plan, we expect to have 300 more added. Now the amount of traffic has gone up very much beyond our expectations say of the order of 20 or 30 times. We are adding new circuits. In some cases, we have no more circuits left. For example in Bombay and Delhi, the last available circuit has been utilised and we are now waiting for the new microwave link to be commissioned. STD from here—Delhi to Bombay goes on automatic exchanges. But Patna, Kanpur, Lucknow they are point to point exchanges."

4.12. As to what was the earning of P&T Department before and after the installation of STD system between Delhi to Bombay, the Committee were informed during evidence as follows:—

“It is much more than we expected. The number of calls per day between Bombay and Delhi used to be roughly 2600 or 2800 and a few months ago when we checked it, it had gone upto 40,000 calls per day

“It is about 18 times the original. In all the STD calls, the duration of calls is not 3 minutes. The income has increased considerably.”

Explaining about the introduction of STD system in other places, the Secretary stated as follows:—

“We are introducing between Bombay and Madras. But for Delhi and Madras line, we have not enough material. Whenever possible, it will be done. We have plan to introduce STD in 24 more stations. We are introducing on a number of new routes in the next two years.”

4.13. It was brought to the notice of the Committee that there had been complaints that STD calls in many cases were wrongly connected or not easily connected with the result that subscribers had to suffer because of such wrong connections and delayed connections. The Secretary of the Ministry suggesting improvements that could be brought about informed the Committee as follows:—

“The main trouble with the STD is in getting the distant Station. This is either due to long distance wing or congestion in the local exchange. If I dial Bombay in the morning it is difficult to get Fort area. Even in Bombay, Kalba Devi to Bombay (other exchanges) it is not possible. STD service is better than the local service.”

4.14. It was also suggested to the Committee that the effective means to prevent misuse of STD system were :—

- “(i) that Government should consider total barring of STD facility in case where such a facility is not wished by the subscribers.
- (ii) that there should be separate charge indicator meters which can record the STD calls separately.
- (iii) that the P&T Department should indicate in the bills the name of the city, town and the members called on the STD as the provision or merely recording the numbers of the STD calls is not adequate to prevent abuse of STD facility.

4.15. Commenting on the above suggestions, the Secretary of the Ministry informed the Committee during the course of evidence as follows:—

- (i) We are providing the facility of barring STD calls to subscribers who want such a facility. In Delhi, this has been introduced. In some exchanges it is already in operation—Tis Hazari, Delhi Gate, Jor Bagh. A subscriber has just to write that my telephone should be barred from STD. It is barred. We have decided if the subscriber says that he does not want STD, we charge Rs. 50/- for the first time when we introduce barring facilities, afterwards we do not charge. We are introducing STD barring in all local exchanges. We have to add new equipment. We are doing that. But the response is poor.
- (ii) At subscribers premises, we can put a meter, which indicates the number of STD calls made by him. It does not, however, say to whom the call was made. Only the units are there. There is a very simple meter. But under our conditions it was not found satisfactory. We found that the meter could be put out of commission. Now we have made a very sophisticated meter. It is being tried in Delhi. The cost of the meter is about Rs. 600/-, three times more than the cost of the telephone.
- (iii) In foreign countries when you get a bill, it indicates the city to which you have dialed, the duration and the date and all that. The whole thing is done on a highly computerised billing system. It is part of the exchange equipment. We may not have such an equipment on our exchanges, because our older strowger exchanges do not have the facility by which calling subscriber's identity can be easily found out. In crossbar exchanges this is quite easy but strowger equipment requires lot of modifications and the whole thing is extremely expensive. We are working on a design by which this can be done."

4.16. In reply to a question whether this STD barring facility was available in all the cities the Secretary informed the Committee as follows during evidence:—

"We are providing this at all cities where STD has been introduced. It will take us a few months before it is implemented. As far as charges are concerned, we are going to make this one time charge, to only those subscribers who want the changeover." It means a lot of work, therefore, charge is necessary.

4.17. The Committee note that with the introduction of STD system, there has been tremendous growth in trunk telephone traffic. The number of trunk calls through the STD system has risen to about 20 to 30 times the number which was put through the manual trunks prior to the introduction of STD system. The Committee also understand that the automatic telephone service can carry a greater number of calls, because there are inevitable delays in a manual or semi-automatic system. The Committee feel that the introduction of the STD system has streamlined the telephone trunk service by eliminating delays and other deficiencies inherent in a manually operated system of trunk traffic. This has provided the subscribers much relief and saving of time and has also increased the revenues of Posts and Telegraphs Department. The Committee feel that this system should progressively be introduced between all important cities connecting administrative, educational, commercial and trade centres.

4.18. The Committee, however, note that at times the subscribers find it too difficult to get through their calls expeditiously between different stations. The Committee would like to suggest that whether the delay is due to long distance or congestion in the local exchange, Government should take adequate steps, as expeditiously as possible, to remove the existing deficiencies to ensure an efficient service to subscribers.

4.19. The Committee further note that the STD barring facility has only been introduced in very few exchanges. They recommend that this facility should be expeditiously made available to all subscribers in all telephone exchanges in the country so that those subscribers who do not want to avail of this STD facility may be provided relief and are saved from the misuse of this system.

4.20. The Committee note that P&T Department has developed a meter, which can be put at subscribers premises, and which indicates the number of subscribers STD calls. They also note that it could not be put at subscribers place as it can be put out of commission. The Committee further note that Government is developing a more sophisticated meter, which is under trial in Telecommunication Research Centre. The Committee hope that this meter would be developed and checked on a high priority basis and installed quickly at the premises of the telephone subscribers using STD facility on their request and at their cost.

(iii) *Complaints*

4.21. It has been represented to the Committee that the subscribers in almost all the major cities are dissatisfied with the service they get from their local telephone system. They have drawn the attention of the Committee to the following :

- (i) Frequent cross-connections;
- (ii) Prolonged absence of dialling tone;
- (iii) Abrupt disconnections in mid-conversation;
- (iv) Scant assistance to subscribers by the local assistance service on the trunk booking service ;
- (v) Inordinate delay in attending to complaints from subscribers;
- (vi) Almost total lack of co-ordination between the different sections of a city telephone system ;
- (vii) Noticeable disinclination on the part of staff connected with telephone systems to be of an assistance to the public;
- (viii) Frequent break down of P.B.X. lines and lack of attention to complaints on this account in some cases for weeks; and
- (ix) Rise in the incidence of wrong number.

4.22. As regards these complaints the Secretary of the Ministry of Communications stated, during evidence :—

“There are two broad categories of these complaints, one is relating to the equipment itself and the other is relating to human factor. As far as the equipment itself is concerned, we are trying to maintain it as far as possible but we are very much short of spare parts and we have taken up this matter with the I.T.I. In the last two or three years, the I.T.I. has increased the supply of spare parts but even now it is not adequate. For example, the trouble mainly starts with the telephone instruments, the dials and the transmitters. What the I.T.I. supply to us is not adequate and we have been requesting, them to increase their supply of dial and transmitters. What I.T.I. in turn have done is that they have started a number of ancillaries sometime before they start responding to all our orders on them. And we have been saying to supply all these spare parts. This is the main trouble.

The second thing is about inter-exchange connections that is called junction lines. Junction lines—we are putting them as fast as is feasible and now we have got a large quantity of imported cables also to increase the number of lines. Of course, in certain cities these junction cables are more often than not, subject to various road digging hazard either by water supply or by any other public service Departments. These are the hazards for which we have got to take care of. Another thing is about the wrong numbers and interruptions in the existing conversations. This I have explained is a serious defect which arises due to inadequate maintenance. But the maintenance people have got the trouble of locating this particular trouble when it takes place. Once they know that it takes place at a particular place, it is very easy for them to repair it. But by the time it is reported to the authority by the subscribers, the conversation is stopped. However, we are checking them as and when it comes to our notice and we are trying to remove it. Apart from this, we have got a very rigid routine which we are following very minutely.

4.23. Explaining the general complaints about the functioning of special telephones services *i.e.* 173, 174, 180, 181, 197, 198, 199 etc. the Secretary of the Ministry stated, "This is again the human problem. We are having very heavy absenteeism amongst our operators. Sometimes it is of the order of 50—55%. We have to manage with 45% of the staff. This is one reason. The other reason is that there has been very rapid expansion and we have got a large amount of fresh candidates, who have been trained, but their services are not yet upto the mark. It takes some time for them to pick up. From last year onwards, what we are doing is, we have decided to take short duty operators, to fill up these vacancies, when there is heavy absenteeism and mitigate the effects of absenteeism. Its actual effect will be felt now, we took this decision last year."

4.24. **The Committee note that complaints in telephone service is due to two factors *viz.*— equipment and human. In so far as equipments are concerned, the Committee suggest that there should be regular checking of installations at the existing telephone exchanges, dial mechanism, switch board equipments as also of instruments given to subscribers and any fault detected should be rectified on the spot so that mechanical defects do not occur frequently.**

4.25. As regards the human factor the Committee would like to suggest that Government should examine the problem in all its aspects and take suitable remedial steps to eliminate causes of complaints arising out of this factor.

4.26. The Committee further feel that a conscious effort should be made in by the P & T Department to inculcate in their staff a sense of duty and a spirit of public service. They should be made to realise that they are running a vital communications system and that inefficient telecommunication invariably leads to a slowing down of the commercial and industrial tempo of a country.

4.27. The Committee have already made their recommendations elsewhere in the Report about augmentation of training programme for the telephone personnel which if implemented would go a long way in improving the efficiency of telephone services.

4.28. The Committee also suggest that Senior Officers including General Manager Telephone should go through unattended complaints thoroughly and take suitable steps to remedy the defects leading to complaints. The Committee would like that list of all unattended complaints should be placed before the Telephone Advisory Committee so that members can also have an idea about the disposal of complaints.

(iv) *Public Call Offices*

4.29. The number of Public Call Offices (P.C.O.) in the Metropolitan Cities as on 30-9-1972 was stated to be as follows:—

1. Delhi	1639
2. Bombay	2155
3. Calcutta	842
4. Madras	809

The P.C.O.'s working in other capital of States as on 30-9-1972 was as follows :—

1. Srinagar	89
2. Chandigarh	56
3. Jaipur	139
4. Lucknow	206
5. Bhopal	64
6. Patna	152
7. Ahmedabad	458
8. Hyderabad	416
9. Trivandrum	54
10. Bhubaneswar	18
11. Shillong	117
12. Bangalore	539

4.30. During evidence, the Secretary of the Ministry of Communications stated as follows :—

“As far as the total P.C.Os. are concerned, we have got 18,253 Offices as at the end of March, 1972, and long distance P.C.O.s., we had, numbering 3718.

* * * * *

About the bad working of P.C.Os. both the Department and the public are to be blamed. These P.C.Os. are exposed units. At least some persons in the public try to make them work, without putting the coins inside. In place of the coins, they put pieces of wire, metals, etc., particularly in Railway Stations etc. However, it does not absolve us also from responsibility. We are making periodical checks of these public call offices. . . . We have now introduced three ten paise new coins, instead of two 10 paise coins for 20 paise as previously. According to new plan it might happen that by the time you put the three coins, the party at the other end does not know what is happening; and he thinks that it is a mischievous call and puts down the receiver. Then you try again, the second time the party straightaway disconnects. We are thinking of having a new device whereby you put all the three coins together, so that they can drop simultaneously into the box. Therefore, the other party does not disconnect.”

4.31. The Committee pointed out that there was a system prevalent in other countries whereby, if one does not get the call, he gets back the money. In reply to the question whether such system was not possible here, the Secretary of the Ministry informed the Committee as follows :—

“That is called a prepayment system. You first put the coins, when the calls come through, the coins go into it. Otherwise, they come out.

* * * * *

As against that prepayment method, our post-system method is simpler. Our system is much easier. You are able to ensure that the called party is there.”

4.32. The Committee note that as on the 31st March, 1972, there were 18,253 short distance PCOs and 3718 long distance PCOs. The Committee need hardly emphasise that telephone has become a basic necessity for the people with increased social, economic educational activities and its need is increasingly felt by the common man. It should therefore, be the endeavour of Government to make

available telephone for use by the general public in adequate numbers. Government should, therefore, accord high priority to the programme of opening PCOs particularly in the metropolitan cities, State Capitals and District towns.

4.33. The Committee note that with the introduction of three ten paise new coins, the user of PCOs now find it difficult to get the call maturated as the party at the other end does not know as to what is happening and puts down the receiver. The Committee would, the refore, suggest that Government should immediately take up the introduction of new device in the Public Call Offices so that all the three coins are dropped simultaneously into the box and the user is connected quickly to the dialled number.

(v) *Shifting of Telephones:*

4.34. Shifts of telephones are stated to be given priority over new telephones, subject to the fulfilment of the following conditions :—

- (i) In multi-exchange areas, if a telephone is required to be shifted from one exchange to another, the shift is allowed if the date of original application on the basis of which the telephone was first installed, has been covered in the second exchange for providing new connections in the same category under which it was obtained. The shift is also allowed even if this condition is not satisfied if the telephone required to be shifted has already worked for a period of atleast three years in the exchange area from where it is required to be shifted. The Heads of Circles/Telephone Districts, however, have discretion to relax this Rule in cases of exceptional nature.
- (ii) In single exchange areas also, if the telephone is required to be shifted to a non-feasible locality the formula (i) above is applied for shifting the telephone from feasible to non-feasible areas.

4.35. In a non-official memorandum submitted to the committee, an organisation has pointed out as follows :—

It is reported that shifting of telephones even within the same exchange area at present takes a long time. This delay is much longer when shifting of a line involves two Exchange areas. As a result, subscribers are put to considerable difficulties and business activity suffers.”

4.36. In a memorandum submitted to the Committee by another non-official organisation, it has been stated as follows :—

“It appears that there is lack of coordination between the various exchanges and various departments of an exchange. It has been reported that transfer of a line from one exchange to the other takes inadvertently long time and considerable delay takes place while passing through various departments.”

4.37. During the course of evidence, about shifting of telephones within the same exchange and when two exchanges are involved, the representative of the P & T Department informed the Committee as follows :—

“The delays in shifting of telephone connections occur where the capacity of telephone exchange is fully utilised already or cable pairs are not available. The telephone is shifted only when it is feasible. But the shift gets priority over the new connections which may have to be given by the particular exchange.”

* * * * *

“We have to make an estimate of the number of shifts which may have to be given in an exchange and keep a few cable pairs and spare for this purpose. That is how we can reduce the delays in shifting, but in many cases where the cable pairs are available and exchange capacity is available the shifting is done without delay.”

4.38. The Committee understand that the shifting of telephones at present takes a long time. The Committee feel that when a telephone is to be shifted and if such shifting is covered by the rules of shifting, there should not be any difficulty in its shifting if the line is available in the exchange concerned. The Committee would suggest that some definite time-limit should be laid down and enforced for shifting of telephone lines both within the same exchange areas and from one exchange to another.

CHAPTER V

TELEPHONE FACILITIES IN RURAL, BACKWARD AND STRATEGIC AREAS

5.1. In a detailed note stating the Telephone facilities being provided at present in the rural areas, hilly areas and strategic areas, the Committee were informed as follows:—

“Telephone facility is normally provided at a place having a post office, if the schemes works out to be remunerative. In case of loss, this facility can be provided on rent and guarantee basis, if some interested party is willing to indemnify the department against the loss. But in order to extend telephone facility to undeveloped areas, a policy has been evolved by the department according to which this facility can be provided at certain categories of stations even on loss if the anticipated revenue is at least 25% of the annual recurring expenditure. This policy has been further liberalised, in respect of hilly and backward areas. These policies cover rural areas as well. Liberalised policy for strategic areas is being formulated.”

5.2. The Revised policy for opening of Public Call Offices on loss basis as laid down in January 1972 and as partially modified on 9-6-72 as a result of review of policy enunciated earlier in 1968 is stated to be as follows:—

“The Telegraph and Telephone facilities in undeveloped areas shall be progressively extended to different categories of stations as indicated below subject to an over-all limit of loss and not exceeding Rs. 30 lakhs for providing both these facilities during a period of 3 years beginning from 1st April, 1971.***

Public Call Offices

“Public Call Offices may be opened on loss basis at the following categories of stations subject to the estimated revenue being at least 25% of the Annual Recurring Expenditure and other conditions stipulated below in all the categories except in categories 4 and 5 where the revenue shall not be less than 10% of Annual Recurring Expenditure in hilly areas and 15% of Annual Recurring Expenditure in backward areas.

1.1 Sub-Divisional headquarter towns.

2. Teshil and corresponding headquarter towns.
3. Sub-Tehsil headquarter towns.
4. Places with a population of 10,000 or more and places in urban areas with a population of 5000 or more.
5. Places with a population of 2,500 or more situated within 12.5 Kms. from an existing telephone exchange. For considering the figures of population, the population of the village or town proper only should be taken into account and not that of a group of villages or towns.
6. Remote localities—100 PCOs to be opened. Such place shall be defined as a place not having a telephone exchange with 40 Kms.
7. (a) Tourist Centres including Pilgrim Centres; and
(b) Agriculture and Irrigation Project sites and townships.”

It has been further laid down that the number of offices under categories 7(a) and 7(b) shall be restricted to 100 PCOs.

5.3. In reply to an unstarred question No. 3987 in Lok Sabha on 30-8-72, about ‘Telephone in Villages’ the Minister of Communications informed the House *inter alia* as follows:—

“***This percentage (i.e. percentage of villages which have been provided with telephone facility) for the country as a whole is 0.669%. P&T circlewise percentage are reproduced below:—

1. Andhra	1.2
2. Bihar	0.61
3. Gujarat	0.94
4. Jammu & Kashmir.	0.65
5. Kerala	8.98
6. Madhya Pradesh	0.225
7. Maharashtra	0.817
8. Mysore	2.058
9. North East	0.719
10. Orissa	0.480
11. Punjab	0.554
12. Rajasthan	1.160
13. Tamil Nadu	1.542
14. Uttar Pradesh	0.320
15. West Bengal	0.398

About the schemes for extending telephone facilities to villages in different States under the Fourth Five Year Plan, in reply to the same question, the Minister further informed the House as follows:—

Sl. No.	Name of Circle	Target for IV Plan	Provided upto 15-8-72
1.	Andhra	250	209
2.	Assam (North East)	80	48
3.	Bihar	150	85
4.	Gujarat	100	51
5.	Jammu & Kashmir	25	14
6.	Kerala	100	64
7.	Madhya Pradesh	125	97
8.	Maharashtra	150	141
9.	Mysore	170	152
10.	Orissa	80	60
11.	Punjab	150	157
12.	Rajasthan	200	155
13.	Tamil Nadu	150	99
14.	Uttar Pradesh	150	137
15.	West Bengal	120	30
		2,000	1,499"

5.4. In post evidence replies furnished to the Committee about the detailed phased programme that has been chalked out to provide telephone facilities in these areas, the Committee were informed as follows:—

“During the 4th Plan period, it was proposed to open 2,000 long distance public Call Offices in the undeveloped areas. The year-wise targets and achievements are shown below:

Sl. No.	Year	Targets	Achievements No. of PCOs opened
1	1969-70	350	502
2	1970-71	400	487
3	1971-72	400	422
4	1972-73	425	362 (Upto 15-12-72)
		2000	1773

It is proposed to open 200 Public Call Offices in hilly and backward areas during 1973-74. During the Fifth Plan period, it is proposed to open 5000 Public Call Offices in the country.”

5.5. In reply to a question as to what improvements are proposed to be made so as to provide better telephone facilities in rural and backward areas the Ministry informed the Committee as follows:—

“Long distance Public Call Offices at places beyond 20 miles from the parent exchanges, used to be provided with copper-wire. Due to frequent copper wire thefts, the service of such PCOs was not satisfactory. The P&T Department has started using ACSR wires in all such cases. Since ACSR wires are not subjected to thefts, the service of such PCOs has improved considerably.”

5.6. The Committee during the course of evidence pointed out that the conditions of telephones exchanges in the rural areas were very bad. The senior Member (TO) Posts and Telegraphs Board informed the Committee as follows:—

“About the functioning of the exchange itself we do admit that the maintenance is not satisfactory because the maintenance has so far been entrusted to employees who are not quite competent to deal with such sophisticated equipment. We have got in many cases the line men who look after it. They have been given some training but they are not sufficiently competent to maintain that. We have now thought of a new scheme of maintaining a group of exchanges from the headquarters in which we have mechanics and Engineering Supervisors available and when the exchange gives trouble they will be able to go round and see that the maintenance is effected in the proper manner.

We have started this scheme in two or three places on an experimental basis. We hope to extend it to other areas also. Our experience has been good. If we have Engineering Supervisors and Mechanics to look after these exchanges there will not be any complaint of this sort.”

About the working conditions for staff working in exchanges in rural areas the Secretary of the Ministry informed the Committee as follows:—

“I completely agree that many of these exchanges require a lot of toning up”.

5.7. The Committee are unhappy to note that only 0.669 per cent of people in the villages have been provided with telephone facilities and that the circlewise percentage except in the case of Kerala, Mysore, Rajasthan and Tamil Nadu, is lower than even one per cent. With greater emphasis being laid by Government on integrated development of backward and underdeveloped areas and for providing necessary infrastructure for the same as also with greater movement of people from villages to towns and cities in search of employment opportunities, education etc., the Committee feel that existing telephones facilities available in rural and underdeveloped areas are far from adequate. The Committee, however, hope that with the enforcement of policy as now revised for opening of telegraph offices (combined offices) and public call offices in backward, underdeveloped and hilly areas, it would be possible to open more public call offices in these areas and to achieve the targets of opening 200 public call offices in 1973-74 and 5000 during the Fifth Plan period.

5.8. The Committee would, however, like to stress that to achieve the aforesaid targets, a phased programme for each year of the Fifth Plan should be drawn up for all categories of Stations mentioned in the revised Policy and all the concomitant factors involved in this process should be tied up in advance to obviate any shortfall in this regard. They would also like to suggest that yearly review of the progress made should be undertaken with a view to remove shortcomings that may be noticed in the implementation of the programme.

5.9. The Committee need hardly stress that telephone is a basic infrastructure for strategic areas. Government should, therefore, formulate as early as possible a liberalised policy for providing telephones in such areas and take expeditious steps to implement the same in accordance with a time-bound programme to be laid down in this behalf.

5.10. The Committee are unhappy to note that maintenance of telephone exchanges in rural areas was not satisfactory. Poor maintenance of Exchanges often result in interruption of link and unsatisfactory service. The Committee would like Government to take concrete and systematic measures to see that the Exchanges in rural areas are serviced properly and maintained in efficient and dependable condition of service.

CHAPTER VI

TELEPHONE TARIFF

6.1. It has been stated by Government that the tariff increases made during these years are essentially based on recommendations based on the Tariff Committees appointed by Government from time to time. For the first time in 1956 a comprehensive study was undertaken by a departmental committee. A Second Tariff Revision Committee was set up in 1964 in pursuance of the recommendations of the Estimates Committee in its 112th Report (Second Lok Sabha)—Part III on Telecommunications. The third and the last P & T Tariff Enquiry Committee was appointed in 1968 under the Chairmanship of Sri Mahavir Tyagi.

6.2. The tariff increases now enforced are stated to have been made on the basis of the recommendations of this last Tariff Enquiry Committee.

6.3. In a written note Government have indicated the position of revision of telephone tariff during the last five years as follows :

“(a) *Local Telephone Rentals:*

Rental for direct exchange lines within the local areas in measured rate and flat rate systems were revised twice in the last 5 years *i.e.* once in May, 1969 and secondly in May, 1971.

“(b) *Local Call Charges:*

Charges of local calls in measured rate exchanges were revised twice during the last five years, *viz.* in May, 1970 and then again in August, 1971. The revision of call charges from 15 P. to 20 P. made in 1970 was only in respect of calls in excess of the first 750 calls per quarter including 150 free calls per quarter. In 1971, the number of free calls per quarter was raised from 150 to 250 and for calls in excess of these a uniform rate of 20 P. per call had been prescribed.

(c) *Trunk Call Charges*

It has been stated that there had been no revision of trunk call rates in the last five years. However, in 1971, the trunk charging scheme was revised by formation of long distance charging areas. Prior to 1971, trunk call charges were based on the radial distance between the two stations as calculated from the co-ordinates fixed for each station. After the formation of long distance charging areas, rates between two stations located in distant charging areas were fixed as rates applicable between the centres of the charging areas instead of radial distance between stations. Rates for stations located within the same charging area or in adjoining charging areas, however remained chargeable on the actual radial distance as calculated according to the co-ordinates.

The tariffs for different radial distances were not changed. The scheme of charging areas was introduced only to simplify the method of charging and eliminate maintenance of a trunk call rate book giving rates from every trunk exchange to all other trunk exchanges in the country."

6.4. Asked to state the reasons for revision of tariffs, Government have in a written note stated :

"The tariff increases referred to above have been made on the basis of the recommendations of the Tariff Enquiry Committee appointed in 1968 under the Chairmanship of Shri Mahavir Tyagi, Member of Parliament. While discussing the policy for tariffs, the Committee has recommended that the tariffs for various telephone services should produce revenues to cover the cost of telephone branch, that is, working expenses, cost of research and development, depreciation and dividend payable and that these revenues should provide for an adequate surplus to cover marginal losses, if any, of other branches and also generate sizeable reserve for development of telecommunication services."

6.5. In reply to a question whether there was scope for reduction in the Telephone Tariff, the representative of Government during the course of evidence stated "No Sir, this is not possible."

6.6. Enumerating in detail, the reasons for not being possible to reduce the tariff, the Ministry in a written note have stated :—

"It is a fact that the telecommunication traffic both in terms of trunk calls, local calls, and STD calls has increased considerably during

the last few years. The growth has taken place as a result of installation of more telephone exchanges and the overall increase in the number of subscribers as also the facility of quicker contact with distant points over STD circuits. However, this growth of traffic has been possible only after installation of wide band transmission systems capable of carrying large blocks of telephone circuits on each route, such as co-axial cable routes and microwave links. The equipment for establishing these links has been installed at considerable cost to the P&T Department and immediately after installation the maximum capacity of the links has not been exploited fully because of the delay in the growth of terminal equipment including channelling equipment, exchange equipment and subscribers' lines. Thus, on the average, the wide band links have not been able to derive the maximum revenue that they were capable of with the result that the overall effect on the economy of the system as a whole has not been noticeable. While revenues have certainly increased, the expenditure of operating and maintaining these services has also increased considerably.

Bulk of the trunk services in the country is manually operated. Where automatic equipment has been installed, its maintenance has also needed considerably larger man-power in our country than is normally employed elsewhere because of the environmental conditions obtained here. The wage bill of staff has undergone consistent increase year by year because of revision of pay scales, introduction of welfare schemes such as medical reimbursement facility, employment of overtime in order to maintain the continuity of service. Further with the introduction of more sophisticated telecom. equipment the rank and hence the pay grades of maintenance staff had to be increased to obtain the required degree of education and skill of the maintenance staff. Apart from this, the investment in the shape of capital has been heavy, increasing the interest borne by the Department. The depreciation on telecom equipment is considerable and heavy capital investment on telecom. equipment results in a large annual bill in the shape of depreciation and replacement funds to be obtained from annual revenue. Thus, keeping the directives of the Tariff Enquiry Committee that the revenues should provide for an adequate surplus to cover marginal loss of other branches and also generate sizeable resources for the development of the telecom.

services, it has not been possible to reduce the tariffs of telecom. services during the last few years. Whenever a tariff investigation has been carried out it has only justified increase of tariff and there has been no possibility of making any reduction in the tariff”.

6.7. The Committee note that in the opinion of Government there is absolutely no scope for the reduction of telephone tariffs. The Committee, would, however, like to stress that the increase in tariff should be commensurate with the improvement in the service provided to the telephone users and that in devising the tariff structure, it must be borne in mind that the net work of telephones is expanded and telephone facility brought within the reach of maximum number of customers. Government should also see that as and when tariff is revised it should be simple enough to be understood by the public and that it is administered correctly and equitably by the authorities concerned.

CHAPTER VII

TELEPHONE REVENUE

(i) *Billing & Accounting*

7.18 It has been stated that the actual procedure followed in the preparations of bills and their delivery to subscribers and their settlement is as follows:—

(a) *Preparation Bills*

The bills are issued on fixed dates on 1st, 11th and 21st of the month. For each subscriber, the billing month(s) and the date of the bill are fixed.

In flat rate exchanges, the rental bills are issued on annual basis and in Measured Rate Exchange the rental and local call bills are issued quarterly. Trunk Call bills for each exchange are issued monthly on the same date on which the rental/local call bills are issued. In a month in which the rental or rental and local call bills, as the case may be, are due for issue, a consolidated bill covering rental/rental and local calls and trunk call charges is issued. Each subscriber has been made aware of the billing month(s) and the date for his telephone.

If for any reason, a subscriber does not get his bill by the fixed date, (such occasions will be only accidental), he is expected to call for a duplicate from the billing office.

(b) *Delivery of Bills*

Telephone bills are delivered to all subscribers, whether Government or private like articles of ordinary post.

The existing arrangements are that the Telephone Revenue Accounting Units are despatching the Bills under Registered Cover addressed to the Post-master of the locality where the exchange is situated/or to the respective Delivery Post-master in that station, as the case may be, for delivery through the Postman alongwith the other ordinary dak. This procedure ensures that no bill goes astray in transit between the TRA Unit issuing the bills and the Delivery Post Office concerned.

(c) *Procedure for settlement of bills*

Bills are payable within 15 days from the date of issue and if payment is not made by a subscriber within the prescribed time limit, a telephonic reminder is given. A further time of one week is allowed to the defaulting subscriber for payments. If the payment is not received even after reminder, the telephone is disconnected.

7.2 During the course of evidence, the representative of the Ministry of Communications informed the Committee about the present system of preparation of telephone bills etc. as follows:—

“In brief I may submit that all the readings etc. of the meters are done in the Exchange itself by the Exchange Staff and those readings and trunk call ticket, etc. are sent to the TRA unit and that Unit prepares the bills. Then this Unit sends these bills in a bunch to the Post Offices concerned by registered post. Suppose for a particular post office area there are about a hundred telephone bills; then those bills are sent to that Post Office under registered cover and then the regular postman will be delivering those bills at the residences of the persons concerned. This is the present procedure of preparation of bills and delivery of bills.”

Over Billing

7.3 In a memorandum submitted to the Committee, by a Chamber of Commerce and Industry of India, it has been stated about Telephone bills as follows:—

- “(i) It has been reported that incorrect bills are frequently sent to subscribers who then have to enter into protracted correspondence with the authorities concerned to obtain refunds.”
- (ii) It has also been pointed out that often bills are sent to subscribers by ordinary post, as a result of which they are either lost in transit or delivered after their due date and therefore, through no fault of their, ‘Subscribers’ lines are summarily disconnected. On the other hand, instances have been cited of cases where, inspite of having paid their bills on time, subscribers have had their telephones disconnected—a state of affairs which well illustrates the lack of co-ordination between the various sections of the city telephone systems.

- (iii) Many companies in the constituency have reported that on number of occasions they have either been overbilled or otherwise incorrectly billed and it has taken them several months to have these bills adjusted to the satisfaction of all concerned. In some extreme cases, refunds have been made by the telephone authorities after a lapse of as much as four years."

7.4 In another memorandum submitted to the Committee by the All India Manufacturers Association, Bombay have stated:

"Some of our members do receive faulty and inflated bills about which complaints are made to the authorities. We suggest that there should be individual metering of the telephone with a checking mechanism. If the mechanism goes wrong, the telephone bills are also wrongly recorded and sent to the client. Rectification of faulty bills is done after a pretty long period. Sometimes, it takes even 5 to 6 months. In most cases correspondences from the subscribers is not even acknowledged and reminders are sent for payment of bills which are not found correct."

7.5 Another Chamber of Commerce, in their memorandum to the Committee have also highlighted this problem of excess billing as follows:—

"A general complaint of the subscribers, however, is that their Bills are for excessive amounts not warranted by the calls and in some cases faulty as well. Even from those quarters who claim to record each and every call made from their telephone, the Chamber has received similar complaints. While the recording meters of other services like Water, Electricity and Gas etc. are fixed at the place of the consumers, there is no such system for fixing telephone meters so that the subscriber may at least know as to how his Bills are running. In case of any report to the Department about there perhaps being any fault in the meter, the subscribers are invariably informed that their meter is correct. In such circumstances, the poor subscriber has no other alternative but to pay what he has been billed under threat of disconnection in the event of non-payment."

7.6 To prevent over-charging in telephone bills, it has been suggested by most of the Chamber of Commerce of Bombay, Kanpur, Calcutta, Madras and some leading members of the T.A.C. that a similar meter, which is kept in the Exchange should be installed alongwith the telephone at the subscribers' premises.

7.7. Asked to State the number and nature of complaints about faulty bills, over-billing, defective meters etc. received during the last 4 years: together with details of their disposal, Government in a written note stated as follows:—

A. *“Number of Complaint*

The number of complaints about faulty bills appearing under the heads “Over billing” and “Disputed meter reading” have been shown along with figures of disposal for the period 1-4-68 to 31-3-72 in the Appendix I. The total number of complaints and the total number of telephones have also been indicated against each year. The complaints are being disposed of regularly by the respective P&T Circles/Telephone Districts after Physical verification and with reference to records available with them.

Nature of Complaints and their probable causes:

- (a) *Over billing*: The causes of over-billing are mostly due to:
- (i) Clerical errors.
 - (ii) Errors in reading of telephone meters.
 - (iii) Errors in calculation of difference between previous and current readings.
 - (iv) Arithmetical error in calculating the charges.

The above errors whenever detected are corrected and the complainant is given relief.

(b) *Disputed meter reading*: Causes for excessive meter may be due to the following reasons:

- (i) Defect in the meter mechanism. Meter mechanism is very robust and seldom develops faults. The fault rate per year is 0.4%. Generally, the fault is that the meter stop recording. It seldom contributes to excess metering complaints.

- (ii) Defect in the telephone instrument or subscribers operating defect:

If at the end of subscriber Trunk Dialling call, the subscriber does not replace the receiver properly or the hookswitch of the telephone instrument does not operate due to mechanical fault the meter continues to register calls.

- (iii) Defect in telephone exchange, equipment and telephone lines : Both in Strowger and Cross Bar Exchanges certain mechanical defects can cause excessive metering. Unusual circuit conditions may also cause excessive metering.

- (iv) Malpractices by subscribers in collusion with Departmental staff.

Some subscribers in collusion with lower category departmental staff or other, arrange to fraudulently divert their lines to other subscribers' telephone lines either in the telephone exchange or at outdoor/in door Distribution Points.

(c) *Manner of disposal of complaints*

On receipt of a complaint, first the bill is checked for clerical/calculation errors. Fortnightly readings of meters and bills of a few previous quarters are also checked to see whether there are any spurts or any increase in the number of calls. If anything unusual is noticed in the meter readings, the Divisional Engineer in charge of the exchange takes the following action:—

- (a) Meter is thoroughly tested.
- (b) The meter is put under observation for a fortnight to measure the rate of calling as also to check the utilisation of the Subscriber Trunk Dialling facility by the Subscriber.
- (c) Subscribers telephone instrument, indoor/outdoor distribution points and exchange fittings are checked.
- (d) Any other causes which may be responsible for abnormal increase in the calls are removed."

7.8 About disposal of faulty bills by the P&T Department, the representative of the Ministry of Communications informed the Committee during evidence as follows:—

“Suppose somebody feels that his bill for local call charges is higher than it ought to have been according to his own estimates, then he makes a representation to the General Managers (Telephones) and the G.M. (Telephones), first goes into the matter whether there is any calculation mistake and if there is any calculation mistake, or if it is due to some other reason, he makes an enquiry. If he is satisfied about the claim, taking into account, his past calling habit, he sanctions the rebate. The case comes to the Directorate only if the amount to be sanctioned as rebate exceeds the powers delegated to him in this regard.”

7.9 The P.A.C. in the 40th Report (Fourth Lok Sabha) observed that Government had then decided to introduce a percentage check of the accuracy of telephone bills. There was also a proposal to introduce photographic system of taking meter readings in the Bombay Telephone District and which might be extended in the light of experience of Delhi and Calcutta Telephone Districts. In their Action Taken reply Government stated as follows:—

“The question of introducing photographic system of taking meter readings has been under the consideration of the Department for some time. Sanction for the purchase of four units of equipment at estimated cost of Rs. 1.32 lakhs for taking photographic readings of meters has been accorded and the Director General Supplies and Disposal has been requested to procure the equipment. As soon as this is received, it will be installed at four places, to start with as an experimental measure.”

7.10 In a written reply about its working and the extent to which it will be able to eliminate complaints about inaccuracy in billing of telephone, the Government Stated:—

“The Photographic system of taking meter readings has not so far been introduced anywhere in the country. The equipment ordered for this purpose is expected to be delivered during this year.

The equipment is in two parts:—

- (i) Photographic equipment; and
- (ii) Film Viewer and Scanner.

The photographic equipment photographs subscriber's meters in blocks of 100 on a film. The negative film containing a series of such blocks after development is inserted in the Film Viewer and Scanner where each meter reading is displayed in turn on an illuminated screen in the incorrect numerical sequence.

With the photographic method nearly 10,000 meter readings can be completed in half a day's time. The record will be free from any human errors, thus minimising second readings and avoiding any queries from the subscribers.

The films subsequently provide strong documentary evidence.

7.11 In a note as to when the existing system of billing/accounting in regard to Telephones was introduced and what improvements had been made therein in recent years in the light of present-day management needs and bringing it on a sound commercial basis, the Ministry replied as follows:—

“The present system of billing & accounting was introduced from 1-7-1970 based on the report of a high powered Committee constituted by the Government of India and submitted to the P&T Board in April, 1970.

The main recommendations made by the Committee in respect of accounting in small & medium sized Telephone units are to ensure the objectives of (i) promptness in the issue of bills, (ii) accuracy of billing, (iii) speedier calculation of revenue and (iv) effective control over outstandings. As a result, the following improvements have been achieved:—

- (a) Staggering of bills on the 1st, 11th & 21st of each month to ensure even load of work in the various officers throughout the year;
- (b) maintenance of a rent control register in each unit to ensure that all bills due are being issued and that there are no omissions;
- (c) introduction of personal accounts for each subscriber which gives a complete picture of the subscriber's financial transactions and shows all the outstanding bills against him on any particular date;
- (d) issue of a consolidated bill to a subscriber in one month covering different kinds of charges, i.e. rent, local calls trunk calls & others;

- (e) exhibition of past arrears in the bills to bring it to the notice of the subscribers about their existence so that they may not deny the same;
- (f) effectively reconciliation of outstandings;
- (g) daily receipt of information regarding opening/closing of telephones by the TRAO; and
- (h) advancement of compilation of the monthly accounts for earlier review by the Management.

7.12 In the case of major Districts, the Committee's recommendations was that the telephone billing & accounting work should be computerised and also issue of bills should be staggered on the 1st, 11th & 21st. For the first two years this should be done on a service bureau basis. Accordingly computerisation was introduced with effect from 1-10-1971 in Bombay District. In Calcutta there was partial computerisation and the entire work will be fully computerised shortly. In Madras the computerised accounting was expected to start from 1-3-1973 and in Delhi, the first stage of the work was expected to start from April, 1973.

Improvements

Switchover to computer billing has made it possible:

- (i) to avoid leakage of revenue, the computer produces a list of bills not issued for investigation.
- (ii) to exercise control over outstandings and to take prompt follow-up action for the same.

Besides the above, the computerised system produces various analytical statements as detailed below which help to take corrective and quick action:

- (i) Outstandings according to exchanges and according to years.
- (ii) Statements showing abnormal variations in calling rates.
- (iii) grouping of subscribers according to number of Local calls.
- (iv) statement of revenue analysed under various heads.
- (v) payment pattern of subscribers.
- (vi) trunk traffic under various priorities."

7.13 The following checks are stated to have been prescribed to guard against the inaccuracies in bill :—

“1. Local Call Charges

- (i) The Exchange Officer shall send a list of telephones in respect of which one or more revolutions were completed during the quarter and TRA Unit shall check the list with the Register of Local Calls.
- (ii) The Inspecting Officer shall furnish to TRA Unit a list of 100-working telephones with the meter readings as on the date of Inspection and the TRA Unit shall check and see that the meter reading shown therein are broadly correct.
- (iii) The Inspecting Officer shall check the proper maintenance of meter reading records in the exchanges.
- (iv) The T.R.A. Unit shall maintain a list of heavy callers and keep a watch over the bills of such subscribers.
- (v) According to the new procedure introduced on the basis of the Billing Committee's Report, all the particulars relating to the meter readings, credit debit and net local calls etc. will be filled in by the Meter Reading Clerk in the Exchange in the Register of local calls which will be completed by him upto the Costing Stage. The Meter Clerk shall take particular care to ensure that :—
 - (a) The 'last reading' in the register tallies with the 'present reading' in the previous quarter's register.
 - (b) the No. of gross calls as worked out correctly represents the difference between the 'present' and the 'last' readings.
 - (c) the number of not chargeable calls equals the gross calls minus credit calls (including free calls) plus debit calls.
 - (d) the evaluation of local calls have been done correctly.
 - (e) Page-wise total and cross totals are correct and the totals of the money column represents the correct charges with reference to the net chargeable calls.

- (vi) Accounting Clerk in TRA Unit shall conduct test check of 25% of items and put his initials against each telephone whose entries are checked. The Head Clerk of the Section shall personally ensure that the prescribed checks have been carried out and completed. It shall also be seen that the total amount of local calls billed as per Bill Register tallies with the total value of the local calls to be billed as per Local Call Register. He shall sign with date on the last page of the Local Call Register in token of having done so.

Rental of Telephones and Accessories.

7.14 In inaccuracies in the rental bills generally occur on account of non-receipt or delayed receipt of Advice Notes in the TRA Units. The following instruction shall be observed to avoid issue of inaccurate bills.

- (1) The Advice Note issuing Officer shall personally ensure that the Advice Note is complete in all respects and the chargeable distance and the rate of rental are shown therein.
- (2) The TRA Unit shall bring to the notice of Head Circles, cases of delay of more than one month in the despatch of completed Advice/Notes to TRA Unit by Advice Note Issuing Officers. The delay shall be viewed seriously, responsibility fixed and suitable action taken by the Head of Circle.
- (3) A register of Guaranteed connections shall be maintained in each TRA Unit and a watch kept that the charges due are recovered from year to year upto the date of expiry of the period of guarantee.
- (4) TRA Unit shall check telephone Directory with the subscribers Record Card to ensure *inter-alia* that no unauthorised telephone exists for which rent is not being recovered.
- (5) Internal review of the Subscribers Record Cards shall be conducted to ensure that rental for each telephone and accessory provided to a telephone is billed for correctly.
- (6) Each Engineering Division shall furnish before 30th April each year a complete list of the PBX's, PXs, non-exchange lines, etc. working on the 31st March to TRA Unit who on its receipt shall check the list with Subscribers Record Cards and have the discrepancies, if any, reconciled.

Trunk Call Charges :

7.15 (1) A test check of valuation of 10% of valued tickets for smaller exchanges and 25% of such tickets for bigger exchanges in respect of valuation done in TRA is provided. In respect of T.C. tickets valued by the exchanges the test check is to be done for 10%.

(2) In cases of these exchanges where the valuation, sorting and listing is done in the local trunk exchange, the Exchange Officer shall conduct a reconciliation between the total number of tickets used in the exchange on each day and during each billing period with the total number of tickets listed and transferred to TRA Unit for billing plus PCO tickets and non-chargeable tickets taken together. The reconciliation between total number of tickets received in the TRA Unit duly listed and the total number of tickets billed for as per the Bill Register as also between the amount of the Trunk Call charges billed for as per Bill Register shall be made by TRA Unit."

7.16 During the course of evidence, about computerizing of billing system, the Committee were informed as follows :—

"We are introducing computer in Bombay. Of course readings are taken manually and they are fed to the computer. Then the computer does all the billing. It is working only in Bombay."

7.17 About fixing a similar meter at the premises of the subscriber, the Secretary of the Ministry informed the Committee as follows :—

"At the subscribers' premises we can put a meter which indicates the number of S.T.D. calls made by him. It does not however say where, the call was made. Only the units are there. This is a very simple meter. But under our conditions it was not found very satisfactory. We found that the meter could be put out of commission. Now we have made a very sophisticated meter. It is being tried in Delhi. The cost of this meter is about Rs. 600".

7.18 The Committee were also informed that the cost of this meter is about three times the cost of telephone instrument and that they have got about 50 meters, which were being tried in Delhi.

7.19. **The Committee are constrained to observe that by and large there is a general feeling among the Public that incorrect or inflated bills are frequently sent to subscribers who have to enter into protracted correspondence with the authorities concerned to obtain refunds. This is high-lighted from the fact that during the**

Calendar years 1970, 1971, 1972 (upto 1-3-72), complaints received by the Telephone Department for over-billing and disputed meter readings were to the tune of 1,86,042, 2,21,613 and 59,846. In terms of percentage, the Committee observe that there is increasing trend in the number of complaints recieved with reference to the number of installed telephones. It increased from 5.83% in 1970 to 6.32% in 1971.

7.20 The Committee, while noting that some measures have been taken to reduce overbilling, would like to emphasise that the whole system of billing requires thorough streamlining. They would, therefore, urge that Government should review the whole working of Billing procedure at a high level and take suitable remedial measures in respect of human and material factors that contribute to overbilling.

7.21. The Committee also note that due to non-delivery or late delivery of bills, subscribers are unable to pay the bills in time with the result that their telephones are disconnected. The Committee would, therefore like to suggest that Government may examine whether it would not be advisable to send bills to subscribers by registered post or in the alternative, if it is considered uneconomical bills may atleast be despatched under certificate of posting on due dates.

7.22 It has been suggested to the Committee that similar meter as is installed in the Exchanges be installed at the subscribers' premises for purposes of cross-check. The Committee note that Government are now developing a sophisticated meter, which is being tried in Delhi and can be installed at subscribers premises, after it is fully developed., examined and checked. The Committee hope that Government would be able to develop this meter without further delay and provide to subscribers who want such meters at their own cost at their residences.

7.23 The Committee regret to note that Government have not been able to introduce photographic system of taking meter readings at four places so far even though it was intended to do so as early as in 1969 due to delay in the procurement of equipments. The Committee would like to suggest that this matter should be taken with the Ministry of Industrial Development so that expeditious steps are taken to procure equipments and instal them. They would like to suggest that in case this experiment proves successful, this system may be introduced in a phased manner in other places.

7.24. The Committee note that one of the main reasons about excess metering complaints is that some subscribers were in collusion with departmental staff or others. The Committee feel that Government should exercise greater vigilance and take a very serious view of the corrupt practices indulged in by their staff and others, *i.e.*, diversion of one subscribers telephone lines to another subscriber's telephone for making S.T.D. and other calls, and issue of wrong bills to subscribers under the cover of clerical errors etc.

7.25 The Committee feel that unless strong action is taken to detect such cases and deterrent punishment is given to the guilty persons, this evil cannot be effectively dealt with.

7.26. The Committee further note that Government have introduced computering of billing system in Bombay, where readings are taken manually and they are fed to computer and this helps in eliminating wrong calculations in billing etc. The Committee would like to suggest that computerisation may be introduced in other cities also, starting with the Metropolitan Cities in accordance with a time-bound programme to be chalked out for this purpose.

(ii) *Arrears of Telephone Revenue*

7.27 The outstanding Telephone Revenue are stated to be as follows:

	(Figures in crores of rupees)		
	Govt	Private	Total
1. Outstandings as on 1-7-69 for bills issued upto 31-3-69	3.47	3.17	6.64
2. Outstandings as on 1-7-70 for bills issued upto 31-3-70	3.45	3.33	
3. Outstandings as on 1-1-71 for bills issued upto 31-3-71	2.33	3.95	6.28
4. Outstandings as on 31-5-72	1.94	4.11	6.05

7.28 The arrears due from Government as on 31st May 1972 are of the order of Rs. 193.97 lakhs broadly classified as below :—

<u>Category</u>	<u>Amount in lakhs</u>
State Govt.	76.42
Central Govt. (Excluding Defence)	56.23
Defence	61.32
TOTAL arrears due from Govt.	193.97 lakhs

Circle-wise details are also furnished in the same statement which shows the details of arrears due from private subscribers.

(b) A statement showing the arrears due from private subscribers as on 31st May, 1972 Circle-wise is at Appendix II.

(c) The P&T Department provides telephone service to subscribers on a credit basis, the credit allowed to a subscriber in the shape of unprepaid local and trunk calls being virtually unlimited. Therefore, in a Department where the system of post billing is in vogue and where the amount billed for during 1970-71 was of the order of Rs. 124 crores, some arrears are inevitable.

(d) The recovery of arrears is a continuous process. Initially, this is achieved by such steps as disconnection of defaulting subscribers telephones, then by personal contact and correspondence with subscribers, and finally legal action, where necessary. The recourse to law is possible only in the case of private subscribers and under the existing procedure, it has to be ensured that there is reasonable prospect of recovery in such a course. In spite of all efforts where we find that dues are irrecoverable the amounts are wiped out by write-off.

Over and above the normal procedure special drives are launched with a view to clear old arrears. The first special drive was launched in Oct. 68 wherein stress was laid to clear arrears upto 1957-58 and to concentrate on the arrears relating to 66-67 and 67-68. A second intensive drive was started in August 70 to clear the arrears upto 1967-68. The third drive for clearing the arrears upto 31-3-1970 was undertaken during May/June 1971. The results of the drive were satisfactory as will be evident from the following figures:—

Year	Amount collected	Outstanding on 1st July following (including outstanding for the bills issued in the preceding years)	Percentage of the outstanding amount collected during the year.
	(Lakhs of Rs.)		
1967-68	74,41	5,94	8.0
1968-69	84,91	6,64	7.8
1969-70	1,01,78	6,78	6.7
1970-71	1,20,80	6,28	5.2

The latest drive which was started from 1-1-72 for clearing arrears for the year ending March 1971, is still continuing. The results so far achieved during the period of 5 months is indicated below :—

(Amount in lakhs)

Year	Arrears as on		Amount settled	Percentage of recovery
	1-1-72	1-6-72		
Upto 67-68 .	146.93	124.73	22.20	15%
68-69 to 70-71 .	251.47	194.79	56.68	23%
TOTAL	398.40	319.52	78.88	20%

To expedite clearance of irrecoverable dues more financial powers to write off arrears of certain description have been delegated to the Heads of Circles prior to delegation of these powers, Heads of Circles could write off irrecoverable telephone dues upto Rs. 2000/- in each case (upto Rs. 4000/- in each case of outstanding prior to April 58). The above powers could be exercised only in the case of *closed Private connections*. After the recent delegation they can also write off within the said limits dues of *both Government and Private telephones* irrespective of the fact whether *they are working or closed*, in cases where the Department does not have the detailed records to substantiate the claim and the dues relate to prior to 1-4-66. Discretionary powers to dispense with detailed investigation in cases of outstandings of less than Rs. 250/- prior to 31-3-66 have also been given to Heads of Circles.

As regards Government subscribers the Chief Secretaries of all the State Governments have been addressed requesting them to issue instructions to all the State Government offices impressing on them the need for prompt settlement of telephone bills”.

7.29 During the course of evidence the representative of the Ministry informed the Committee about recovery of arrears as follows :—

“ The first drive we undertook was from August '70 to November 1970 for clearance of arrears in respect of Bills issued by March 31, 1968. That was the first drive and I will give the results achieved simultaneously as a result of this drive. The arrears as on 1st July 1970 was Rs. 266.86 lakhs and during the period of drive the arrears were reduced to Rs. 220.56 lakhs, thus collecting an amount of Rs. 46.30 lakhs which worked out to 17 per cent and we were not satisfied

with the results which were not very encouraging. A number of letters were issued to all the heads of Circles asking them to make further efforts to reduce the arrears and take personal interest in this. This was the result of the first drive.

The second drive was undertaken during May-June 1971 for clearing arrears in respect of Bills issued by 31st March, 1970. In this second drive, the arrears in respect of Bills issued upto 31st March, 1968 were further reduced from Rs. 220.56 lakhs to Rs. 169.01 lakhs as on 1st July, 1971. This was the result of the second drive. Then we also again brought to the notice of the Heads of Circles the observation made by the Minister of Communications, that is, that he wanted better results and because low realisation would indicate low degree of interest, therefore he expected that the officers would take further interest in making these drives a great success. Then the third drive was undertaken from January, 1972 covering the arrears in respect of bills issued upto 31st March, 1971. The amount was Rs. 398.40 lakhs out of which Rs. 84.42 lakhs were cleared upto 30-6-72. After having tried all these drives, recently, we have issued special instructions to all the Heads of the Circles by saying that so far as private connections are concerned, a one month's registered notice is to be given to anybody who is in arrears. If he does not pay within that period, his telephone is to be disconnected. We have fixed a target date for disconnecting private telephones in arrears".

7.30 About special steps taken to recover arrears from Government Department, the representative of the Government added :—

"We have taken two or three steps. We have addressed letters to all the Chief Secretaries requesting them to issue instructions to get the arrears cleared up as quickly as possible. Otherwise, we may have to enforce disconnection vigorously even in respect of Government telephones also. Some time back, in consultation with the C & AG, instructions were issued to the Ministries and the State Governments that as soon as they receive telephone bills, they make the payment. Even in the case of disputed bills, they should make provisional payment subject to dispute being settled later on. But these instructions are not being followed. So far as the

Ministry of Defence is concerned, we have had personal dialogues with them and they have agreed to pay their arrears for the period upto November 1967. The Defence Headquarters had suggested to the Ministry of Defence that since the records for the earlier period are not complete we may discuss and settle the matter on an *ad hoc* basis. So far as Ministry of Defence is concerned, we will come to some settlement with them. About other Ministries, the difficulty is that we do not have a clear picture about the arrears against a particular Ministry. In our accounting system, the record is not kept Ministry wise and we do not have the figures readily available about the arrears against a particular Ministry”.

“ So far as the State Governments are concerned, we have written to Chief Secretaries of the State Governments. We have been impressing upon them the desirability of issuing instructions to the officers concerned for prompt payment of our telephone bills. In some cases of disconnection of telephones there has been some sort of interference by State Government officers. We have accordingly, requested the Chief Secretaries that this kind of high handedness on the part of the authorities to interfere in our working, should be avoided.”

7.31 In reply to another question as to when Government expect to totally wipe out the arrears as a result of those drives, the Committee were informed as follows :—

“We have taken two steps. We have increased the powers of the Heads of Circles to write off the irrecoverable arrears. We have told them ‘Please have a two-pronged drive—collect the arrears and also write them off wherever the amounts are irrecoverable’. But, the arrears will never be completely wiped out because we are giving Telephone facilities on credit. Some arrears are inevitable under such a system.”

7.32 During the course of evidence, it was suggested that Government should consider introduction of Security Deposit Scheme for private telephone users as that would add revenue and eliminate losses due to non-payment of dues by subscribers. The Secretary, of the Ministry stated that that was a good suggestion.

7.33 The Committee, while appreciating the fact that in a system where telephones are provided to subscribers on credit basis

and where the post billing system is in vogue some arrears are inevitable, cannot, but feel concerned to note that arrears of telephone revenue as on 31-3-72 were to the tune of Rs. 6.05 crores out of which 1.94 crores were outstanding against Government Departments (both Central and States). The Committee while observing that as the result of special drives launched during the last four years, percentage of recovery has been of the order of 20 per cent are of the opinion that much more concerted efforts have to be made on the part of the Department to bring down the arrears to the minimum possible. It is indeed a matter of great concern that the Government Departments are not alive to their responsibilities to clear the dues. The Committee feel that a decision should be taken at a high level and suitable directives be issued to clear off the arrears. In the case of State Governments the matter should be taken at the highest level so that pointed attention is drawn to the settlement of the problem.

7.34. The Committee are concerned to note that out of Rs. 6.05 crores arrears of the telephones revenue, the arrears due from private subscribers are as much as Rs. 4.11 crores. The Committee cannot but come to the conclusion that efforts made by Government to realise arrears from private subscribers have either been half hearted or proved ineffective. The Committee would, therefore, like Government to go into the matter thoroughly and find effective ways and means to liquidate arrears due from private subscribers. In this regard the Committee would like to suggest that Government should first undertake analysis to identify big cases of defaults by subscribers say of over five thousand rupees and concentrate their efforts in realising arrears from such subscribers. They should also make concentrated efforts in realising arrears of past years so that arrears are recovered in time and before the party persons concerned disappears. The Committee are of the opinion that there is no reason why arrears cannot be realised if Government effectively implement the policy decision taken by them for realisation of telephone arrears.

7.35. The Committee would like to suggest that Government may examine whether it would be feasible to introduce "Security Deposit Scheme" for private subscribers which may to some extent prove helpful in realising recovery of telephone arrears.

CHAPTER VIII

TRAINING & TELECOMMUNICATIONS RESEARCH CENTRE

(i) Training

8.1 The recruitment of telecommunication personnel is stated to be at three levels, *viz.*, (1) Engineers (2) Supervisors and (3) Operative Staff and Technicians. The first two categories *viz.* Engineers and Supervisors were trained at the Regional Telecommunication Training Centres, the third category *viz.* Operative Staff and Technicians were trained at the Circle District Telecommunication Training Centres. The existing facilities and future expansion programmes of the training centres is stated to be as follows :

(i) Regional Telecommunications Training Centres.

Existing facilities

There were five Regional Telecommunication Training Centres located at Jabalpur, Nagpur, Bombay, Calcutta and Trivandrum. As fresh recruitment of graduate engineers was comparatively very small, the bulk of trainees at these training centres were from the cadre of Engineering Supervisors. The present simultaneous capacity of these five Regional Training Centres was 1560 as detailed below :—

Jabalpur	720
Nagpur	120
Bombay	240
Calcutta	240
Travandrum	240
TOTAL	1560

It has been stated that that was adequate to meet the demand upto then, but with the fast expansion of telecommunication services the requirement of Engineering Supervisors had increased and to cope with the situation, an immediate expansion of training facilities had been proposed by way of opening training classes at additional centres. As a part of that scheme, training of Engineering Supervisors had already commenced at Madras in December, 1972 and it would be followed by commencement of training classes at Ahmedabad in February, 1973

(ii) *Future Expansion Programme*

It has been stated that by the end of the 4th Five Year Plan, the requirement of training of Engineering Supervisors was expected to increase to 2750 per year. To meet this requirement, expansion plans were on hand for increasing the training capacity by construction of new buildings and hostels for the TTCs at Calcutta, Trivandrum and Nagpur. After completion of these schemes, the total training capacity would go upto 2750. With the larger investments proposed in the Fifth Five Year Plan the expansion of telecom. net work will be at a rapid pace with a consequent increase in the demand of supervisory staff. The projected requirement for training of Engineering Supervisors by the end of the Fifth Plan was expected to be 4500 per year. To meet this requirement it was proposed to establish additional Regional TTCs during the Fifth Plan taking the total capacity to 4500. Telecommunication technology was making rapid strides all over the world and a high degree of sophistication was taking place in the equipment. To keep abreast with these developments and to train telecommunication personnel in the latest techniques, there were plans to establish an advanced Level Telecommunication Training Centre at Ghaziabad (near Delhi) with the aid of the United Nations Development Programme. This training, it has been stated, would be of international standard.

Circle/District Telecommunications Training Centres

8.2 It has been stated that every P & T Circle/District had a Telecommunication Training Centre for training of various cadres of operative staff and technicians such as Mechanics, Telephone Inspectors, Telephone Operators, Linemen, Wiremen and Telegraphists, etc. There were 24 such training centres with an overall training capacity of over 12,000 per year.

To cope with the rising demand of trained personnel, adequate expansion of these training centres had already been made in the 4th Five Year Plan. There were schemes also to provide for hostel accommodation upto 50% of trainees and residential quarters on 100% basis for instructional staff. These provisions had been made with a view to have complete and efficient centre on the trainees both in their class work as well as extra-curricular activities.

Future Plans

8.3 To meet the future requirement of training during the 5th Five Year Plan the training capacity for these cadres was proposed to

go upto 20,000 trainees per year, by the end of Fifth Plan as per Appendix—III). For this purpose, further expansion of existing Circle/District Training Centres was planned during the Fifth Plan. Additional training centres would be opened as and when new Districts/Circles were formed. For this purpose, funds to the tune of Rs. 5.82 crores had been provided including Rs. 32 lakhs in foreign exchange. With a view to improve the telephone service Government have also undertaken the job of revision/modification of the various syllabi to incorporate the latest developments in telecommunication owing of the Department. It has been stated that the revised syllabi laid greater stress on practical training with a view to ensure optimum efficiency of the equipment.

Refresher Training

8.4 In order to keep the staff constantly in touch with latest developments in technology and sophisticated equipment, various refresher courses for the different cadres were being conducted at the telecommunication training centres. At present refresher courses on 25 different subjects were being conducted. During the year 1971-72 over 4000 persons were imparted refresher training and the number would go up to 6000 persons per year by the end of Fifth Plan.

8.5 During the course of evidence it was pointed out by the Committee that apart from deficiencies or drawbacks in the equipment leading to inefficiency in telephone service, one cannot overlook the human element involved in it which requires improved training. In reply, the Secretary of the Ministry of Communications stated :

“As far as staff is concerned, of course this problem is there all over the country—not only in the P & T Department but in all Departments. We have got telephone operators who come in direct contact with the public. The qualification for these Operators twenty years ago was SSLC; today also we recruit Operators with the SSLC qualifications. There is a wide difference between the SSLC candidates of twenty years ago and the SSLC candidates we get today. The human material is not the same as it used to be and probably the working conditions are also not the same; they are much more difficult than they used to be. So, with these two contributory causes, the services we provide through the personnel are not what would be.”

(ii) *Telecommunication Research Centre*

8.15. The Telecommunication Research Centre (TRC), New Delhi, which was established is functioning as a part of the P. & T. Board. The work in TRC was devoted to design and development of a complete range of modern telecommunication equipments for enabling indigenous manufacture. TRC also functioned as technical adviser to the P & T Department on various planning and operational problems. The indigenous designs were being evolved without foreign collaboration and employ to the maximum extent indigenously available components and materials.

8.16. The important designs completed during the past three years and reached to the stage of production were as follows :—

- (i) 24 channel pulse code modulation system for local area junctions.
- (ii) Crossbar.
- (iii) STD Barring and Subscribers metering facilities.
- (iv) Various types of power plants for telecommunication stations and equipments.
- (v) Transistorised (45W) Ringer.
- (vi) 6 G Hz, 960 channels long haul microwave equipment.
- (vii) Single channel VHF system for rural telephone facility.
- (viii) 4 MHz, 960 channel equipment for small tube coaxial cables.

The main projects actively under way were :

1. 12 GHz, 2700 channel equipment for standard coaxial cables.
2. Updating of a large number of carrier and VFT systems of earlier designs.
3. Cross bar Telex.
4. Equipment for Automatic Machine Accounting of Trunk calls.
5. 2 MHz/120 channel and 4 MHz/960 channel fully transistorised microwave equipments.
6. A range of single and multi-channel VHF/UHF systems for rural and secondary routes.
7. New/improved jointing methods for local cables with plastic insulation/sheathing.
8. Computer controlled electronic switching system for large exchanges.

8.17. About savings in foreign exchange, the Committee were informed as follows:—

“With regard to annual saving of foreign exchange, this would depend on the total quantity taken up for manufacture of each of the items. At this stage, it is difficult to make a specific estimate. However, it may be stated that currently, transmission and power plant items worth about Rs. 8 crores per annum are being manufactured in ITI and some private sector units to designs evolved by TRC. In general, this involves import content of only 20 per cent. Therefore, approximately 6 crores would be the present annual savings in foreign exchange. To this must be added also the saving of foreign exchange due to a large number of telephone switching systems and items to TRC designs which adopt the electro-mechanical switches already in production in ITI. Imports of the former might have been otherwise necessary. The number of design reached to production stage as also the quantity of manufacture of various items is rising to meet growing demands. It is, therefore, expected that the annual foreign exchange savings will show a continually rising trend in the years to come.”

8.18. The total amount spent on the T.R.C. during the last three years was stated to be as follows:—

“The total expenditure debitable to Capital and revenue heads for the past three years is as follows:—

Year	1969-70	.	.	.	Rs. 28.1 lakhs
	„	1970-71	.	.	Rs. 35.5 lakhs
	„	1971-72	.	.	Rs. 33.7 lakhs
					<u>Rs. 97.3 lakhs.</u> ”

8.19. During their visit to Telecommunication Research Centre, the Committee were informed that the TRC was set up in 1956 to initiate design and development work for all types of communication equipment systems and accessories to enable indigenous manufacture and to function as the principal adviser to the P&T Department on all technical matters. The Committee were also informed that the equipment to TRC designs had been in production in Indian Telephone Industries (ITI) and a few manufacturing activities of TRC was stated to be ‘Electronic Switching system’. The design and development of an Electronic Telephone Exchange controlled by a special digital computer had been in progress since 1965. It was stated that it was a very major activity and was the first development effort to design a total switching system indigenously. The special computer of the new

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5. 2 MHz/120 channel and 4 MHz/960 channel fully transistorised microwave equipments.
6. A range of single and multi-channel VHF/UHF systems for rural and secondary routes.
7. New/improved jointing methods for local cables with plastic insulation/sheathing.
8. Computer controlled electronic switching system for large exchanges.

8.17. About savings in foreign exchange, the Committee were informed as follows:—

“With regard to annual saving of foreign exchange, this would depend on the total quantity taken up for manufacture of each of the items. At this stage, it is difficult to make a specific estimate. However, it may be stated that currently, transmission and power plant items worth about Rs. 8 crores per annum are being manufactured in ITI and some private sector units to designs evolved by TRC. In general, this involves import content of only 20 per cent. Therefore, approximately 6 crores would be the present annual savings in foreign exchange. To this must be added also the saving of foreign exchange due to a large number of telephone switching systems and items to TRC designs which adopt the electro-mechanical switches already in production in ITI. Imports of the former might have been otherwise necessary. The number of design reached to production stage as also the quantity of manufacture of various items is rising to meet growing demands. It is, therefore, expected that the annual foreign exchange savings will show a continually rising trend in the years to come.”

8.18. The total amount spent on the T.R.C. during the last three years was stated to be as follows:—

“The total expenditure debitable to Capital and revenue heads for the past three years is as follows:—

Year	1969-70	.	.	.	Rs. 28.1 lakhs
	„	1970-71	.	.	Rs. 35.5 lakhs
	„	1971-72	.	.	Rs. 33.7 lakhs
					<u>Rs. 97.3 lakhs.</u> ”

8.19. During their visit to Telecommunication Research Centre, the Committee were informed that the TRC was set up in 1956 to initiate design and development work for all types of communication equipment systems and accessories to enable indigenous manufacture and to function as the principal adviser to the P&T Department on all technical matters. The Committee were also informed that the equipment to TRC designs had been in production in Indian Telephone Industries (ITI) and a few manufacturing activities of TRC was stated to be ‘Electronic Switching system’. The design and development of an Electronic Telephone Exchange controlled by a special digital computer had been in progress since 1965. It was stated that it was a very major activity and was the first development effort to design a total switching system indigenously. The special computer of the new

exchange was like a super telephone operator of extraordinary speed and flexibility. The speed of that super-operator was stated to be so high that it could cater to the needs of all the 10,000 subscribers in the exchange all by itself. Further for the specific telephone call process, its inbuilt logical intelligence being similar to that of a human operator, it provided great potential for providing new sophisticated services which was not possible at present with the existing automatic exchanges. The Electronic exchange was stated to be under installation at the Laboratories of the TRC and would be ready for laboratory trial early this year (1973). The first commercial exchange of this type was expected to be ready towards the end of 1975.

8.20. During the course of evidence the Committee were informed that at present it was not really necessary to go in for foreign know-how, but research and development was absolutely necessary to keep their equipment from getting obsolete and to keep up with the modern trend in telecommunications system. The Secretary of the Ministry added, "We are spending very little on research. Know-how probably the present capacity of research know-how is hardly half percent or even less of total sales in the ITI. Whereas in foreign countries, it can be as much as 10 to 12 percent of their sales. So we have to enlarge our research development programmes. Personally I feel we have got to expand, the research and development unit."

8.21. During the course of evidence to a question as to what had been the main contribution of TRC, Delhi, the Secretary of the Ministry informed the Committee as follows:—

"The total work of the TRC can be divided into three parts, viz. long distance equipment, telephone equipment and the measuring equipment. The long distance equipment made in the country is entirely to the design developed by the TRC. For instance ITI is producing equipments of the value of roughly Rs. 6 crores according to the designs of TRC, thus saving that much of foreign exchange. Regarding telephone equipments, we have got technical know-how, obtained from abroad in 1948-49, for the Strowger system. We have also got technical know-how for the crossbar from BTM. In regard to the call queueing equipment and various ancillary equipments going into telephone exchanges as well as teleprinter exchanges, these were all designed by the TRC and are currently under production in the ITI. And finally, there is a whole range of measuring instruments which are required for maintenance purposes for the P&T installations. Roughly about 40 instruments have been designed by the TRC and these are currently under manufacture."

8.22. About savings of foreign exchange, the Secretary added, "As far as complete freedom from dependence from foreign sources is concerned, long distance equipment is entirely designed by TRC and manufactured by ITI. We import only because the total quantity manufactured in the ITI is not enough. To supplement the ITI output, we are importing some long distance equipment."

8.23. In reply to another question as to how coordination was being maintained between the research activities of TRC and that of ITI, and other research centres, the Secretary, during the course of evidence informed the Committee as follows:—

"The TRC and ITI work in very close coordination. In fact there is a lot of exchange of information between the two. There are very few other research and development centres in the country which carry out work of any great significance to the P&T. They are working on Radar or such other items in which P&T., is not directly concerned and to that extent there is not much liaison between the telecommunication centre and other scientific centres. But recently we have felt that there should be close coordination between the different centres. To that extent we have set up a Committee only four or five months back and this Committee has gone into very great details not only of the working of the TRC but other scientific centres. The report of this committee is expected shortly and we will place a copy of the report before the Committee. As far as review of the work is concerned there is a review committee in the P&T Directorate which looks into the working of the TRC. But we have given TRC lot of freedom. The main point is that TRC must keep in close touch with the developments in the field of telecommunication and we want the TRC to tell the P&T Directorate what is the future in the tele-communication rather than the Directorate should tell the TRC what is future action to be taken."

8.24. Asked to state whether TRC was adequately equipped and the personnel that were running the Centre were adequately qualified, the Secretary, during the course of evidence informed the Committee as follows:—

"Today equipment in the Research Centre is adequate for the staff for working in it. But taking the research centre as a whole it is completely inadequate for the needs of the Department. The efforts on research and development, should in my personal opinion be far more than it is today. It is not only the TRC but the same remarks go to ITI. I do not say much further about it because

I am aware that the Menon Committee is also working on the same lines, The work of the Menon Committee is not only coordination but the working of TRC whether it should be expanded or the size of exchange should be changed. It is all included in the terms of reference”.

8.25. The terms of reference of the Menon Committee were stated to be as follows:—

- “1. To review the research and development work being done in the field of tele-communications by various organisations under the Ministry of Communications, viz., the Telecommunication Research Centre of the P&T Department and its Telecommunication Workshops as well as the public sector undertakings and the Overseas Communications Service, and take into account work in this field in other institutions and organisations in the country.
2. To suggest measures whereby work in this field, being carried out by different organisations in the country, can be effectively coordinated.
3. To suggest measures to expand the scope of research and development work in this field in the country and to accelerate its pace.
4. To locate areas in which the research and development effort is found to be lacking or inadequate and recommend measures for making good the deficiencies.
5. To bring indigenous designs and technology on par with those obtaining in advanced countries.
6. To suggest measures to enable the Telecommunication Research Centre of the P&T Department, and other organisations mentioned above under the Ministry of Communications to progressively undertake research and development work on par with similar work being done abroad.
7. To recommend steps to build up supporting facilities commensurate with these objectives.
8. To recommend financial support needed for the effective implementation of the above programmes.
9. To suggest ways and means by which the transfer of design and development work to production can be expedited.
10. To suggest appropriate administrative and personnel policies for efficient implementation of the Committee’s recommendations.

The Committee would be required to submit report to Government by the end of September 1972.

8.26. During the course of evidence the Secretary of the Ministry, about Electronic Exchange that was being developed at TRC, informed the Committee as follows:—

“The telephone communication research centre has worked on the electronics exchange for the past six years. This type of exchange which they have taken up for development has proved to be most sophisticated and we expect that the first trial will be ready towards the end of next year—by December, 1973. We are trying to rush this but a number of components have to be imported and it will take sometime. After this trial exchange has been made we will make bigger exchange and put into regular field and this may take us to 1975 and when the design and complete manufacture can be taken up it may be by the end of 1980. Similar exchanges have already been developed and these are in extensive use in United States and in Canada. The exchanges are getting sophisticated. Not all countries can afford to go in for electronic exchanges.”

8.27. In reply to another question whether with the successful completion of the Electronic Telephone Exchange, this country would catch up with other countries of the world, the Secretary of the Ministry informed the Committee as follows:—

“In technology it will. But it will take sometime after 1980 to manufacture the exchange and then instal them. New electronic exchanges, cross bar or strowger takes us two years for installation and commissioning and Electronic exchanges which they are now making say of 6,000 line exchange can be commissioned and tested within six months.”

8.28. Asked to state the financial implications of Electronic Exchange the Secretary of the Ministry stated during evidence, “We find that beyond 6000 lines it breaks even with electro-magnetic exchanges; when it become for Small these electronic exchanges are very expensive.”

8.29. In reply to another questions whether Government was going to set up factory for the manufacture of these electronic exchanges in the Fifth Five Year Plan, the Committee were informed by the Secretary as follows:—

“Second Switch Factory at Raibareilly. We do not have time to switch over to electronics just now, but certainly, we have to take over this technology and start.”

The Secretary further informed the Committee that by the end of 1980, "We must be in regular production of electronic exchange".

8.29. The Committee note that:—

- (i) the Telecommunication Research Centre has been established in 1956 and the work in the Centre is devoted to design modern equipment for indigenous manufacture;
- (ii) the Telecommunication Research Centre has designed a number of instruments which have reached the stage of production and it is working on an Electronic Exchange which was expected to be ready for laboratory trial early this year, for field trial by 1975 and for complete manufacture by the end of 1980 and this Exchange has great potential for providing new sophisticated services which are not possible at present with the existing automatic exchanges;
- (iii) most of the designs have been indigenously developed and have resulted in considerable saving of foreign exchange which is expected to show rising trend in the years to come. However certain equipments have to be imported because the total production capacity of Indian Telephone Industries is not enough;
- (iv) as already admitted by Government, very little amount is being spent on research know-how, it is probably half per cent or even less of the total sales in the I.T.I. where it is as much as 10 to 12 per cent of sales in foreign countries.

In this connection the Committee would like to observe that developments in the field of telecommunication technology have, in the recent past, been so rapid and extensive all over the World that in order to catch up with the fast developing technology and to keep abreast of the progress taking place in the more advanced countries considerable expansion in research and development field is required in the country to fully exploit the latest techniques and to obtain the maximum economies in the operation of the telecommunication network as well as in providing new services and in improving the existing telecommunication services. The Committee therefore, feel that an alround effort has to be made to intensify and expand the research and development in the telecommunication activities.

8.30. The Committee would like to emphasise that the funds allocated for research and development programme in telecommunication services should be performance oriented, to enable the Government to evaluate the success or otherwise of the research and development programmes carried out and the resultant benefits derived therefrom. The Committee need hardly stress the utility of time bound research programmes for finding correct solutions to the pressing problems facing the telephone services in the country.

8.31. The Committee would also like to recommend that concentrated efforts should be made for the removal of shortcomings noticed in Cross bar exchanges and improve its technology and design to suit Indian conditions and that the Telecommunication Research Centre should—

- (i) devise suitable exchanges to suit the requirements of rural areas;
- (ii) work on the improvement of telephone metering devices to obviate complaints of excess metering etc.;
- (iii) work on projects through which telephone services become cheaper and thus reach every corner of the country;
- (iv) work on the improvements of designs of Public Call Offices to ensure trouble free service and also improve telecommunication services to hilly and strategic areas.

8.32. The Committee hope that the Menon-Committee appointed *inter-alia* to review the research and development work will submit its report at an early date and Government will take suitable steps to implement their recommendations as early as possible.

8.33. The Committee further hope that the target fixed for the laboratory and field trial and for manufacture of the Electronic Exchange will be adhered to as with the commissioning of such exchanges, it will be possible, as claimed by Government, to provide sophisticated services which are not possible at present with the existing automatic exchanges. They would also recommend that periodic review should be undertaken to assess the progress made in this regard and suitable remedial steps taken to overcome any short comings noticed with a view to see that the targetted dates are adhered to.

8.34. Since the Indian Telephone Industries are the principal manufacturers of Telecommunication equipment in the country

and most of the designs developed in the Telecommunication Research Centre are manufactured there, the Committee are of the view that a very close liaison is necessary between the two so that the research done by the Research Centre are quickly translated for practical use. It has also to be ensured that there is no duplication of effort between the two in the matter of research in the field of telecommunications.

8.35. The Committee would also urge that the proved designs which have been handed over by the Telecommunication Research Centre to the I.T.I. and the P & T Workshops are expeditiously produced for use on the P & T network.

8.36. The Committee would also like to stress that Government should ensure that utmost co-ordination and close liaison is maintained between the Telecommunication Research Centre and the Institutes under Council of Scientific and Industrial Research, National Physical Laboratories, Central Electronic Engineering Research Institute and University Centres of research and other organisations in the field to avoid duplication and also to take suitable advantage of researches made by them.

CHAPTER IX

TELEPHONE ADVISORY COMMITTEE

9.1. A Telephone Advisory Committee is stated to have been constituted to look after the interests of telephone users at every station in which the working telephone connections plus the number of applicants on waiting lists for new connections total 1500. The functions of these Committees are as follows :—

Functions of the T.A.Cs :

- (1) Bringing the telephone-using public and the P&T Department into closer relationship;
- (2) Giving the public confidence that their grievances are being properly represented and attended to;
- (3) Advising the Department on the betterment of local and trunk service;
- (4) Giving publicity to the action being taken by the Department to improve the telephone service;
- (5) Assisting the Department to tide over the present situation by invoking co-operation and patience from the public;
- (6) Assisting the Department in the opening of new connections on fair and equitable basis by assessing merits and the comparative nature of the importance of the activities of the applicant and in conformity with the policies of the Government.

9.2. Composition of T.A.Cs :

The composition of T.A.Cs is as follows :—

Interest to be represented	Each Zone of Delhi, Bombay and Calcutta	Other State Capitals	Rest of Stations
State Administration	1	1	1
State Legislature	1	1	1
Corporation	1	1	1
Members of Parliament	1	1	1
Trade & Commerce	2	2	1
Press	2	1	1
Medical Profession	1	1	1
Prominent Public workers	3	1	1
Un-represented interest	4	2	1
Official Members	2	2	2
	18	13	9

In addition, two staff representatives are to be co-opted as Members on each of the T.A.Cs. General/District Manager, Telephones is the Chairman of Committee in a Telephone District and a Director of Telegraphs is the Chairman of the Committee in case the telephone system is in the jurisdiction of a P&T Circle. These Committees are expected to meet at least once in six months. A copy of the Minutes of the meetings of each such Committee is to be sent to P&T Directorate for watching the activities of the Committee."

9.3. To a question as to how the members to the Telephone Advisory Committee are elected or nominated, the Ministry in a written reply stated as follows :—

"The representatives of State Government and Vidhan Sabha are nominated on the recommendations of the State Government concerned and MPs are nominated by the Minister of Parliamentary Affairs. The representatives of other interests, viz. Trade & Commerce, Medical profession, Press etc. are nominated by the Minister of Communications from a panel of names drawn up after obtaining recommendations from the various representative bodies. Unrepresented interests are represented on the Committee through prominent citizens nominated in the discretion of the Minister of Communications. As far as possible, only local persons are nominated on the T.A.Cs as these Committees function for specific stations and not on any Zonal or regional basis."

9.4. It was represented to the Committee by a leading all India Organisation "There is a considerable scope for improvement in the working of the Telephone Advisory Committee in each region. It is reported that some members of the Advisory Committee take advantage of their position and give benefit to their friends and relatives. Because of heavy demand for new connections and scarcity it is reported that some members of the telephone staff promise early connection for monetary considerations."

9.5. It has been brought to the notice of the Committee by a prominent Member of the Telephone Advisory Committee, Calcutta that :

- "(i) ***the terms of reference should clearly be mentioned to the Members of (T.A.C.) while electing them in order to enable them to function properly.. * * *
- "(ii) At present the meetings of T.A.C. are being held very irregularly and rather infrequently and this, . . . should not be so. * * *

9.6. The Telephone Committee, 1966 in its report have *inter alia* observed :

“*****The functions assigned to the Telephone Advisory Committee provide that they will be assisting the Department in the opening of new connections on fair and equitable basis by assessing merits and the comparative nature and importance of the activities of the applicants and in conformity with the policy of the Government. This with the waiting list running into thousands has not been practical in application. The members of the Telephone Committee can only give consideration to cases either taken up with them by the parties or put up before them by the Administration leading to allegations of favouritism or talk about corruption.

The rules do not give any clear guidance regarding the considerations which may be taken into account by the Committee in exercising their discretion in sanctioning out-of-turn connections.

In respect of stations in which the Telephone Advisory Committees are functioning the Heads of Circles/Districts seem to prefer to issue sanctions for out-of-turn connections through T.A.C. even in cases where discretion is vested in them.

In the relaxed OYT or non-OYT stations the T.A.Cs have been given enormous power in that the Committee can recommend 50% of the connections on out-of-turn basis under both the priority and general categories and the discretion vested is fully exercised.*****

9.7. The Telephone Committee had accordingly recommended :

“*****The powers of the T.A.C. to sanction telephone connections out-of-turn in each of the General and Special categories may be restricted to 7½ per cent of the capacity to be released for allotment or 75 connections in an exchange in a year, whichever is less. In the case of the stations which have no T.A.C. functioning, the discretion vested in the T.A.C. will be exercisable by the Head of the Circle/District or the Director of Telegraphs so authorised. *****In non-O.Y.T. stations also demands under the above categories may be met on out-of-turn priority for the general list.*****

9.8. The Telephone Committee had also observed that “the Committee feel the desirability of proper instructions being issued by the Department to bring in uniformity in the convening and conducting of the meetings of the T.A.C. The procedure should not provide scope for unauthorised

cases being put up and incorporated in the minutes of T.A.C. meeting recommending out-of-turn connections. This, the Committee feels, cannot be ruled out under the existing procedure". The Telephone Committee *inter alia* accordingly recommended :

"A meeting of the T.A.C. should be convened every quarter, even if no capacity is available for allotment.

The date for the next meeting of the T.A.C. should be decided in the Committee meeting itself and the members requested to send in items including cases for out-of-turn connections for inclusion in the agenda at least fifteen days ahead with discretion to accept items received later for inclusion in a supplementary agenda.

The agenda should then be drawn up and circulated to the members ten days ahead with details of the cases suggested by the individual members of the T.A.C. for out-of-turn connections.

The draft agenda for the meeting, including the list to be circulated to members of the T.A.C. for out-of-turn connections, should be put up on a regular file and the approval of the Chairman obtained and kept on record before issue of the normal agenda.

The agenda should be circulated with the following information :

- (a) Progress report on items pending from the previous meetings.
- (b) Position of the exchange showing equipped capacity, working connections and the number on the waiting list on General and special category.
- (c) Maximum number of connections available for allotment by the T.A.C. under each category.
- (d) List of feasible localities in which the connections can be recommended.

The T.A.C. is not to recommend cases for allotment out-of-turn in non-feasible areas. The Secretary of the T.A.C. will ensure that only such connections are approved by the T.A.C. which are technically feasible.

The T.A.C. should not recommend allotment of out-of-turn telephones to parties not registered in the waiting list, if made, the recommendation should be ignored.****"

9.9. The Estimates Committee in their 112th Report (Second Lok Sabha)—Part II on Telecommunications had suggested that suitable provision may be made for holding the meetings of Telephone Advisory Committee in the rules and regulations for the conduct of business of these Advisory Committees and Government in their Action Taken replies had stated that instructions had been issued to Heads of Telephone Districts and Circles that the meetings of the Committee should be held atleast once in every quarter.

9.10. The Committee note that *inter-alia* the functions of the Telephone Advisory Committee are to bring the public and the P&T Department into close relationship and give public the confidence that their grievances are being properly represented and attended to. The Committee have no doubt that in the discharge of their functions particularly in respect of out-of-turn allotments, the T.A.Cs. are fully alive to their responsibilities for taking decisions on fair and equitable basis and on the merit of each case to the satisfaction of general public. However, in the absence of rules giving clear guidance regarding the considerations which may be taken into account by the T.A.C. in exercising their discretion in sanctioning out-of-turn connections, there is very likelihood of allegations of favouritism or nepotism being levelled against them. The Committee, therefore, recommend that Government should clearly spell out the guiding principles that should be taken into account by the T.A.C. in exercising their discretion in sanctioning out-of-turn allotments keeping in view the recommendations made by the Telephone Committee, 1966 in this regard.

9.11. The Committee had been informed in pursuance of their recommendation contained in their 112th Report (Second Lok Sabha)—Part III on Telecommunications that instructions had been issued to Heads of Telephone Districts and Circles to hold the meetings of the T.A.C. atleast once in every quarter, but they have now been given to understand that the T.A.C. are expected to meet atleast once in six months. The Committee are unable to reconcile these statements. The Committee would like to stress that the meeting of the T.A.C. should be held frequently atleast once in every quarter as they are an important link between public and the Governmental machinery. They would also like to suggest that recommendations of the Telephone Committee 1966 in respect of holding of meetings, drawing up of agenda etc. should be implemented in actual practice.

9.12. The Committee have no doubt that while nominating members on the Telephone Advisory Committees, Government ensure that all interests are duly represented thereon. The Committee, however, would suggest that the composition and character of T.A.C. may be reviewed periodically to ensure that in the fast expanding economy and the consequent rapid rate of growth of demand of telephones, all the interests are duly represented in the Committee and that no interests go by default or vested interests are created by repeated nominations.

CHAPTER X

TELEPHONE DIRECTORIES

10.1. As per decisions taken in 1963, Telephone Directories are required to be published by each Telephone District and each P & T Circle. All exchanges under the jurisdiction of a Telephone District or Circle are grouped in the Telephone Directory of the particular District/Circle, the only exception being the Goa Sub-Division, which publishes its own Telephone Directory. The Circle is generally co-terminus with one or more State boundaries. Telephone Directories of Andhra, Assam, Bihar, Jammu & Kashmir, Kerala, Madhya Pradesh, Mysore, Orissa and West Bengal Circles and Goa Sub-Division are published annually. All other Directories were published biannually but since October, 1971, a decision has been taken to publish them also annually.

10.2. From the statement furnished by Government (*vide* Appendix IV) about the publication of Telephone Directories during the last three years viz. 1970, 1971 and 1972, it will be observed that in the majority of cases either the directories had not been printed at all or their publication has been delayed for a few months. In one case in the year 1971, the delay was to the extent of even one year.

10.3. In the case of the publication of next issue of Delhi Telephone Directory, in reply to a question in the Lok Sabha on the 9th August, 1972, the Minister of Communications had stated that the next issue of the Directory was likely to be published by November, 1972. But till now, it has not been issued and the delay in this particular case is to the extent of almost 2 years the last issue having been published in April, 1971.

10.4. Government have, in a written note furnished to the Committee, stated that some of the main reasons for delay in regular publication of telephone directories are as follows :—

“ The most important factor for the delay or non-publishing the telephone directories according to the prescribed periodicity is non-availability of printing paper in the country. The paper mills who enter into a rate contract with the D.G.S.&D. are reluctant to supply the paper on some pretext or the other, as it is found profitable for them to sell it in open market. The D.G.S. & D. and the CCPS have been approached for prompt arrangement for the supply of paper.

With a view to overcome shortage of paper the Department has decided to bring out telephone directories once in a year instead of twice in a year hitherto in force.

It has also been decided that telephone directories of circles should be bifurcated into Engineering Division-wise and the Directories in future be printed on Divisional basis. This procedure is expected to save a lot of paper and time taken to bring out a bulky directory.

There has some times been inordinate delay on the part of printers to complete the work of printing of directories in the specified period. This is mainly due to their undertaking many jobs simultaneously. CCPS has been requested to examine this point while giving his recommendations for appointment of printers for publication of telephone directory.

Another element which causes delay in publishing telephone directories is that some time the printers and advertising agents do not cooperate and co-ordinate between them thus causing delay.

With a view to eliminate the delay in the finalisation of formalities for selection and appointment of printers and advertising agents, the Heads of Circles/Telephone Districts have been delegated with full powers for the selection and appointment of printers and advertising agents on all India competitive tenders."

10.5. About the reasons for delay in regular publication of directories and the remedial steps taken to overcome them, the Secretary of the Ministry of Communications, during the course of evidence stated :

"We had a Directory Committee a few years ago. They standardised the directory, the way it has to be produced and the number of times it has to be issued in a year. It was decided at that time that we will have two Directories every year at each exchange system. But, we have got into very serious difficulties in getting the necessary paper and the printing capacity for making these Directories. In almost every district, the production has fallen far behind the scheduled date. Now, what we have done is that, though it is not an attractive thing, we have reduced the issues to one per year and even this one per year is giving us a lot of trouble. In similar exchange systems, we used to have Circle Directories. For example, if you take Uttar Pradesh, the whole of Uttar Pradesh issues one Telephone Directory. It covers about 30 or 40 exchanges. There also, instead of issuing

this Directory to each and every subscriber, at each of these exchanges, we are issuing division-wise. In Uttar Pradesh you have got about six or seven divisions, and each division will publish a Directory, only for its own exchanges, and issue it to the subscribers. By this we found that we can save round about 40 or 50% of the total paper required. The second difficulty we are having is with regard to the advertisement revenue. Of course, revenue is always welcome. But the obligations that it creates, is much more than the benefits that it provides. For example, advertisements are given to an Advertisement Contractor. He has to collect the advertisements and he has got to coordinate with the Printers so that the particular advertisement comes at that particular page. This again, results in a lot of delays. But, as long as we want revenue we do not want to give up the advertisement business. But the position is not very satisfactory and all I can say at present is that we are trying to improve it."

10.6. In a written note furnished to the Committee, the Ministry have explained the reasons for non-availability of printing paper in requisite quantity and quality, which is the main cause for delay in regular publication of directories and measures taken to overcome the shortage of paper as follows:—

- (i) According to standards laid down by the Department printing paper of 48 GSM substance is to be used for telephone directories. This standard ensures that the size of the directory does not get unnecessarily bulky and cost remains reasonable. The paper is procured through DGS&D and Controller of Printing and Stationery. The DGS&D fixes rate contract on paper mills for different sizes of paper. Departmental indents for paper for telephone directory are placed by different Circles and Telephone Districts on Government of India Stationery Office, Calcutta, who gets allotment from DGS&D and in turn places orders on the paper mills on rate contract. The paper is therefore, supplied by Paper Mills, direct to the indentors. There is no separate quota allotted for directory paper and the total procurement and supply to P&T Department includes paper required for other forms and stationery also. 48 GSM paper is in great demand and very frequently these mills plead inability to supply due to shortage.
- (ii) The matter was discussed in a meeting with DGS&D and Chief Controller of Printing and Stationery where representatives of several papers mills were also present. In view of the overall

shortage, DGS&D had suggested that the P & T Department may accept higher sizes of paper which the mills could supply. The Department agreed to accept 52 GSM paper and made relaxation further upto 60 GSM size even though it costs the Department considerably more. However, the process of making changes in individual indents takes a long time since these are routed through Government of India Stationery Office. Once relaxation is accepted, it is communicated to all Heads of Circles/Districts. If the particular mill supplying to a Circle/Telephone District pleads inability, the DGS&D tries to allot P & T quota to any other mill willing to supply the correct size. Failing this, he informs the Government of India Stationery Office concerned the size of paper which is available. The Government of India Stationery Office in turn informs the P&T Circle/Telephone District who then accept the higher size and place revised indents with Government of India Stationery Office. Thereafter Government of India Stationery Office places orders on the mill. By this time, the mill concerned is very often unable to supply the revised size also and the whole process had to be gone through again. This results in continued delay in the publication of telephone directories.

(iii) Recognising the acute shortage of printing paper all over the country, the Department has taken steps to reduce its consumption of paper for the telephone directories by taking the following steps :

- (a) Directories were hitherto being printed on six-monthly or eight-monthly basis. The Department has recently reduced the frequency of publication of directories to once a year. This is expected to reduce the requirement of paper from 2500m. tonnes per year.
- (b) Telephone directories of P & T Circle contain telephone numbers of all exchanges within the Circle limits and the directories are, therefore, very bulky. These are distributed to all subscribers in the Circles and also to outside subscribers on sale. The Department has decided as an experimental measure to publish directories in P&T Circles to cover telephone exchanges within one engineering Division only and restrict their circulation also to subscribers within that Division only except for departmental copies and sale copies. This scheme is being tried in a few Circles on an experimental

basis and if found successful will cover the entire country. It is expected to reduce the annual requirement of paper further by 30000 tonnes as a result of this step. The bottleneck due to the delay involved in supplying the required size of paper through Government of India Stationery Office, Chief Controller of Printing and Stationery and Director General of Supplies and Disposals is still a very source of delay in the publication of directories. This matter is continuous under correspondence with Director General Supplies and Disposals and Chief Controller of Printing and Stationery. Recently, the DGS & D has decided to earmark separate quota for the printing paper required for telephone directories and made allotments on paper mills directly. Thus, the Government of India Stationery Office will be able to supply paper earmarked, for the Department without making further allotments for the available stock to all other Departments of the Government. This will relieve to some extent the bottleneck of receiving only part supplies of printing paper for telephone Directories. The Department is also considering independent procurement of printing paper directly from mills without routing the requirements from DGS & D and Chief Controller of Printing and Stationery and the matter is under discussion with the concerned Ministries."

10.7. The Telephone Directory Standardisation Committee, 1969, while going into the existing procedure of production of Directories have suggested the adoption of mechanised system for compilation of the Directory. They have *inter alia* stated :

"The Telephone Directories are now compiled on a manual basis. The manuscript is brought uptodate and is sent to the press for printing. ***** Under the present system of composing and printing, the work of printing and binding alone takes a minimum of 41 months and that too if the work is entrusted to a competent press. If the directories are to be brought out at the prescribed periodicity of six months, the time available between the distribution of one issue of the directory and the interval between the distribution of one issue of the directory and release of the manuscript for the next issue of the press is insufficient to bring the manuscript uptodate. Further, the information in the directory itself is bound to be more and more out of date with the

present slow methods of compilation, composing and printing. This will be more so with the rapid expansion of Telephone systems in the country and the large number of changes in the subscribers' list within short periods. A stage would soon be reached when composing and printing the Directory for the prescribed periodicity would be practically impossible under the present system of production. ***** The introduction of National Subscriber Trunk Dialling will also make it imperative to make available upto-date information to all subscribers in the telephone system of the country. It is also necessary to furnish a daily and monthly lists of number changes to Trunk exchanges to give them the latest information. The present system of publishing the telephone directories will be no match to the situation. ***** The modern trend for printing upto-date and accurate information in telephone directories is through the preparation of upto-date and accurate Paper Tape/Magnetic Tape in put for composing within 5 days of last date of furnishing all the data and corrections. By adopting a computerised system of updating the directories, it will be possible to obviate the need for proof reading at all stages of production of the directory. ***** With the computerised system of updating, the process of printing the directory would be speeded by use of high speed photo type setting, photo offset production and mechanical binding. ***** From considerations of practicability, economies involved, improvement in efficiency of service, etc. the Committee is of the opinion that mechanised system for compilation of the directory at least in the four major cities of Calcutta, Bombay, Delhi and Madras shall be adopted urgently. The change-over can be effected by drawing up a phased programme on a short term and long-term basis. In the short-term proposal, computerised system available in India may be hired out and services of agencies such as IBM, ICL etc. may be utilised for generating paper tape/magnetic tape. A suitable photo type setting printing and binding equipment shall be set up either in public sector or private sector which will take up, apart from directory printing, other printing works of the Department also."

10.8. The Committee are unhappy to note that there has been inordinate delay in the publication of telephone directories of majority of telephone circles and districts and there are instances when the directories have not been published according to prescribed periodicity. In certain cases there has been a delay of about even one year

and in the case of Delhi Telephone Directory, the delay is almost to the extent of two years. The Committee need hardly stress the necessity of timely publication of Directories as their irregular and delayed publications defeat the very purpose for which they are issued. The introduction of National Subscriber Trunk Dialling and its growth makes it all the more imperative to make available upto date information to all subscribers by timely and regular publication of Directories :

10·9. The Committee are given to understand that the most important factor for the delay or non-publishing the telephone directories according to the prescribed periodicity is non-availability of printing paper in the country. The Committee note that certain remedial steps have been taken by Government to overcome the shortage of paper and that they are in continuous correspondence with the Director General Supplies and Disposal and the Chief Controller of Printing and Stationery as regards supply of paper. The Committee further note that D.G.S.&D. has decided to earmark separate quota for the printing paper required for telephone directories and make allotment on paper mills directly and that Department is also considering independent procurement of printing paper directly from mills without routing their requirements through D.G.S.& D. and Chief Controller of Printing and Stationery and the matter is under discussion with concerned Ministries.

10·10. The Committee would suggest that apart from the measures already taken to overcome the shortage of printing paper for Telephone Directories, the problems connected with the non-availability of paper should be taken up at the highest level with the D.G.S. & D and the Chief Controller of Printing and Stationery and a firm arrangement arrived at for timely availability of printing paper of the requisite quality and quantity.

10·11. The Committee are not aware whether any decision has been taken by Government on the recommendation of the Telephone Directory Standardisation Committee for the adoption of the mechanised system for compilation of the Directories atleast in the four major cities of Calcutta, Bombay, Delhi and Madras. The Committee would like to know in due course the decision taken in the matter as they feel that if mechanised system of compilation of Directories is adopted, it will go a long way to solve the problem of delay involved in printing the Directories and to that extent lead to expeditious publication of Directories.

10-12. The Committee understand that in some of the telephone Directories, among general and other information given therein, information regarding Trunk Call rates is also given. The Committee would like to suggest the Government may consider the desirability of giving this information in all the Telephone Directories.

CHAPTER XI

CONCLUSION

11.1. Advance planning for telephones is important, no less than that for industrial projects. Unless necessary infrastructure is built up in advance, it cannot be possible to meet even a reasonable portion of the rising demand for telephone facilities in the coming years. If the annual growth rate is to expand at the rate of 5 to 6 per cent as envisaged in the Fourth Five Year Plan, the additional demand for telephones is bound to be higher. To build up necessary capacity for providing this additional facility, the Posts and Telegraphs Department will have to make a larger investment in Cables, Equipments, telephone instrument spares, microwave links etc. It is, therefore, important that a 'Perspective Plan' for 10 to 15 years is drawn up in regard to the development of telephone services in the country to meet the needs of developing economy.

11.2. There has been continuous shortfalls in the successive Plan periods *viz.* First, Second and Third Plan periods to the tune of Rs. 543 lakhs, 896 lakhs and 67 lakhs respectively in the actual expenditure incurred on telephone services against the targetted amount of Rs. 3419 lakhs, 6067 lakhs and 12441 lakhs. Wide gaps between Plan provision and the actual expenditure indicate not only faulty and unrealistic planning but also tardy implementation of the schemes. It is hoped that Government should in future, frame more realistic estimates as far as possible keeping in view the various factors likely to affect the implementation of the programme.

11.3. While the financial allocations for telephones in the Fourth Plan has been increased from Rs. 466 crores to Rs. 488 crores, the physical target has been reduced from 7.6 lakhs additional telephone connections to 7 lakhs additional telephone connections. From the information supplied by the Department, it appears that even this reduced target will not be fulfilled and the actual achievement will be 6.47 lakhs additional telephones by the end of the Fourth Plan. It is felt that highest importance has to be given to the achievement of the physical target for, it is well known that there are very long lists of persons waiting for several years for provision of telephones in metropolitan and other cities. Therefore there is no reason why material management, was not taken care of by the telephone authorities in the light of experience gained in the earlier Plan periods.

11.4. It is a matter of concern that Government will not be in a position to supply telephone connections without any waiting period till 1986, in spite of the fact that it is considered a basic infrastructure for a developing economy. In this connection it is pointed out that during the first three years of the Fourth Plan *i.e.* till the end of March, 1972, Government were able to provide only 3,12,144 additional telephones and the estimated additional number of telephone connections to be installed during the remaining two years of the Fourth Plan is 3,35,000. This indicates that there would be shortfall of 52,856 telephone connections against the revised estimate of 7,00,000 telephone connections and 1,17,856 telephone connections against the original estimates of 7,60,000 connections. This is all the more distressing, considering the fact that the total number of persons/organisations on the waiting list all over India as on 31-3-1972 was 3,41,109 and is likely to be about 4 lakhs at the end of the Fourth Plan *i.e.* by 31st March, 1974. Further it is a matter of great concern to note that the problem of providing new telephone connections in the Metropolitan cities of Bombay, Delhi and Calcutta is getting more and more acute from year to year and that people in these metropolitan cities have been on the waiting list for as long as 9 to 10 years.

11.5. It is regretted that there is a wide disparity between the projections for demand for telephones and the actual achievement envisaged in providing telephone connections during Fourth Five Year Plan.

11.6. It is, therefore, felt that the whole planning has been unrealistic. They would, therefore, like to emphasise that Plan projection should be based on a sound scientific forecast of unsatisfied demand of telephones and the capability of Government to provide telephone connections on the basis of their production capacity as well as other related machinery and equipment etc. required for the same.

11.7. Provision of telephone is an essential infrastructure facility for development and is largely self-paying particularly in sectors of growth. Government, therefore, should see that all the requisite materials are made available for timely implementation of the programme.

11.8. It need hardly be emphasised that there should be a well thought-out Plan so as to ensure that at least in the next ten years, we will be reaching a position where telephone connections would be available readily on demand least for all essential requirements.

11.9. Against the requirement of 7509 Kms. of cables, for implementation of the Fourth Plan target of 7,60,000 additional telephones, the actual

availability of cables from the only indigenous manufacturers, namely, Hindustan Cables Ltd., Roop Narainpur, in the public sector was 1914 Kms. till 31st March, 1972 and was expected to be 2847 Kms. more till the end of the Fourth Plan. This has perforce necessitated the import of cables worth Rs. 29.85 crores under a World Bank loan. It is pointed out that the requirements of cables had been projected by the Working Group of the Planning Commission, as early as September 1962 and they recommend not only the augmentation of the capacity at Roop Narainpur from the existing 3,000 Kms. to 6,000 Kms., but also the setting up of a new unit for manufacture of cables at Hyderabad. It is disappointing that the plan for expansion of the capacity of Hindustan Cables Ltd., at Roop Narainpur, which was taken in hand in April 1966 and trial production of which was expected to start by 1969-70 has not yet fructified. In fact, according to the latest information available, the production capacity of Hindustan Cables Ltd. has come down from 2600 Kms. in 1969-70 to 2500 Kms. and 1940 Kms. in 1970-71 and 1971-72 respectively. It is difficult to understand why Government have felt so helpless in ensuring that at least the existing capacity was put to full productive use and that the expanded capacity was also brought into commission as per scheduled programme, instead of the date being postponed to 1976-77. The leisurely manner in which the decision about the setting up of the second factory to manufacture cables was handled with the result that the factory which was essential for meeting Plan requirements, has not actually started production even in the fourth year of the current Plan, though the need for it was recognised as early as 1962 is deprecated. Government should examine at the highest level as to how a key project of this nature has been allowed to be delayed thus greatly retarding the programme for achieving self-reliance in this vital field of communications, and forcing the country to incur a loan liability of as much as Rs. 29. 85 crores to finance the import of cables.

11.10. The main reason for the failure of Government to meet the projected demands for telephones has been the consistent shortfall in the production of Exchange lines, telephone instruments and the manufacture of spares required for equipments. The demand for telephone instrument is about 3 lakhs per annum while the Indian Telephone Industry, Bangalore are able to supply hardly two lakhs. The shortfall of exchange lines, both local and trunk would be to the extent of 10 per cent and 36 per cent respectively at the end of the Fourth Plan. One of the reasons for shortfall in the production of cross bar exchange has also been its faulty design and is unsuitability to the Indian conditions. Some items of transmission equipment are being imported and the total imports during the Fourth Plan period would be of the value of Rs. 11.32 crores. The provision of spares is very scarce resulting in inadequate maintenance of telephone equipments and conse-

quent faulty service. Ten per cent of the I.T.I.'s capacity has been set apart for the manufacture of spare parts with the result that the production of sophisticated equipment is affected to that extent.

In order to accelerate the tempo of production to meet the projected demands of telephone equipments at least in the Fifth Plan period, concerted efforts have to be made in all fields of production as well as in providing all the necessary infrastructure in advance for the same.

11.11 In advanced countries the main product unit concentrates on production of sophisticated equipments only while the other ancillary parts are produced in ancillary units. It needs hardly be emphasised that there is imperative need to develop ancillary industries by factories like I.T.I. and other similar factories in the process of being set up. This would, apart from releasing the capacity now being used for producing ancillary parts and spares, would generate more employment opportunities.

11.12. The losses on account of theft of copper wire during 1969-70 to 1971-72 had been to the tune of about Rs. 7 crores. Even though Government realised the need to amend the Telegraph Wires (Unlawful Possession) Act, 1950 to make the punishment for stealing telegraph wires more deterrent and brought forth an amending Bill which was passed by the Rajya Sabha on 27-3-1966 could not get it passed by the Third Lok Sabha due to its dissolution. It is regretted that no further move has been initiated by Government since 1966 to amend the Telegraph Wire (Unlawful Possession) Act, 1950 although seven years have elapsed since then. Government should bring forth the amending Bill before Parliament at an early date.

11.13 It is noted that the plant for manufacturing 1,000 tonnes of copper-clad wire per year at Rupnarainpur which was received in 1969 and whose installation had been delayed for certain reasons would now be commissioned soon.

11.14. is regretted to note the delay in the installation of the plant. There is no reason why priority should not be given for commissioning of this plant and to increase its production capacity to meet the full requirement of copper-clad wire.

11.15. It is a matter of concern that the B.T.M. crossbar exchange equipment which Government imported from Bell Telephone Manufacturing Company, Belgium was suffering from many defects with the result that the very purpose for providing efficient telecommunication service for which it was imported and installed has been defeated.

The main defects as brought to the notice are inadequate contact protection, component failures, instability of mechanical adjustments, circuit problems and corrosion. It is pointed out that the cross-bar technology imported from B.T.M. has in actual practice not been found to be fully suited to Indian conditions. It is not clear as to how such serious shortcomings occurred when a technical team of officers had gone round different countries to examine and recommend a suitable type of cross-bar equipment for manufacture in India. ITI indicated to the collaborators the pattern of traffic etc. only for Strowger system and did not have the adequate data about the periodicity of Calling which is an essential feature in this system. It is not understood as to why it was not possible to identify the basic requirement of periodicity of calls and special features of Indian conditions while going in for the B.T.M. Cross-bar equipment.

11.16 It is understood that Government have invited global tenders for import of 35,000 lines of cross-bar exchange equipment and that offers have been received from three foreign firms including BTM (Penta Conta) with whom there is already an agreement for manufacture with ITI and L.M. Ericsson of Sweden. It is necessary to impress upon Government the need for most careful scrutiny at the highest technical level so as to make sure that equipment which would give best service in Indian conditions would be imported and that the difficulties and shortcomings which were experienced in earlier years in the working of imported cross-bar equipment from BTM are not allowed to recur.

11.17 Government should analyse the factors, both human as well as material, responsible for the operational shortcomings of Trunk Services and take suitable remedial measures to ensure maximum efficient service possible. This is all the more necessary in view of huge losses suffered by Government due to non-maturing of calls.

11.18 The introduction of the STD system has streamlined the telephone trunk service by eliminating delays and other deficiencies inherent in a manually operated system of trunk traffic. This has provided the subscribers much relief and saving of time and has also increased the revenues of Posts and Telegraphs Department. It is felt that this system should progressively be introduced between all important cities connecting administrative, educational, commercial and trade centres.

11.19 It is, however, noted that at times the subscribers find it too difficult to get through their calls expeditiously between different stations. It is suggested that whether the delay is due to long distance or congestion in the

local exchange, Government should take adequate steps, as expeditiously as possible, to remove the existing deficiencies to ensure an efficient service to subscribers.

11.20 Complaints in telephone service are due to two factors *viz.* equipment and human. In so far as equipments are concerned, it is suggested that there should be a regular checking of installations at the existing telephone exchanges, dial mechanism, switch board equipments as also of instruments given to subscribers and any fault detected should be rectified on the spot so that mechanical defects do not occur frequently.

As regards the human factor it is suggested that Government should examine the problem in all its aspects and take suitable remedial steps to eliminate causes of complaints arising out of this factor.

11.21 It is also suggested that Senior Officers including General Manager Telephone should go through unattended complaints thoroughly and take suitable steps to remedy the defects leading to complaints. All unattended complaints should be placed before the Telephone Advisory Committee so that members can also have an idea about the disposal of complaints.

11.22 As on the 31st March, 1972, there were 18,253 short distance PCOs. The telephone has become a basic necessity for the people with increased social, economic, educational activities and its need is increasingly felt by the common man. It should, therefore, be the endeavour of Government to make available telephone for use by the general public in adequate numbers. Government should, therefore, accord high priority to the programme of opening PCOs particularly in the metropolitan cities, State Capitals, and District towns.

11.23 The shifting of telephones at present takes a long time. It is felt that when a telephone is to be shifted and if such shifting is covered by the rules of shifting, there should not be any difficulty in its shifting if the line is available in the exchange concerned. It is also suggested that some definite time-limit should be laid down and enforced for shifting of telephone lines both within the same exchange areas and from one exchange to another.

11.24 It is noted that only 0.669 per cent of people in the villages have been provided with telephone facilities. With greater emphasis being laid by Government on integrated development of backward and underdeveloped areas and for providing necessary infrastructure for the same as also with greater movement of people from villages to town and cities in search of employment opportunities, education etc. It is felt that existing

telephones facilities available in rural and underdeveloped areas are far from adequate. It is however, hoped that with the enforcement of policy as now revised for opening of telegraph offices (combined offices) and public call offices in backward, underdeveloped and hilly areas, it would be possible to open more public call offices in those areas and to achieve the targets of opening 200 public call offices in 1973-74 and 5000 during the Fifth Plan period.

11.25 There is a general feeling among the Public that in-correct or inflated bills are frequently sent to subscribers who have to enter into protracted correspondence with the authorities concerned to obtain refunds. This is high-lighted from the fact that during the calendar years 1970, 1971, 1972 (upto 1-3-72), complaints received by the Telephone Department for over-billing and disputed meter readings were to the tune of 1,86,042, 2,21,613 and 59,846. In terms of percentage, it is observed that there is increasing trend in the number of complaints received with reference to the number of installed telephones. It increased from 5.83% in 1970 to 6.32% in 1971.

11.26 While noting that some measures have been taken to reduce overbillings, the whole system of overbilling requires thorough streamlining. Government should review the whole working of billing procedure at a high level and take suitable remedial measures in respect of human and material factors that contribute to overbilling.

11.27 It is also observed that one of the main reasons about excess metering complaints is that some subscribers were in collusion with departmental staff or others. Government should exercise greater vigilance and take a very serious view of the corrupt practices indulged in by their staff and others *i.e.* diversion of one subscriber's telephone lines to another subscriber's telephone for making S.T.D. and other calls, and issue of wrong bills to subscribers under the cover of clerical errors etc.

11.28 It is felt that unless strong action is taken to detect such cases and deterrent punishment is given to the guilty persons, this evil cannot be effectively dealt with.

11.29 Government have introduced computerising of billing system in Bombay, where readings are taken annually and they are fed to computer and this helps in eliminating wrong calculations in billing etc. It is suggested that computerisation may be introduced in other cities also, starting with the Metropolitan Cities in accordance with a time-bound programme to be chalked out for this purpose.

11.30 While appreciating the fact that in a system where telephones are provided to subscribers on credit basis and where the post billing system is in vogue some arrears are inevitable. The arrears of telephone revenue as on 31-5-72 were to the tune of Rs. 6.05 crores out of which Rs. 1.94 crores were outstanding against Government Departments (both Central and States). While observing that as a result of special drives launched during the last four years, percentage of recovery has been of the order of 20%, it is suggested that much more concerted efforts have to be made on the part of the Department to bring down the arrears to the minimum possible. In the case of State Governments the matter should be taken at the highest level so that pointed attention is drawn to the settlement of the problem.

11.31 Out of Rs. 6.05 crores arrears of the telephones revenue, the arrears due from private subscribers are as much as Rs. 4.11 crores. Efforts made by Government to realise arrears from or private subscribers have either been half-hearted or proved ineffective. Government should go into the matter thoroughly and find effective ways and means to recover arrears due from private subscribers.

11.32 There are five Regional Tele-communication Centres to impart training to Engineering Supervisors and at present their total capacity is 1560. The expansion plans have been taken in hand to increase the number of centres and the training capacity upto 2750 to meet the requirements of the Fourth Five Year Plan.

11.33 It was also proposed to establish further additional Regional Training Centres during the Fifth Five Year Plan to meet the projected requirements of 4500 trained Engineering Supervisors. The Government also propose to establish an advanced level Tele-communication Training Centre with the aid of United Nations Development Programme to keep abreast with the latest developments in the field of tele-communication technology.

11.34 It is felt that concerted measures should be taken to develop these projected training centres according to a time bound programme. It is suggested that Government should also undertake periodic review of the progress made in the establishment of these Centres and augmentation of their training capacity so that suitable remedial steps may be taken to overcome any shortcomings that may come to their notice as a result of such review in the training imparted and in the expeditious establishment of these centres.

11.35 It is noted at Tele-communication Research Centre has been established in 1956 and the work in the Centre is devoted to design modern equipment for indigenous manufacture. It has designed a number of ins-

truments which have reached the stage of production and it is working on an Electronic Exchange which was expected to be ready for laboratory trial early this year, for field trial by 1975 and for complete manufacture by the end of 1980 and this Exchange has great potential for providing new sophisticated services which are not possible at present with the existing automatic exchanges.

11.36 In this connection, it is suggested that developments in the field of tele-communication technology have, in the recent past, been so rapid and extensive all over the World that in order to catch up with the fast developing technology and to keep abreast of the progress taking place in the more advanced countries considerable expansion in research and development field is required in the country to fully exploit the latest techniques and to obtain the maximum economies in the operation of the tele-communication net work as well as in providing new services and in improving the existing tele-communication services. It is felt that an allround effort has to be made to intensify and expand the research and development in the tele-communication activities.

11.37 It is emphasised that the funds allocated for research and development programme in tele-communications services should be performance oriented, to enable the Government to evaluate the success or otherwise of the research and development programmes carried out and the resultant benefits derived therefrom.

11.38 It is recommended that concentrated efforts should be made for the removal of shortcomings noticed in Cross bar exchanges and improve its technology and design to suit Indian conditions and that the Tele-communication Research Centre should—

- (i) devise suitable exchange to suit the requirements of rural areas;
- (ii) work on the improvement of telephone metering devices to obviate complaints of excess metering etc.;
- (iii) work on projects through which telephone services become cheaper and thus reach every corner of the country;
- (iv) work on the improvements of designs of Public Call Offices to ensure trouble-free service and also improve tele-communication services to hilly and strategic areas.

11.39 Since the Indian Telephone Industries are the principal manufacturers of Tele-communication equipment in the country and most of the

designs developed in the Tele-communication Research Centre are manufactured there, it is suggested that a very close liaison is necessary between the two so that the researches done by the Research Centre are quickly translated for practical use. It has also to be ensured that there is no duplication of effort between the two in the matter of research in the field of tele-communications.

11.40 It is also stressed that Government should ensure that utmost coordination and close liaison is maintained between the Tele-communication Research Centre and the Institutes under Council of Scientific and Industrial Research, National Physical Laboratories, Central Electronic Engineering Research Institute and University Centres of research and other organisations in the field to avoid duplication and also to take suitable advantage of researches made by them.

11.41 The functions of the Telephone Advisory Committee are to bring the public and the P&T Department into close relationship and give public the confidence that their grievances are being properly represented and attended to. Government should clearly spell out the guiding principles that should be taken into account by T.A.C., in exercising their discretion in sanctioning out-of-turn allotments keeping in view the recommendations made by the Telephone Committee, 1966 in this regard.

11.42 It is also stressed that meetings of the T.A.C. should be held frequently atleast once in every quarter as they are an important link between public and the Governmental machinery.

11.43 While nominating members on the Telephone Advisory Committees, Government no doubt, ensure that all interests are duly represented therein. It is suggested that the composition and character of T.A.C. may be reviewed periodically to ensure that in the fast expanding economy and the consequent rapid rate of growth of demand of telephones, all the interests are duly represented in the Committee and that no interests go by default or vested interests are created by repeated nominations.

11.44 It is regretted to note that there has been inordinate delay in the publication of telephone directories of majority of telephone circles and districts and there are instances when the directories have not been published according to prescribed periodicity. In certain cases there has been a delay of about even one year and in the case of Delhi Telephone directory, the delay is almost to the extent of two years. The irregular and delayed publications defeat the very purpose for which they are issued. The introduction of National Subscriber Trunk Dialling and its growth makes it all the more imperative to make available upto-date information to all subscribers by timely and regular publication of Directories.

11.45 It is understood that the most important factor for the delay or non-publishing the telephone directories according to the prescribed periodicity is non-availability of printing paper in the country. It is noted that certain remedial steps have been taken by Government to overcome the shortage of paper.

11.46 Apart from the measures already taken to overcome the shortage of printing paper for telephone Directories, the problems connected with the non-availability of paper should be taken up at the highest level with the D.G.S.&D. and the Chief Controller of Printing and Stationery and a firm arrangement arrived at for timely availability of printing paper of the requisite quality and quantity.

NEW DELHI.

April 23, 1973

Vasakha 3, 1985

KAMAL NATH TEWARI

Chairman,

Estimates Committee.

APPENDIX I

(Vide para 7.7)

Statistical Data Regarding number and nature of Telephone Complaints

Period	Nature of complaints over-billing.		Nature of complaint disputed meter reading		Total No. of complaints received	Percentage of complaints regarding over-billing with reference to total number of telephones	Percentage of complaints regarding disputed meter reading with reference to total number of complaints	Total No. of Tele-phones in the country
	No. of complaint received	No. of complaint dispose	No. of complaint received	No. of complaint disposed				
1968 (1-4-68—31-12-68)	39375	39870	11707	11137	1,16,935	3.64	1.09	1081672
1969	48115	48209	16636	17696	1,55,750	4.08	1.41	1177744
1970	49459	49320	24209	22736	1,86,042	3.9	1.93	1248585
1971	51228	42687	37764	34181	2,21,613	3.64	2.68	1407258
1972 (1-1-72—31-3-72)	19798	19146	9781	9874	59,846	1.35	0.67	1466570

NOTE :—Number of complaints received indicated against a period is the number of fresh complaints received during the period. The disposal figure indicate disposal of fresh as well as pending complaints.

APPENDIX II

(Vide Para 7·27)

Statement showing the arrears due from Private subscribers as on 31st May, 1972

(Figures in thousands of Rupees)

Units	State Govts.	Central Govt. excluding Defence	Defence	Private	Total
1	2	3	4	5	6
Andhra	23	..	1	509	533
Assam	1983	1239	1594	3259	8075
Bihar	539	54	61	2535	3189
M. P.	557	87	125	3443	4212
Maharashtra	87	7	92	924	1110
Gujarat	35	9	40	728	812
J. & K.	1250	184	265	725	2424
Kerala	8	3	2	275	288
Tamil Nadu	7	..	..	210	217
Mysore	18	..	2	222	242
Orissa	448	20	14	818	1294
Punjab	267	76	300	875	1518
Rajasthan	163	21	102	454	740
U. P.	391	146	1197	1701	4758
West Bengal	343	284	1197	1701	3525
Calcutta Phones	296	151	176	3744	4367
Delhi Phones	108	3042	1436	5538	10124
Bombay Phones	251	86	155	7622	8114
Madras Phones	9	6	1	455	471
Hyderabad Phones	2	..	1	159	162
Bangalore Phones	1	1	23	151	176
Ahmedabad Phones	81	29	38	187	335
Poona Phones . . . .	..	..	23	126	149
Kanpur Phones	199	120	191	783	1293
Nagpur Phones	74	36	10	546	666
Patna Phones	304	13	9	757	1083
Jaipur Phones	198	9	4	439	650
TOTAL	7642	5623	6132	41124	60521

APPENDIX III*(Vide para 8·3)**List of Circle|District Telecom. Training Centres*

Sl. No.	Name of TTC		Training Capacity	
			At the end of 4th Plan	At the end of 5th Plan
1	Calcutta	District	800	1000
2	New Delhi	„	500	800
3	Bombay	„	800	1200
4	Madras	„	1000	1000
5	Hyderabad	„	500	600
6	Bangalore	„	200	600
7	Ahmedabad	„	150	600
8	Kanpur	„	150	500
9	Poona	„	150	500
10	Andhra	Circle	500	800
11	Assam	„	400	400
12	Bihar	„	500	700
13	Gujarat	„	700	1200
14	J. & K.	„	400	400
15	Kerala	„	500	700
16	Madhya Pradesh	„	500	700
17	Madras	„	600	800
18	Mysore	„	500	700
19	Maharashtra	„	1000	1200
20	Orissa	„	400	500
21	Punjab	„	500	700
22	Rajasthan	„	500	600
23	Uttar Pradesh	„	500	1000
24	West Bengal	„	500	800
25	Additional Training Centres in Fifth Plan		..	2000
TOTAL .			12250	20000

APPENDIX IV

(Vide para 10. 2)

Particulars of telephone directories published during the last three years i.e. 1970, 1971 and 1972

Name of the circles/ district	Periodi- city	1970		1971		1972	
		Month in which due	Month in which brought out	Month in which due	Month in which brought out	Month in which due	Month in which brought out
1	2	3		4		5	
CIRCLE							
Andhra . . .	Yearly	April, 1970	May, 1970	May, 1971	Sept. 1971	Sept. 1972	Not yet due
Assam . . .	Do.	Dec. 1969	Not printed	Dec. 1970	Dec. 1971	Dec. 1972	Do.
Bihar . . .	*Half yearly	Jan. 1970	Do.	Jan. 1971	Not printed	Aug. 1972	Sept. 1972
Gujarat	Do.	July, 1970	Do.	July, 1971	Aug. 1971	April, 1972	July, 1972
Kerala . . .	Yearly	April, 1970	Do.	April, 1971	Not printed	April, 1972	Not yet printed
Madras . . .	*Half Yearly	Dec. 1969	Do.	Dec. 1970	April, 1971	April, 1972	Do.
Maharashtra	Do.	June, 1970	Nov. 1970	May, 1971	Not yet printed	Nov. 1972	Do.
Madhya Pradesh . . .	Yearly	Jan. 1970	Not yet printed	April 1971	Do.	Dec. 1972	Do.
Mysore	Do.	July, 1970	Oct. 1970	Oct. 1971	Dec. 1971	Feb. 1972	Not yet printed
Orissa	Do.	Mar. 1970	Not yet printed	Mar. 1971	Feb. 1971	Feb. 1972	Do.
Rajasthan	*Half Yearly	May, 1970	Do.	May 1971	Aug. 1971	Aug. 1972	Do.
		Jan. 1970	Do.	Jan. 1971	Not yet printed	Jan. 1972	May, 1972
		Feb. 1970	Do.	Feb. 1971	Do.	Jan. 1973	Not yet due
		Aug. 1970	Do.	Aug. 1971	Jan. 1971		

*All Directories due annually since October, 1971.

1	2	3	4	5	6	7	8
Punjab . . .	Half yearly	Dec. 1970	Not yet printed	Dec. 1971	Partly printed & distributed. Balance awaited from Press at Trivandrum.		
U. P.	Do.	April, 1970 Oct. 1970	Do. Dec. 1971	June, 1971 Dec. 1971	Not yet printed Do.	Dec. 1972 due	not yet printed
West Bengal	Yearly	Dec. 1970	Feb. 1971	Dec. 1971	July 1972	July 1973	not yet due
J. & K.	Do.	Oct. 1970	July, 1971	July, 1972	July, 1972	July, 1973	Do.
<i>DISTRICTS</i>							
Ahmedabad . . .	Half yearly	April, 1970 Oct. 1970	Not yet printed Nov. 1970	May, 1971 Nov. 1971	July, 1971 Not yet printed	Nov. 1972 ..	Not yet printed ..
Bangalore . . .	Do.	Jan. 1970 July, 1970	Not yet printed July, 1970	Jan. 1971 July, 1971	Do. July, 1971	Jan. 1972	June, 1972
Bombay . . .	Do.	Jan. 1970 July, 1970	Not yet printed Oct. 1970	April, 1971 Oct. 1971	Not yet printed Oct. 1971	Oct. 1972	Not yet due
Calcutta . . .	Do.	April, 1970 Oct. 1970	Not yet printed Nov. 1970	May, 1971 Nov. 1971	Not yet printed Nov. 1971	Nov. 1972	Do.
Delhi . . .	Do.	Jan. 1970 July, 1970	Not yet printed Sept. 1970	Mar. 1971 Sept. 1971	Not yet printed Aug. 1971	Aug. 1972	Not printed
Hyderabad . . .	Do.	Mar. 1970 Sep. 1970	Not printed Do.	Nov. 1971 Sep. 1971	Not printed May. 1971	May, 1972	Do.
Madras	Do.	Jan. 1970 July, 1970	Do. Oct. 1970	April, 1971 Nov. 1971	May, 1971 Not yet printed	Nov. 1972	Do.
Poona . . .	Do.	Mar. 1970 Sep. 1970	Not printed Oct. 1970	April, 1971 Oct. 1971	Do. July, 1971	July, 1972	Do.

APPENDIX V

Summary of Recommendations/Conclusions contained in the Report

Serial No.	Reference to Para No. of the Report	Summary of Recommendations, Conclusions
(1)	(2)	(3)
1	1.6	The Committee feel that advance planning for telephones is important, no less than that for industrial projects. Unless necessary infrastructure is built up in advance, it cannot be possible to meet even a reasonable portion of the rising demand for telephone facilities in the coming years. If the annual growth rate is to expand at the rate of 5 to 6 per cent as envisaged in the Fourth Five Year Plan, the additional demand for telephones is bound to be higher. To build up necessary capacity for providing this additional facility, the Posts and Telegraphs Department will have to make a larger investment in Cables, Equipments, telephone instrument spares, microwave links etc. The Committee, therefore, feel that it is important that a 'Perspective Plan' for 10 to 15 years is drawn up in regard to the development of telephone services in the country to meet the needs of developing economy.
2	2.17	The Committee regret to note continuous shortfalls in the successive Plan periods viz., First, Second and Third Plan periods to the tune of Rs. 543 lakhs, 896 lakhs and 67 lakhs respectively in the actual expenditure incurred on telephone services against the targetted amount of Rs. 3419 lakhs, 6067 lakhs and 12441 lakhs. This is all the more regrettable in the context of increasing demand for telephones, consequent increase in waiting list and inability of Government to cope

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with it. The Committee are unable to appreciate the stand of Government that one of the limitations in fulfilling the future demands and building infrastructure for telephones has been financial constraints, as they find that Government have not been able to utilise even the amounts allocated in the Plans. The Committee are constrained to observe that wide gaps between Plan provision and the actual expenditure indicate not only faulty and unrealistic planning but also tardy implementation of the schemes. They hope that Government would in future frame more realistic estimates as far as possible keeping in view the various factors likely to affect the implementation of the programme.

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The Committee note from the Mid-Term Fourth Plan Appraisal, that while the financial allocations for telephones has been increased from Rs. 466 crores to Rs. 488 crores, the physical target has been reduced from 7·6 lakhs additional telephone connections to 7 lakhs additional telephone connections. From the information supplied by the Department, it appears that even this reduced target will not be fulfilled and the actual achievement will be 6·47 lakhs additional telephones by the end of the Fourth Plan. The Committee have commented on this subsequently in para 2·33 also. The Committee attach the highest importance to the achievement of the physical target, for, it is well known that there are very long lists of persons waiting for several years for provision of telephones in metropolitan and other cities. The Committee see no reason why material management, was not taken care of by the telephone authorities in the light of experience gained in the earlier Plan periods.

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4	2*19	<p>The Committee note that Government have belatedly set up a Committee under the Chairmanship of Shri M. S. Pathak, Member, Planning Commission, to go into all aspects of manufacture of telecommunication equipment and to prepare a perspective Plan for stepping up of indigenous capacity for manufacture of telecommunication equipment of all types. The Committee, however, find that the report of the high powered Committee is still awaited. As the setting up of facilities for manufacture of equipment etc. takes several years, the Committee would like to stress that this report should be expedited and Government should draw up a working plan of action to ensure that the targets to be set out in the next Plan are achieved in time.</p>
5	2*33	<p>The Committee are concerned to note that Government will not be in a position to supply telephone connections without any waiting period till 1986, in spite of the fact that it is considered a basic infrastructure for a developing economy. In this connection they would like to point out that during the first three years of the Fourth Plan i.e. till the end of March, 1972, Government were able to provide only 3,12,144 additional telephones and the estimated additional number of telephone connections to be installed during the remaining two years of the Fourth Plan is 3,35,000. This indicates that there would be shortfall of 52,856 telephone connections against the revised estimate of 7,00,000 telephone connections and 1,17,856 telephone connections against the original estimates to 7,60,000 connections. This is all the more distressing, considering the fact that the total number to persons/organisations on the waiting list all over India as on 31-3-1972 was 3,41,109 and is likely to be about 4 lakhs at the end of the Fourth Plan i.e. by 31st March, 1974. Further it is a matter of great concern to note that the problem of providing new telephone connections in the Metropolitan cities of Bombay</p>

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Delhi and Calcutta is getting more and more acute from year to year. At the end of 31st March, 1971, the number of persons/organisations on the waiting list in Bombay, Delhi and Calcutta was 79,648, 45,000 and 34,187 respectively which increased to 91,644, 57,596 and 37,924 respectively as on 30-6-1972.

6 2.34

Government have also admitted that people have been on the waiting list for as long as 9 to 10 years in these metropolitan cities. The Committee regret to observe that there is a wide disparity between the projections for demand for telephones and the actual achievement envisaged in providing telephone connections during Fourth Five Year Plan. Original projection for telephones demand during the Fourth Plan was to the tune of 16.5 lakhs while the actual telephone connections proposed to be provided by the end of the Fourth Plan are only 6,47,144 as against the revised target of 7,00,000. This is indicative of the fact that the effort made is far from being commensurate with the demand projection.

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The Committee, therefore, feel that the whole planning has been unrealistic. They would, therefore, like to emphasise that Plan projection should be based on a sound scientific forecast of unsatisfied demand of telephones and the capability of Government to provide telephone connections on the basis of their production capacity as well as all other related machinery and equipment etc. required for the same. The Committee, however, hope that it should be possible for Government to draw up realistic assessments for the Fifth Plan period based on their experience of Fourth Plan period.

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The Committee take note of the fact that the Pathak Committee has been set up to estimate the demand for the next 10 to 20 years and also suggest concerted measures for its implementation and would like to

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reiterate that the Pathak Committee should give its recommendation without further delay and Government should draw up a White paper setting out the dimensions of the problem and how they propose to meet it during the next decade. This should be laid on the Table of the House so as to give an opportunity to the elected representatives of the people and the public to give their suggestions before it is adopted as a plan for action.

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The Committee would also like to point out that provision of telephone is an essential infrastructure facility for development and is largely self-paying particularly in sectors of growth. Government, therefore, should see that all the requisite materials are made available for timely implementation of the programme.

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The Committee can hardly emphasise that there should be a well thought-out Plan so as to ensure that at least in the next ten years, we will be reaching a position where telephone connections would be available readily on demand at least for all essential requirements.

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The Committee note that as against the requirement of 7509 Kms. of cables, for implementation of the Fourth Plan target of 7,60,000 additional telephones, the actual availability of cables from the only indigenous manufacturers, namely, Hindustan Cables Ltd., Roop Narainpur, in the public sector was 1914 Kms. till 31st March, 1972 and it is expected to be 2847 Kms. more till the end of the Fourth Plan. This has perforce necessitated the import of cables worth Rs. 29.85 crores under a World Bank loan. The Committee would like to point out that the requirements of cables had been projected by the Working Group of the Planning Commission, as early as September 1962 and they recommended not only the augmentation of the capacity at Roop Narainpur from the existing

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3,000 Kms. to 6,000 Kms. but also the setting up of a new unit for manufacture of cables at Hyderabad. The Committee are greatly disappointed that the plan for expansion of the capacity of Hindustan Cables Ltd., at Roopnarainpur, which was taken in hand in April 1966 and trial production of which was expected to start by 1969-70 has not yet fructified. In fact, according to the latest information available the production capacity of Hindustan Cables Ltd. has come down from 2600 Kms. in 1969-70 to 2500 Kms. and 1940 Kms. in 1970-71 and 1971-72 respectively. The Committee are at a loss to understand why Government have felt so helpless in ensuring that at least the existing capacity was put to full productive use and that the expanded capacity was also brought into commission as per scheduled programme, instead of the date being postponed to 1976-77. The Committee cannot too strongly deprecate the leisurely manner in which the decision about the setting up of the second factory to manufacture cables was handed with the result that the factory which was essential for meeting Plan requirements, has not actually started production even in the fourth year of the current Plan, though the need for it was recognised as early as 1962. The Committee would like Government to examine at the highest level as to how a key project of this nature, has been allowed to be delayed thus greatly retarding the programme for achieving self-reliance in this vital field of communications, and forcing the country to incur a loan liability of as much as Rs. 29.85 crores to finance the import of cables. At a time, when there is a pressing demand for creating productive avenues to relieve the problem of unemployment, the Committee are at a loss to understand why the second unit of the requisite capacity could not be set up in time and commissioned to pro-

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duce the requisite cables for the telephone industry and also incidentally provide acutely needed opportunities for productive employment.

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2.73 The Committee note that the main reason for the failure of Government to meet the projected demands for telephones has been the consistent shortfall in the production of exchange lines, telephone instruments, and the manufacture of spares required for equipments. The demand for telephone instrument is about 3 lakhs per annum while the Indian Telephone Industry, Bangalore are able to supply hardly two lakhs. The shortfall of exchange lines both local and trunk would be to the extent of 10 per cent and 36 per cent respectively at the end of the Fourth Plan. One of the reasons for shortfall in the production of cross bar exchange has also been its faulty design and its unsuitability to the Indian conditions. Some items of transmission equipment are being imported and the total imports during the Forth Plan period would be of the value of Rs. 11.32 crores. The position of spares is very acute resulting in inadequate maintenance of tepehone equipments and consequent faulty service. Ten per cent of the I.T.I.'s capacity has been set apart for the manufacture of spare parts with the result that the production of sophisticated equipment is affected to that extent.

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2.74 The Committee, while noting that the new factories at Naini and Rae Bareilly are coming up for the manufacture of telephone equipments would like to emphasise that in order to accelerate the tempo of production to meet the projected demands of telephone equipments atleast in the Fifth Plan period, concerted efforts have to be made in all fields of production as well as in providing all the necessary infrastructure in advance for the same.

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2.75 The Committee understand that in advanced countries the main product unit concentrates on production of sophisticated equipments only while the other ancillary parts are produced in ancillary units. The Committee need hardly emphasise that there is imperative need to develop ancillary industries by factories like I.T.I. and other similar factories in the process of being set up. This would, apart from releasing the capacity now being used for producing ancillary parts and spares, would generate more employment opportunities.

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2.82 The Committee note that the losses on account of theft of copper wire during 1969-70 to 1971-72 had been to the tune of about Rs. 7 crores. The Committee further note that even though Government realised the need to amend the Telegraph Wires (Unlawful Possession) Act, 1950 to make the punishment for stealing telegraph wires more deterrent and brought forth an amending Bill which was passed by the Rajya Sabha on 27-3-1966 could not get it passed by the Third Lok Sabha due to its dissolution. The Committee regret to say that no further move has been initiated by Government since 1966 to amend the Telegraph Wire (Unlawful Possession) Act 1950 although seven years have elapsed since then. The Committee would urge Government to bring forth the amending Bill before Parliament at an early date.

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The Committee further note that the Centre's request to the States to set up Police Cells exclusively for dealing with copper wire theft cases and the communication of the Minister of Communications to the Chief Ministers of States in the matter has not so far brought any positive results. They feel that with a view to impress upon the States to avoid losses which run into crores of rupees

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and also that all the State Governments take concerted action, Government may examine the desirability of bringing this matter before the Home Ministers' Conference so as to highlight this problem which is essentially a problem of law and order.

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The Committee note that the plant for manufacturing 1,000 tonnes of copper-clad wire per year at Rupnarainpur which was received in 1969 and whose installation had been delayed for certain reasons would now be commissioned soon. They, however, find that this will not be sufficient to meet the total requirements of approximately 4,000 tonnes of cable per year.

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The Committee regret to note the delay in the installation of the plant. They see no reason why priority should not be given for commissioning of this plant and to increase its production capacity to meet the full requirement of copper-clad wire. The Committee would also like to emphasise that urgent steps should be taken to concentrate on efforts to replace the copper-clad wire by the substitute wire at places where the incidence of thefts is high.

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The Committee note that Government have decided to convert Manual Exchanges into automatic exchanges gradually and propose complete automisation by 1986. They further note that the main handicap in this regard is shortage of automatic exchanges equipment. The Committee hope that with the gradual stepping up of production capacity of equipments, Government would be able to adhere to the target date of automisation which is essential for providing better telecommunication facilities to the telephone users. The Committee would like Government to prepare a programme for automisation for each year so that the target date could be adhered to.

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- 20 3·17 The Committee are concerned to note that the B.T.M. cross-bar exchange equipment which Government imported from Bell Telephone Manufacturing Company, Belgium is suffering from many defects with the result that the very purpose for providing efficient telecommunication service for which it was imported and installed has been defeated.
- 1 3·18 The main defects as brought to the notice of the Committee are inadequate contact protection component failures, instability of mechanical adjustments, circuit problems and corrosion, The Committee cannot help but to point out that the Cross-bar technology imported from B.T.M. has in actual practice not been found to be fully suited to Indian conditions. It is not clear as to how such serious shortcomings occurred when a technical team of officers had gone round different countries to examine and recommend a suitable type of cross-bar equipment for manufacture in India. The Committee understand that the ITI indicated to the collaborators the pattern of traffic etc. only for Strowger system and did not have the adequate data about the periodicity of Calling which is an essential feature in this System. The Committee fail to understand why it was not possible to identify the basic requirement of periodicity of calls and special features of Indian conditions while going in for the B.T.M. Cross-bar equipment.
- 22 3·19 The Committee understand that Government have invited global tenders for import of 35,000 lines
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of cross-bar exchange equipment and that offers have been received from three foreign firms including BTM (Penta Conta) with whom there is already an agreement for manufacture with ITI and L.M. Ericsson of Sweden. The Committee would like to impress upon Government the need for most careful scrutiny at the highest technical level so as to make sure that equipment which would give best service in Indian conditions would be imported and that the difficulties and shortcomings which were experienced in earlier years in the working of imported cross-bar equipment from BTM are not allowed to recur.

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3·26 The Committee note that there has been increase in the percentage of utilisation in the year 1972 and hope, that the utilisation may reach 93% by the end of the Fourth Five Year Plan. To achieve the maximum utilisation, the Committee would like Government to issue instructions to all Heads of circles and Districts to review the spare capacity available in each Exchange and take concrete measures to bring it into utilisation. The P & T Board should in particular review regularly the utilisation of capacities in exchanges having 1000 lines and more so as to ensure that these are pressed into service at the earliest.

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3·27 The Committee hope that concerted efforts will be taken to ensure that paucity of cables and other equipments are not allowed to hold the full utilisation of capacity of telephone Exchanges.

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4·9 The Committee note that while there is considerable improvement in the operation of 'Trunk Call

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Services' yet there is persistent feeling among business and other quarters that it requires further toning up to give the maximum satisfaction to the subscribers.

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4.10 The Committee would, therefore, urge that Government should analyse the factors, both human as well as material, responsible for the operational shortcomings of Trunk Services and take suitable remedial measures to ensure maximum efficient service possible. This is all the more necessary in view of huge losses suffered by Government due to non-maturing of calls.

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4.17 The Committee note that with the introduction of STD system, there has been tremendous growth in trunk telephone traffic. The number of trunk calls through the STD system has risen to about 20 to 30 times the number which was put through the manual trunks prior to the introduction of STD system. The Committee also understand that the automatic telephone service can carry a greater number of calls, because there are inevitable delays in a manual or semi-automatic system. The Committee feel that the introduction of the STD system has streamlined the telephone trunk service by eliminating delays and other deficiencies inherent in a manually operated system of trunk traffic. This has provided the subscribers much relief and saving of time and has also increased the revenues of Posts and Telegraph Department. The Committee feel that this system should progressively be introduced between all important cities connecting administrative, educational, commercial and trade centres.

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4.18 The Committee, however, note that at times the subscribers find it too difficult to get through their calls expeditiously between different stations. The Committee would like to suggest that whether the delay is due to long distance or congestion in the local exchange, Government should take adequate steps, as expeditiously as possible, to remove the existing deficiencies to ensure an efficient service to subscribers.

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4.19 The Committee further note that the STD barring facility has only been introduced in very few exchanges. They recommend that this facility should be expeditiously made available to all subscribers in all telephone exchanges in the country so that those subscribers who do not want to avail of this STD facility may be provided relief and are saved from the misuse of this system.

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The Committee note that P & T. Department has developed a meter, which can be put at subscribers premises, and which indicates the number of subscribers STD calls. They also note that it could not be put at subscribers place as it can be put out of commission. The Committee further note that Government is developing a more sophisticated meter, which is under trial in Telecommunication Research Centre. The Committee hope that this meter would be developed and checked on a high priority basis and installed quickly at the premises of the telephone subscribers using STD facility on their request and at their cost.

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| 31 | 4.24 | The Committee note that complaints in telephone service is due to two factors <i>viz.</i> equipment and human. In so far as equipments are concerned, the Committee suggest that there should be a regular checking of installations at the existing telephone exchanges, dial mechanism, switch board equipments as also of instruments given to subscribers and any fault detected should be rectified on the spot so that mechanical defects do not occur frequently. |
| 32 | 4.25 | As regards the human factor the Committee would like to suggest that Government should examine the problem in all its aspects and take suitable remedial steps to eliminate causes of complaints arising out of this factor. |
| 33 | 4.26 | The Committee further feel that a conscious effort should be made in by the P&T Department to inculcate in their staff a sense of duty and a spirit of public service. They should be made to realise that they are running a vital communications system and that inefficient telecommunication invariably leads to a slowing down of the commercial and industrial tempo of a country. |
| 34 | 4.27 | The Committee have already made their recommendations elsewhere in the Report about augmentation of training programme for the telephone personnel which if implemented would go a long way in improving the efficiency of telephone services. |
| 35 | 4.28 | The Committee also suggest that Senior Officers including General Manager Telephone should go through unattended complaints thoroughly and take suitable steps to remedy the defects leading to complaints. The Committee would like that list of all unattended complaints should be placed before the Telephone Advisory Committee so that members can also have an idea about the disposal of complaints. |
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- 36 4.32 The Committee note that as on the 31st March, 1972, there were 18,253 short distance PCO and 3718 long distance PCOs. The Committee need hardly emphasise that telephone has become a basic necessity for the people with increased social, economic, educational activities and its need is increasingly felt by the common man. It should therefore, be the endeavour of Government to make available telephone for use by the general public in adequate numbers. Government should, therefore, accord high priority to the programme of opening PCO particularly in the metropolitan cities, State Capitals and District towns.
- 37 4.33 The Committee note that with the introduction of three ten paise new coins, the user of PCOs now find it difficult to get the call matured as the party at the other end does not know as to what is happening and puts down the receiver. The Committee would, therefore, suggest that Government should immediately take up the introduction of new device in the Public Call Offices so that all the three coins are dropped simultaneously into the box and the user is connected quickly to the dialled number.
- 38 4.38 The Committee understand that the shifting of telephones at present takes a long time. The Committee feel that when a telephone is to be shifted and if such shifting is covered by the rules of shifting, there should not be any difficulty in its shifting if the line is available in the exchange concerned. The Committee would suggest that some definite time-limit should be laid down and enforced for shifting of telephone lines both within the same exchange areas and from one exchange to another.
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39 5.7 The Committee are unhappy to note that only 0.669 per cent of people in the villages have been provided with telephone facilities and that the circlewise percentage except in the case of Kerala, Mysore, Rajasthan and Tamil Nadu, is lower than even one per cent. With greater emphasis being laid by Government on integrated development of backward and underdeveloped areas and for providing necessary infrastructure for the same as also with greater movement of people from villages to towns and cities in search of employment opportunities, education etc., the Committee feel that existing telephones facilities available in rural and under developed areas are far from adequate. The Committee, however, hope that with the enforcement policy as new revised for opening of telegraph offices (combined offices) and public call offices in backward, underdeveloped and hilly areas, it would be possible to open more public call offices in those areas and to achieve the targets of opening 200 public call offices in 1973-74 and 5000 during the Fifth Plan period.

40 5.8 The Committee would, however, like to stress that to achieve the aforesaid targets, a phased programme for each year of the Fifth Plan should be drawn up for all categories of Stations mentioned in the revised policy and all the concomitant factors involved in this process should be tied up in advance to obviate any shortfall in this regard. They would also like to suggest that yearly review of the progress made should be undertaken with a view to remove shortcomings that may be noticed in the implementation of the programme.

41 5.9 The Committee need hardly stress that telephone is a basic infrastructure for strategic areas. Government should, therefore, formulate as early as possible a liberalised policy for providing telephones in such areas and take expeditious steps to implement the same in accordance with a time-bound programme to be laid down in this behalf.

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42	5.10	The Committee are unhappy to note that maintenance of telephone exchange in rural areas was not satisfactory. Poor maintenance of Exchanges often result in interruption of link and unsatisfactory service. The Committee would like Government to take concrete and systematic measures to see that the Exchanges in rural areas are serviced properly and maintained in efficient and dependable condition of service.
43	6.7	The Committee note that in the opinion of Government there is absolutely no scope for the reduction of telephone tariffs. The Committee would however, like to stress that the increase in tariff should be commensurate with improvement in the service provided to the telephone users and that in devising the tariff structure, it must be borne in mind that the net work of telephones is expended and telephone facility brought within the reach of maximum number of customers. Government should also see that as and when tariff is revised it should be simple enough to be understood by the public and that it is administered correctly and equitably by the authorities concerned.
44	7.19	The Committee are constrained to observe that by and large there is a general feeling among the Public that in-correct or inflated bills are frequently sent to subscribers who have to enter into protracted correspondence with the authorities concerned to obtain refunds. This is high-lighted from the fact that during the Calendar years 1970, 1971, 1972 (upto 1-3-72), complaints received by the Telephone Department for over-billing and disputed meter readings were to the tune of 1,86,0422,21,613 and 59,846. In terms of percentage, the Committee observe that there is increasing trend in the number of complaints received with reference to the number of installed telephones. It increased from 5.83% in 1970 to 6.32% in 1971.

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45	7.20	The Committee, while noting that some measures have been taken to reduce overbilling, would like to emphasise that the whole system of billing requires thorough streamlining. They would, therefore, urge that Government should review the whole working of Billing procedure at a high level and take suitable remedial measures in respect of human and material factors that contribute to overbilling.
45	7.21	The Committee also note that due to non-delivery or late delivery of bills, subscribers are unable to pay the bills in time with the result that their telephones are disconnected. The Committee would, therefore, like to suggest that Government may examine whether it would not be advisable to send bills to subscribers by registered post or in the alternative, if it is considered uneconomical, bills may atleast be despatched under certificate of posting on due dates.
47	7.22	It has been suggested to the Committee that similar meter as is installed in the Exchanges be installed at the subscribers premises for purposes of cross-check. The Committee note that Government are now developing a sophisticated meter, which is being tried in Delhi and can be installed at subscribers premises, after it is fully developed, examined and checked. The Committee hope that Government would be able to develop this meter without further delay and provide to subscribers who want such meters at their own cost at their residences.
48	7.23	The Committee regret to note that Government have not been able to introduce photographic system of taking meter readings at four places so far even though it was intended to do so as early as in 1969 due to delay in the procurement of equipment ^s . The Committee would like to suggest that this matter should be taken with the Ministry of Industrial Development so that expeditious steps are taken to procure equipments and instal them. They

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would like to suggest that in case this experiment proves successful, this system may be introduced in a phased manner in other places.

- 49 7.24 The Committee note that one of the main reasons about excess metering complaints is that some subscribers were in collusion with departmental staff or others. The Committee feel that Government should exercise greater vigilance and take a very serious view of the corrupt practices indulged in by their staff and others *i.e.* diversion of one subscriber's telephone lines to another subscriber's telephone for making S.T.D. and other calls, and issue of wrong bills to subscribers under the cover of clerical errors etc.
- 50 7.25 The Committee feel that unless strong action is taken to detect such cases and deterrent punishment is given to the guilty persons, this evil cannot be effectively dealt with.
- 51 7.26 The Committee further note that Government have introduced computerizing of billing system in Bombay, where readings are taken manually and they are fed to computer and this helps in eliminating wrong calculations in billing etc. The Committee would like to suggest that computerisation may be introduced in other cities also, starting with the Metropolitan Cities in accordance with a time-bound programme to be chalked out for this purpose.
- 52 7.33 The Committee, while appreciating the fact that in a system where telephones are provided to subscribers on credit basis and where the post billing system is in vogue some arrears are inevitable, cannot, but feel concerned to note that arrears of telephone revenue as on 31-5-72 were to the tune of Rs. 6.05 crores out of which 1.94 crores were outstanding against Government Departments (both Central and States). The Committee while observing that as the result of

special derives launched during the last four years, percentage of recovery has been of the order of 20%, are of the opinion that much more concerted efforts have to be made on the part of the Department to bring down the arrears to the minimum possible. It is indeed a matter of great concern that the Government Departments are not alive to their responsibilities to clear the dues. The Committee feel that a decision should be taken at a high level and suitable directives be issued to clear off the arrears. In the case of State Governments the matter should be taken at the highest level so that pointed attention is drawn to the settlement of the problem.

- 53 7.34 The Committee are concerned to note that out of Rs. 6.05 crores arrears of the telephones revenue, the arrears due from private subscribers are as much as Rs. 4.11 crores. The Committee cannot but come to the conclusion that efforts made by Government to realise arrears from private subscribers have either been half-hearted or proved ineffective. The Committee would, therefore, like Government to go into the matter thoroughly and find effective ways and means to liquidate arrears due from private subscribers. In this regard the Committee would like to suggest that Government should first undertake analysis to identify big cases of defaults by subscribers say of over five thousand rupees and concentrate their efforts in realising arrears from such subscribers. They should also make concentrated efforts in realising arrears of past years so that arrears are recovered in time and before the party/persons concerned disappears. The Committee are of the opinion that there is no reason why arrears cannot be realised if Government effectively implement the policy decision taken by them for realisation of telephone arrears.

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54	7·35	The Committee would like to suggest that Government may examine whether it would be feasible to introduce "Security Deposit Scheme" for private subscribers which may to some extent prove helpful in realising recovery of telephone arrears.
55	8·8	The Committee note that there are five Regional Tele-communication Centres to impart training to Engineering Supervisors and at present their total capacity is 1560. The Committee further note that the expansion plans have been taken in hand to increase the number of centres and the training capacity upto 2750 to meet the requirements of the Fourth Five Year Plan.
56	8·9	It was also proposed to establish further additional Regional Training Centres during the Fifth Five Year Plan to meet the projected requirements of 4500 trained Engineering Supervisors.
57	8·10	The Government also propose to establish an advanced level Tele-communication Training Centre with the aid of United Nations Development Programme to keep abreast with the latest development in the field of tele-communication technology.
58	8·11	The Committee stress that concerted measures should be taken to develop these projected training centres according to a time bound programme. The Committee would like to suggest that Government should also undertake periodic review of the progress made in the establishment of these Centres and augmentation of their training capacity so that suitable remedial steps may be taken to overcome any shortcomings that may come to their notice as a result of such review in the training imparted and in the expeditious establishment of these centres.

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59	8·12	As admittedly, the services provided by the operational staff are not what these should be, the Committee feel that there is an immediate and urgent need for intensification of the training programme in the training centres to keep pace with the latest developments in the field of telecommunications. The Committee suggest that Government should review the syllabi of training and modify them as necessary to serve better the present day requirements and to underscore the idea of service.	
60	8·13	The Committee would further like to suggest that Government should examine the desirability of giving suitable incentives in the form of cash awards, advance increments making suitable entries in the Service Books, etc., of trainees who show outstanding performance in the training programme.	
61	8·14	The Committee would further like to point out that in order to keep the staff constantly in touch with the latest developments in technology and sophisticated equipments, technical staff in the department should be given a refresher course after a specified years of service. The Committee note that the refresher course in about 25 subjects is already being conducted and about 4 thousand persons were imparted refresher training in 1971-72. The Committee would like this programme to be further intensified so as to cover all technical employees under this programme in a specified number of years.	
62	8·29	The Committee note that :— (i) the Telecommunication Research Centre has been established in 1956 and the work in the Centre is devoted to design modern equipment for indigenous manufacture; (ii) the Telecommunication Research Centre has designed a number of instruments which have reached the stage of production and it is working on an	

Electronic Exchange which was expected to be ready for laboratory trial early this year, for field trial by 1975 and for complete manufacture by the end of 1980 and this Exchange has great potential for providing new sophisticated services which are not possible at present with the existing automatic exchanges;

- (iii) most of the designs have been indigenously developed and have resulted in considerable saving of foreign exchange which is expected to show rising trend in the years to come. However certain equipments have to be imported because the total production capacity of Indian Telephone Industries is not enough;
- (iv) as already admitted by Government, very little amount is being spent on research know-how, it is probably half per cent or even less of the total sales in the I.T.I. whereas it is as much as 10 to 12 per cent of sales in foreign countries.

In this connection the Committee would like to observe that developments in the field of telecommunication technology have, in the recent past, been so rapid and extensive all over the World that in order to catch up with the fast developing technology and to keep abreast of the progress taking place in the more advanced countries considerable expansion in research and development field is required in the country to fully exploit the latest techniques and to obtain the maximum economies in the operation of the telecommunication net work as well as in providing new services and in improving the existing telecommunication services. The Committee, therefore, feel that an alround effort has to be made to intensify and expand the research and development in the telecommunication activities.

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63	8-30	<p>The Committee would like to emphasise that the funds allocated for research and development programme in telecommunications services should be performance oriented, to enable the Government to evaluate the success or otherwise of the research and development programmes carried out and the resultant benefits derived therefrom.</p> <p>The Committee need hardly stress the utility of time bound research programmes for finding correct solutions to the pressing problems facing the telephone services in the country.</p>
64	8-31	<p>The Committee would also like to recommend that concentrated efforts should be made for the removal of shortcomings noticed in Cross bar exchanges and improve its technology and design to suit Indian conditions and that the Telecommunication Research Centre should—</p> <ul style="list-style-type: none"> <li data-bbox="330 912 974 972">(i) devise suitable exchanges to suit the requirements of rural areas ; <li data-bbox="330 994 974 1092">(ii) work on the improvement of telephone metering devices to obviate complaints of excess metering etc. ; <li data-bbox="330 1114 974 1212">(iii) work on projects through which telephone services become cheaper and thus reach every corner of the country ; <li data-bbox="330 1234 974 1356">(iv) work on the improvements of designs of Public Call Offices to ensure trouble free service and also improve telecommunication services to hilly and strategic areas.
65	8-32	<p>The Committee hope that the Menon-Committee appointed <i>inter-alia</i> to review the research and development work will submit its report at an early date and Government will take suitable steps to implement their recommendations as early as possible.</p>

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- 66 8·33 The Committee further hope that the target fixed for the laboratory and field trial and for manufacture of the Electronic Exchange will be adhered to as with the commissioning of such exchanges, it will be possible, as claimed by Government, to provide sophisticated services which are not possible at present with the existing automatic exchanges. They would also recommend that periodic review should be undertaken to assess the progress made in this regard and suitable remedial steps taken to overcome any shortcomings noticed with a view to see that the targetted dates are adhered to.
- 67 8·34 Since the Indian Telephone Industries are the principal manufacturers of Telecommunication equipment in the country and most of the designs developed in the Telecommunication Research Centre are manufactured there, the Committee are of the view that a very close liaison is necessary between the two so that the researches done by the Research Centre are quickly translated for practical use. It has also to be ensured that there is no duplication of effort between the two in the matter of research in the field of telecommunications.
- 68 8·35 The Committee would also urge that the proved designs which have been handed over by the Telecommunication Research Centre to the I.T.I. and the P. & T. Workshops are expeditiously produced for use on the P. & T. network.
- 69 8·36 The Committee would also like to stress that Government should ensure that utmost coordination and close liaison is maintained between the Telecommunication Research Centre and the Institutes under Council of Scientific and Industrial Research, National Physical Laboratories, Central Electronic Engineering Research Institute and University Centres of research and other organisations in the field to avoid duplication and also to take suitable advantage of researches made by them.
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The Committee note that *inter-alia* the functions of the Telephone Advisory Committee are to bring the public and the P. & T. Department into close relationship and give public the confidence that their grievances are being properly represented and attended to.

- The Committee have no doubt that in the discharge of their functions particularly in respect of out-of-turn allotments, the T.A.Cs. are fully alive to their responsibilities for taking decisions on fair and equitable basis and on the merit of each case to the satisfaction of general public. However, in the absence of rules giving clear guidance regarding the considerations which may be taken into account by the T.A.C. in exercising their discretion in sanctioning out-of-turn connections, there is very likelihood of allegations of favouritism or nepotism being levelled against them. The Committee, therefore, recommend that Government should clearly spell out the guiding principles that should be taken into account by the T.A.C. in exercising their discretion in sanctioning out-of-turn allotments keeping in view the recommendations made by the Telephone Committee, 1966 in this regard.

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The Committee had been informed in pursuance of their recommendation contained in their 112th Report (Second Lok Sabha)—Part III on Telecommunications that instructions had been issued to Heads of Telephone Districts and Circles to hold the meetings of the T.A.C. atleast once in every quarter, but they have now been given to understand that the T.A.C. are expected to meet atleast once in six months. The Committee are unable to reconcile these statements. The Committee would like to stress that the meeting of the T.A.C. should be held frequently atleast once in every quarter as they are an important link between public and the Governmental machinery. They would also like to suggest that recommendations of the Telephone Committee 1966 in respect of holding of meetings, drawing up of agenda etc. should be implemented in actual practice.

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- 72 9.12 The Committee have no doubt that while nominating members on the Telephone Advisory Committees, Government ensure that all interests are duly represented thereon. The Committee, however, would suggest that the composition and character of T.A.C. may be reviewed periodically to ensure that in the fast expanding economy and the consequent rapid rate of growth of demand of telephones, all the interests are duly represented in the Committee and that no interests go by default or vested interests are created by repeated nominations.
- 73 10.8 The Committee are unhappy to note that there has been inordinate delay in the publication of telephone directories of majority of telephone circles and districts and there are instances when the directories have not been published according to prescribed periodicity. In certain cases there has been a delay of about even one year and in the case of Delhi Telephone Directory, the delay is almost to the extent of two years. The Committee need hardly stress the necessity of timely publication of Directories as their irregular and delayed publications defeat the very purpose for which they are issued. The introduction of National Subscriber Trunk Dialling and its growth makes it all the more imperative to make available upto-date information to all subscribers by timely and regular publication of Directories.
- 74 10.9 The Committee are given to understand that the most important factor for the delay or non-publishing the telephone directories according to the prescribed periodicity is non-availability of printing paper in the country. The Committee note that certain remedial steps have been taken by Government to overcome the shortage of paper and that they are in continuous correspondence with the Director General Supplies and Disposal and the Chief Controller of Printing and Stationery as
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- regards supply of paper. The Committee further note that D.G.S. & D. has decided to earmark separate quota for the printing paper required for Telephone Directories and make allotment on paper mills directly and that Department is also considering independent procurement of printing paper directly from mills without routing their requirements through D.G.S. & D. and Chief Controller of Printing and Stationery and the matter is under discussion with concerned Ministries.
- 75 10.10 The Committee would suggest that apart from the measures already taken to overcome the shortage of printing paper for Telephone Directories, the problems connected with the non-availability of paper should be taken up at the highest level with the D.G.S. & D. and the Chief Controller of Printing and Stationery and a firm arrangement arrived at for timely availability of printing paper of the requisite quality and quantity.
- 75 10.11 The Committee are not aware whether any decision has been taken by Government on the recommendation of the Telephone Directory Standardisation Committee for the adoption of the mechanised system for compilation of the Directories atleast in the four major cities of Calcutta, Bombay, Delhi and Madras. The Committee would like to know in due course the decision taken in the matter as they feel that if mechanised system of compilation of Directories is adopted, it will go a long way to solve the problem of delay involved in printing the Directories and to that extent lead to expeditious Publication of Directories.
- 77 10.12 The Committee understand that in some of the Telephone Directories, among general and other information given therein, information regarding Trunk Call rates is also given. The Committee would like to suggest that Government may consider the desirability of giving this information in all the Telephone Directories.
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APPENDIX VI*(Vide-Introduction)**Analysis of Recommendations' Conclusions contained in the Report.***I. CLASSIFICATION OF RECOMMENDATIONS :****A. Recommendations for improving the Organisation and Working :—**

S. Nos. 1, 3, 4, 7, 10, 11, 13, 14, 16, 23, 24, 25, 26, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 66, 67, 69, 70, 71, 72, 73, 76, 77.

B. Miscellaneous Recommendations :—

S. Nos. 2, 5, 6, 8, 9, 12, 15, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 39, 47, 48, 65, 68, 74, 75.