

Consultation Paper No. 98/6

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TELECOM REGULATORY AUTHORITY OF IND

LICENCE FEE FOR RADIO PAGING SERVICE PROVIDERS IN CITIES

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CONSULTATION PAPER ON
VIABILITY ASSESSMENT FOR
LICENCE FEE DETERMINATION

21st December 1998

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INTRODUCTION

Consequential to the new economic policy of the Government, which inter-alia envisaged liberalisation of the telecommunication service sector for achieving international standards in terms of quality and pricing, Radio Paging Service was one of the Value Added Services opened up to private investment in mid-1992. Starting with 27 cities in the first round, tenders for 19 Telecom Circles were invited in the second round excluding the 27 cities already covered. After launching of the first paging service in March 1995 in Chandigarh, the paging industry recorded a high subscriber growth during the first three years but the overall performance remained sluggish for various reasons. Telecom experts still project vast potential for the Indian pager market comparable with large overseas markets like China and US. New market segments with provision of various value-added services are also being vigorously pursued by the large operators.

2. Keeping in view the actual performance of the Radio Paging Service Providers during the first three years of operation, certain recommendations on restructuring of tariffs for the paging service industry were proposed by the TRAI in the second Consultation Paper on Telecom Pricing (Paper No. 98/3) issued on September 9, 1998. In the meantime, the Department of Telecommunications has sought recommendations of the TRAI on the issue of the quantum and structure of license fee for Radio Paging Service Providers in the cities for duration of the balance license period, on completion of their first three years of operation. In that context, this Consultation Paper focuses on the viability assessment of the radio paging service providers including other options of tariff structure, which would not only facilitate the turn around of languishing service providers but also enable them to generate adequate cash flows for payment of reasonable amount of license fee on a regular basis. The Paper analyses the current financial status of the paging service providers as well as other concerns of the industry. The study makes an assessment of the financial viability of the radio paging service providers under different scenarios of tariff options along with revenue sharing arrangement with the PSTN operator for the outgoing calls from the PSTN to the paging network. The sensitivity analysis has also been attempted to quantify the likely impact of license fee burden under different scenarios of revenue sharing for license fee payment.

3. We look forward to a comprehensive debate on the issues raised in this paper with a view to helping the TRAI firm up its recommendations for the structure and quantum of license fee for the radio paging service providers in the cities for duration of the balance license period from fourth year onwards. To facilitate the accomplishment of this task in a time bound framework, written comments should be furnished not later than January 11, 1999 to the Secretary, Telecom Regulatory Authority of India, 16th Floor, Jawahar Vyapar Bhawan, 1-Tolstoy Marg, New Delhi 110 001. For any clarification in the matter Mr. Rakesh Kapur, Joint Secretary (Commercial) or Mr. Sanjay Kumar, Dy. Secretary (Commercial) may be contacted on telephone numbers 3316782 and 3356523, respectively. They can also be contacted on fax No. 91-11-3738708 and e-mail. trai@del2.vsnl.net.in

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(Justice S.S. SODHI)

Chairperson

Dated: December 21, 1998

Chapter I

BACKGROUND

1. Radio Paging service providers commenced their operations in India in 1995. At present, paging services are available in 27 cities and partially in the 12 States (list enclosed at Annex I). Except for Madurai and Coimbatore, all other cities where paging services are available have three or four operators. Allocation of the territory for paging operation was made on the basis of open tenders, classifying the Cities and Circles into three categories - A, B & C - on the basis of their population and extent of economic activities (existing or potential thereof).

LICENCING OF PAGING OPERATORS

2. Radio Paging (as well as Cellular Mobile Telephone) services were licensed on the basis of open tenders, whereas licenses for all other Value Added Services were granted on fixed license fee subject to fulfillment of certain eligibility criteria. There were two regimes of the license fee for paging service operators- one for the Cities and the other for the Circles. For the cities, the license fee for the first three years was to be paid in three installments with a provision for review of license fee for the fourth year onwards. The license fee for the Circles to be paid over a period of ten years was fixed at the initial stage itself. The details thereof are tabulated in Annex-I.

3. While floating open tenders, bids were invited by the DOT in 1992 from Indian companies for a ten-year

license period for each territory. No paging service operator was allowed to bid for more than 10 cities. There was, however, no limit on the bidding for number of Circles. In the bidding operation, the highest bid (H-1) was automatically accepted and all the other bidders were asked to match the H-1 bid for taking up the service. This helped in introducing multiple paging operators in each city and also maximized the revenue for the Government from the license fee. Though the paging operators agreed to make payment of the license fee at that time, based on the H-1 bid, the high license fee quantum has not been found sustainable after three years of operations for the majority of the paging operators.

4. A survey of license fee in other countries reveals that most of the countries in the Asia-Pacific region have either no license fee or if there is one, it is a small percentage of the revenue. For example, in Thailand the license fee for paging is at present around 3 per cent of the revenue, which will be reduced to 1 per cent of the revenue by the year 2000. In Singapore also, similar arrangement for the license fee has been made. South Korea does not have any license fee as such, but the operators have to pay a cess for the R & D at the rate of 6 per cent of the revenue. In China there is no license fee. But the operator has to pay one-time wireless charge, which is close to \$ 12,000 per channel. In Taiwan the operators have to pay some charges for the wireless and 1 per cent of the revenue towards license fee. In United Kingdom also, there is only one time charge of British Pounds 25,000 from the operator for the license fee. A tabulation of the comparative international scenario is given at Annex II. **Given the situation prevailing in other countries regarding license fee arrangement, the paging industry strongly feels that the license fee in India is very high and unreasonable from the viewpoint of viability and for sustainable growth of the industry.**

Chapter II

CURRENT STATUS OF THE PAGING OPERATORS

TARIFF STRUCTURE

1. Two variants of paging services¹ are available in India at present - alphanumeric and numeric.

Alphanumeric paging service

is accessed through an operator only. Numeric paging service allows for auto paging in addition to operator assisted paging.

The existing tariff for access to the service is a fixed monthly rental - Rs. 250 for alphanumeric and Rs. 150 for numeric, irrespective of the extent of usage. At present there is no revenue sharing arrangement for the calls made for access to the service.

2. It has been noticed that some of the Paging Operators are currently charging an additional levy of upto Rs.50 per month per subscriber for the operator assisted numeric paging service, treating it as a Value-added service against the auto numeric service. Numeric paging service constitutes only about 15 percent of the total paging subscriber base, of which about 70 percent subscribers use operator-assisted numeric service. Since it constitutes a small percentage of the total paging subscriber base, no separate dispensation has been proposed for this category in the ongoing tariff re-structuring exercise underway in TRAI.

FINANCIAL STATUS

3. In order to have a closer scrutiny on viability assessment of paging service industry, sample data of 10 paging operators, exclusive to city operations, has been analyzed in this Paper. These operators cover almost 85 to 90 percent of the total paging subscriber base in India, thereby constituting a fairly representative sample.

4. This study reveals (Annex III) that the capacity utilization of the existing network (based on the network capacity and the number of subscribers) of most of these paging operators has been low (between 6 to 30 percent). At the time of bidding, these operators had projected the capacity utilization for the first three years of the operation in the range of 35 per cent to 80 per cent. Operator-D has reported the highest network capacity utilization with 68 per cent in 1996-97 and 56 per cent in 1997-98. Most of the operators have reported net loss during the first three years. The loss reported even by the Operator-D was about Rs. 15 Crore in 1997-98. **Other salient features of the analysis² on financial results of these ten paging operators are as follows:**

- Average Capex per average number of subscriber during 1996-98 was around Rs. 3385³.
- Average network revenue per subscriber per annum during 1996-98 has been reported around Rs. 2159.
- Average license fee as a percentage of the network revenue during 1996-98 was 47 per cent.

- Operating cost of these operators has been very high. Ratio of operating cost to the network revenue in 1997-98 had median of around 163 per cent; the situation in 1996-97 being worse.
- The largest component of the operating expenses, excluding the license fee, has been salary and wages, and the expenses on the personnel overheads, with a median between 64 to 65 per cent in 1997-98
- Advertisement and publicity expenses accounted for roughly 15 per cent of the network revenue.
- Debt equity ratio of the ten operators⁴ as on 31.3.1997 had a wide variation, ranging from 1:10 in the case of Operator X to 2.02:1 in the case of Operator A⁵. The license agreement stipulates debt-equity ratio of 2:1.
- Bad debts were reported in the range of 3 to 15 per cent of the network revenue during 1997-98.

REASONS FOR HIGH LOSSES

5. Some of the factors impinging on the viability of this industry have been reported, from time to time, as under:

- a. Evolving high competitive pressures leading to operators offering significant subsidies on pagers in order to expand the subscriber base.
- b. High dependence on fixed line penetration and growth.
- c. Fixed monthly rentals irrespective of usage.
- d. High license fees.
- e. Simultaneous entry of Cellular Mobile Telephone Service (CMTS).
- f. Delayed commencement of operations due to delays in bandwidth availability.
- g. Low awareness about the paging.

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IPSA's VIEW POINT

6. Indian Paging Service Association (IPSA) has also been raising issues from time to time at various fora impinging upon the viability of the Paging service providers. IPSA's submissions had been as under:

- a) The paging operators feel that the rental caps⁶ are low in India. The charges per month for numeric service around the world range between US\$ 8 (Rs.340) to US\$ 27 (Rs.1100) and that for Alphanumeric service from US\$ 13 (Rs.540) to US\$ 35 (Rs.1500). The average for Asia-Pacific region works out to US\$ 13 (Rs.450) per month for Numeric and US\$ 20 (Rs.700) per month for Alphanumeric service. (Refer Annex II).
- b) With about 80% import duty, the cost of setting up the infrastructure for providing Radio Paging Service in India had been one of the highest in the world⁷.
- c) Higher cost of pagers due to high import duty on components of the pagers, and high excise duty on manufacture of pagers.
- d) Operational cost break up includes an element of 20-25% towards direct labor. Other important cost elements are real-estate costs and rentals, line costs for networking, costs of putting up the networks, and interest costs.
- e) High WPC charge in India has also contributed towards higher operational cost.

f) As per last 3 years experience, customer is least resistant to increase in monthly tariff, but more resistant to increase in entry prices, hardware price, or collection of security deposit.

g) Interconnection charge be paid by the PSTN operators to the paging operators because the paging industry generates over

1.5 million incoming paging calls every day at the current level of subscribers. As a result of that the PSTN operators earn over Rs. 500 million every year for the calls, which on an average last not more than 40 seconds.

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CONCERN OVER FINANCIAL STATUS

7. Financial Institutions normally assume a gestation period of 2 to 3 years for paging service industry. Even when

the paging operators are approaching the end of their gestation period, continued losses much beyond their projections have become a matter of concern. High license fee is one of the major contributing factors in this regard. Notwithstanding the argument that the first three years were the initial phase of operation for the paging industry, and some more time needs to be given to the operators to stabilize, financial trends of the initial period along with revised future projections would certainly provide a sound basis for making mid-stream correction in the policy framework for tariff/ license fee for the paging industry.

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PROPOSALS IN REGARD TO TARIFF FOR PAGING SERVICE AS PER THE CONSULTATION PAPER ON TELECOM PRICING

A. ATTEMPT AT TARIFF RESTRUCTURING

8. TRAI's recent Consultation Paper⁸ on Telecom Pricing is a larger exercise aimed at the complex task of restructuring the tariffs of different telecom services, by adopting some clearly defined and transparent principles that focus on the cost-oriented

or cost-based tariffs. During this exercise, financial analysis of seven paging operators⁹ (constituting a subscriber base of about 70% of the total paging subscriber base) was made to calculate median figures for the Capital expenditure (Capex) and the Operating expenses (Opex). Thirty percent of the median Capex was adopted as the normative Annual Recurring Expenditure (ARE) towards meeting the average capital related expenses. Its components included depreciation (@10%), interest (@10%) and profit (@10%). Median Opex was meant to cover all the allowable operational expenses for an efficient operation. Certain expenses (such as bad debts) were excluded from the Opex giving no allowance for the same. License fee projections on adhoc basis as reported by the operators (pending licensor's decision on the license fee quantum for the fourth year onwards) were also included in the Opex. In terms of percentage of network revenue, this license fee worked out to 17% for 1999-00,

and 13.1% for 2000-01, which averages to 15% (Refer Annex-VII). Both these cost elements (Capex and

Opex) were clubbed to arrive at the cost-based tariffs in terms of monthly rentals for the paging service. In view of the proposal to introduce revenue sharing arrangement (RSA) with the PSTN operators in respect of incoming calls to the Paging Control Terminal (PCT), monthly rental estimates so arrived at on cost basis were adjusted downwards to include the impact of additional revenue stream due to the RSA with the PSTN.

9. The tariff structure as per the Consultation Paper proposes that the peak call charge for locals calls from the PSTN to PCT be charged at Rs. 1.50, of which 20 paise be passed on to the paging operator and upto Rs. 1.30 retained by the PSTN operator¹⁰. The tariff proposals also envisage increase in the ceiling for the rentals. The ceiling for alphanumeric pager is to be increased to Rs. 300 per month and that for numeric pager to Rs. 175 per month. New tariff proposal maintains the ratio of rentals between alphanumeric and numeric, the existing ratio being 5:3 (= 1.67) and the proposed ratio being 12:7 (=1.7). The change in rental is not expected to significantly alter the demand pattern of the paging service, which is at present favorable to alphanumeric - 85 per cent of the pagers being alphanumeric. The price ratio in other countries of Asia varies from 1.33 to 2.5¹¹.

10. To sum up, changes suggested in the tariff structure for the Paging industry as per the Consultation Paper on Telecom Pricing were as under:

(In Rs.)

	PSTN call charge	PSTN share	Paging share	Rental per month	
				Alphanumeric	<i>Numeric</i>
Proposed ¹²	1.50	1.30	0.20	300	175
Existing	No revenue sharing arrangement			250	150

11. The proposed rentals (with revenue sharing arrangement) were quantified on the assumption that the network would stabilize by the year 2000-01. The proposed rentals took into account the license fee outgo as projected by the paging operators. Median value of the rentals along with the revenue sharing arrangement was expected to break-even the paging operations by the year 2000-01. Being the median value, some operators would have made profits, while others would be required to become more efficient for improving their viability.

B. REDUCTION IN CHARGES FOR LEASED LINE AND INTER-EXCHANGE JUNCTIONS

12. The Consultation Paper on Telecom Pricing has also proposed substantial reduction in charges for leased lines and inter-exchange junctions. Since the paging operators in the cities are not using leased lines, the reduction does not benefit city-paging operators. For the circles also the operators use PSTN lines at present and not the leased lines, there is no effect of the proposed reduction on the operating cost of the operators as mentioned by IPSA.

RELEVANCE OF THE PRESENT EXERCISE

13. Financial indicators analyzed in Para 4 above relate to the first three years of operation of the paging industry as the paging service providers largely commenced their operations in 1995. There is no doubt that increase in the subscriber base with higher PSTN penetration may enhance long term viability of the paging industry in the later years. Escalation in monthly rentals of the cellular mobile telephone service as proposed in the Consultation paper on Telecom Pricing may also help in stimulating the demand for paging subscribers. The trends in wireless segment in places like Hong Kong, however, reflect a gradual decline in the demand for pagers due to the increasing popularity of the cellular phones. **Regardless, the fact remains that the industry is making substantial losses and is unable to pay even the committed license fee. Revised projections, taking into account even the restructured tariffs, do not seem to offer succor for turnaround in the immediate future. While factors impinging on the long-term viability are themselves dependent on various other parameters, a medium-term solution to the viability of the paging industry needs to be addressed at the earliest for survival of the industry. Since license fee for cities had been fixed only for the first 3 years of the license period, it offers an excellent opportunity to alleviate hardship to the operators by making an in-depth assessment of their financial viability before quantifying the reasonable license fee payable from 4th year onwards.** This exercise would include exploring alternate tariff / license fee structures along with any other measures, which could make this important Value Added Service viable and spur its growth. **DOT has also sought recommendations of the TRAI on the fixing of license fee for the period after three years of operation in the cities¹³.**

IMPACT OF PROPOSED TARIFFS AS PER THE CONSULTATION PAPER ON TELECOM PRICING

14. The tariffs proposed in the Consultation Paper on Telecom Pricing (refer Para 10 above) have been superimposed on the sample size of 10 operators to analyze their revised profitability projections. The revised tariffs do project increased cash flows with improved viability of the service providers to a certain extent. However, additional revenue from the revised tariffs may not have significant impact on improving the financial viability of most of the operators. Salient characteristics emerging from this analysis are as follows:

- License fee as percentage of the network revenue for the period 1996-98 was around 47%. Actual license fee payment by the ten operators during 1997-98 at Rs. 53.19 Crore worked out to 44% of the network revenue. If it were argued

that this magnitude of license fee is to be maintained in future (to avoid loss to the exchequer through license revenue fee), the quantum of license fee as a percentage of projected network-revenues (refer Annex –V.1) would be 23.6%, 17.6%, and 14.1% in 1998-99, 1999-00 and 2000-01, respectively. Average license fee adopted in the Consultation Paper on Telecom Pricing, if calculated as percentage of the revenue, was 15%. (Refer Annex- VII).

- Cash flows of these operators may continue to be precarious despite adding back the license fee as assumed by the operators. Most of them continue to show negative cash balance during 1998-2000. Despite high growth rates of 34 percent and 28 percent in the subscriber base projected by these operators for the two-year period, the situation may become comfortable only for some operators by the year 2000-01.
- Tabulation of the net profit /loss on these assumptions is given below:

(Rs. Crore)

Service Provider	Net Profit/Loss (without license fee)					
	1998-99		1999-00		2000-01	
	As reported by the operator	Based on the tariff proposal	As reported by the operator	Based on the tariff proposal	As reported by the operator	Based on the tariff proposal ¹⁴
A	-23.64	-14.09	-12.22	-1.68	-4.22	9.21
B	-2.77	-1.55	-3.94	-2.55	-4.1	-2.48
C	-6.09	-1.67	-1.6	4.51	2.57	10.47
D	-5.07	2.01	6.08	15.14	7.72	25.14
E	-6.08	-4.03	-4.88	-2.27	-4.09	-0.88
F	-4.88	-2.93	-3.99	-1.53	-3.72	-0.68
G	-5.09	-3.20	-4.28	-1.93	-3.75	-0.88
H	-7.9	-3.50	-9.7	-4.79	-8.1	-1.85
I	-34.76	-19.03	-21.74	-2.80	-13.53	8.69
J	-14.31	-8.58	-10.02	-2.10	-5.79	4.52

- Rentals proposed as per the Consultation Paper on Telecom Pricing with revenue sharing arrangement (@ 20 paise per incoming call) may, therefore, make only marginal improvement in the viability position

of the industry, even if license fee component is excluded.

- In case the license fee is levied @ 5% of network revenue, five operators among the sample study may end up with surplus from the year 2000-01 onwards, but the rest would be reporting losses in the range of Rs.1 to 3 Crore. Profitability and cash flow of the paging industry would, of course, be eroded if license fee at a higher percentage of network revenue were imposed. The sensitivity analysis with different license fee figures is contained in Annex V.

EFFECT OF IMPROVEMENT IN OPERATIONAL PERFORMANCE

15. Keeping aside the component of license fee for a separate treatment, high operating costs reported by the Paging Service providers also offer scope for improvement in the operational performance and productivity for enhanced financial viability. A tabulation of the operating ratio, salary/wages and personnel overheads, advertisement and publicity expenses is depicted in Annex III. It may be seen that most of the operators have reported very high operating ratio in the first three years of their operation (1995-98). All operators have projected improvement in their operating ratio. **With normative operating ratio assumed at 60 percent of the network revenue¹⁵, profit and loss accounts of the operators reflect that even without any license fee burden, six out of the ten paging service providers do not show profits in the year 1998-99** (refer Annex V, Table 2). The situation, however, improves in the year 1999-00 with only four operators in losses, and by the year 2000-01 only two operators may continue to report losses. If, however, we adopt the same license fee (15%, in terms of network revenue¹⁶) as taken in the Consultation Paper on the Telecom Pricing, it is observed that on an operating ratio of 60 per cent, no operator may show profit during the years 1998-99, but two operators show profit in 1999-00, and three operators may show profit by the year 2000-01.

16. If, however, it is argued that the operating ratio for an efficient industry should be, normatively speaking, around 40 per cent, then the projections reflect improved profitability from 1998-99 onwards (refer Annex –V, Table 3). In addition, with the license fee at the same level as in the Consultation Paper (in terms of percentage of the network revenue), the industry may become viable in aggregate. It needs to be deliberated whether the operating ratio at 40 percent is achievable. Most of the operators of the sample have are not projected to achieve that even in the year 2000-01.

WPC CHARGES

17. WPC charges as a percentage of total operating cost have been reported in the range of 2 to 3 %. Although it constitutes a small percentage of the total operating cost, a rationalization of this charge could also contribute towards improving the viability.

18. It is true that the benchmarks would improve with an increase in subscriber base and network utilization. **However, considering that the service providers may not become viable in the immediate future, it is imperative that alternate options are explored to assess viability of the paging industry on achievable**

**operating ratios and other parameters,
so as to arrive at a sustainable basis for the license fee payment.**

Chapter III
ALTERNATE PROPOSALS

1. Revenue sharing arrangement offers advantage of increasing license fee with the increase in subscriber base, apart from providing an element of certainty in revenue collection for the licensor. However, given the detailed position in previous Chapter, it is felt that some alternate tariff options on revenue sharing arrangement should also be explored. These proposals (mentioned in the Para below) may not only help in making the paging operators viable, but also generate adequate cash flow to facilitate payment of license fee.

2. Following alternate proposals with revenue sharing arrangement on varying PSTN charges have been analyzed: -

(Rs.)

Proposal	Local call charge from PSTN to pager	Share of the call charge to		Rental per month		Ratio of Percentage Revenue contribution from rentals and call charges
		PSTN	Pager	Alphanumeric	Numeric	
I	1.50	0.60	0.90	300	175	83.8:16.2
II	2.00	1.30	0.70	300	175	87:13
III	1.75	1.00	0.75	300	175	86.2:13.8

IV	-	-	-	325	200	-
v ¹⁷	2.60	1.30	1.30	300	175	78.3:21.7

3. The share¹⁸ of revenue from the rentals in the gross revenue of the operator varies from 78 percent to 87 per cent in the above alternatives. The revenue from the call charges would, therefore, be between 22 percent to 13 percent.

Marginal increase of revenue from the rentals is more than that from the call charges. However, increase in rentals beyond a certain limit may act as a barrier to increasing the subscriber base. The alternative of revenue sharing through call charges offers better flexibility with the advantage of improving the viability progressively.

4. It is assumed here that reasonable increase in the PSTN call charge for paging, as proposed in the above alternatives, would not reduce the number of calls made to the paging subscribers. This is also based on the premise that the paging is largely used in the closed user groups and by the business houses, utility and service industry like courier service, hospitals etc. Marginal increase in the call charge may not particularly effect their calling pattern for paging the subscriber, given the benefit accruing otherwise from the paging facility.

5. In the above alternatives, the share of paging operator out of the PSTN call charge is proposed higher than the one proposed in the Consultation Paper on Telecom Pricing. In proposal I, the share is 60 per cent of the PSTN call charge. This premises on the fact that a call to the PCT network on an average is close to 40 seconds duration, including the switching time. Roughly more than four calls may be possible to the PCT network from PSTN within the standard three minutes pulse. As worked out in the TRAI's Consultation Paper on Telecom Pricing (refer Annex II, Para 1.2 of that Paper), the average estimated cost per minute of local call ranges from Rs. 0.35 per minute to Rs. 0.50 per minute. An arrangement with higher revenue share for the paging operator would, therefore, not be irrational.

6. In case revenue sharing arrangement with the PSTN operator is not feasible due to technical constraints, option of higher monthly rentals (Proposal IV above) can be considered at the rate of Rs.325 for alpha numeric and Rs.200 for numeric pagers, in line with the Consultation Paper on Telecom Pricing (Annex-VII Para-15 of the Consultation Paper on Telecom Pricing).

7. A summary of the projected profit and loss data for the above alternatives (without license fee and with license fee) for the ten paging operators of the sample study has been tabulated for the years 1998-99, 1999-00, and 2000-01 (Annex – VI). License fee quantum as a percentage of the network revenue for various alternate proposals are depicted in Annex – VIII for the years 1998-99, 1999-2000, and 2000-01.

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Chapter IV

ISSUES FOR CONSIDERATION

1. Following issues are proposed for consultation through public debate:

- a. Is it necessary that any future arrangement on license fee payment must ensure the levels of license fee quantum comparable to the levy during the first three years?
- b. Is it rational to levy any license fee on the paging service industry? If so, what should be the quantum and structure of the license fee?
- c. Since call from PSTN to paging network is an interconnection issue, is it not justified to have a revenue sharing arrangement for the same, which may also include the provision for payment of license fee?
- d. Do alternatives based on revenue sharing arrangement offer better options for improving the operators' viability through improved cash flows, which in turn would also facilitate license fee payment on a regular basis?
- e. Are there any network constraints in implementing the revenue sharing arrangement between the PSTN and the PCT network on the incoming calls from the PSTN?
- f. What percentage of network revenue would be a reasonable proposition for levy of license fee?
- g. Which tariff combination in terms of monthly rentals and revenue sharing arrangement offers an optimum option in this situation?
- h. Would the proposed increase in the PSTN call charge have any adverse impact on the number of calls from the PSTN to the paging subscriber?
- i. In its initial response to the Consultation Paper on Telecom Pricing, IPSA had suggested that the paging calls from PSTN be charged at the uniform rate of Rs. 1.30 for every minute (instead of cap of Rs. 1.50 for three minutes pulse, as proposed in the Consultation Paper) and the revenue be equally shared between the PSTN operator and the paging operator. Subsequently, IPSA proposed charging at two pulse for every paging call with revenue sharing in the ratio of 1:1 with the PSTN operators. To what extent these propositions of IPSA are reasonable?

Annex-1

A. PAGING SERVICES IN CITIES

Sl.No.	Name of the city	No. of operators licensed	Licence fee for first 3 years (Rs. Lakh)
1.	Amritsar	3	6.75
2.	Ahmedabad	4	217.8
3.	Bombay	4	1050
4.	Banglore	4	240
5.	Bhopal	3	65.51
6.	Calcutta	4	423
7.	Chandigarh	4	58
8.	Coimbatore	2	15
9.	Delhi	4	756
10.	Ernakulam	3	18
11.	Hydrabad	4	188
12.	Indore	3	58
13.	Jaipur	4	99
14.	Kanpur	4	99
15.	Ludhiana	3	20.58
16.	Lucknow	3	99
17.	Madras	4	423

18.	Madurai	2	9
19.	Nagpur	4	65.51
20.	Pune	4	76
21.	Patna	3	15
22.	Rajkot	4	36.3
23.	Surat	4	108.4
24.	Trivadrur	3	18
25.	Varanasi	4	58
26.	Visakhapatnam	3	9.72
27.	Vadodara	4	65.51

Note;-1. Licence fee in cities is payable in three years in the ratio of 1:2:3 .

2.Cities were also classified on the basis of installed telephone exchange capacity in those cities.

B. Paging Services in Circles

SI No.	State	Category ¹	Service commenced	Annual levy(in lakhs)	No. of licence	Name of Licencee
1	Andhra Pradesh	A	yes	4400	1	Punwire Mobile Communications
2	Assam	C	No	116	2	1.Easy Call Communications Ltd. 2.S.M.Electronics.
3	Andaman & Nicobar Islands	C	No	8	2	1.Matrix Paging (I) Pvt.Ltd. 2.S.M.Electronics
4	Bihar	C	----	----	----	-----

5	Gujrat	A	Yes	5050	1	1.Punwire Mobile Communications
6	Haryana	B	Yes	4100	1	1.Punwire Paging Services Ltd.
7	Himachal Pradesh	C	No	351	1	Punwire Paging Services Ltd.
8	J&K	C	Yes	50	2	1.S.M.Electronics 2.ABC Communications (I) Pvt. Ltd
9	Karnataka	A	Yes	4551	2	1.Punwire mobile communications 2. BPL System Projects Ltd.
10	Kerala	B	Yes	2500	2	1.Punwire Mobile Communications 2.BPL System Projects Ltd.
11	Maharashtra	A	Yes	6650	1	Punwire Mobile Communications L
12	Madhya Pradesh	B	Yes	1102	2	1.Punwire Mobile Communications 2. Modi Korea Telecom
13	North East	C	c	66	2	1.Microwave Communications Ltd. 2. Easy Call Communications(I) Pvt Ltd.
14	Orissa	C	No	163	2	1.Microwave Communications Ltd. 2.Telesistem (I) Pvt Ltd.
15	Punjab	B	Yes	3120	2	1.Punwire paging Services Ltd. 2.Hutchison Max Telecom
16	Rajasthan	B	Yes	2601	2	1.Punwire Mobile Communication 2. Modi Korea Telecom
17	Tamilnadu	A	Yes	3652	2	1.Punwire Mobile Communications 2. BPL System ProjectsLtd.
18	U.P.	B	----	4350	2	1.Punwire Mobile Communications 2.Microwave Communications Ltd.
19	West Bengal	B	No	519	2	1.Modi Korea Telecom 2. Easy Call Communications Ltd.

Notes-1. Category A,B,C is on the basis of capacity of the PSTN Switching System

Performance bank guarantee is charged on this categorisation.

2. Payment of licence fee during the 10 year licence period is in the equal proportion @ 1/11 during the first five years and @ 1.2/11 during the next five years.

ANNEX II

COMPARISON OF PAGING SERVICE IN VARIOUS COUNTRIES

COUNTRY	LICENSE FEES	SUBSCRIBER CATAGORIES (In percentage)		TARIFFS (IN \$ PER MONTH)		LICENSE FEE IN A METROPOLION CITY PER YEAR	COMPARIS OF LICENC REGIME vis.a.vis INDIA (In percentage)
		NUMERIC	ALPHA-NUMERIC	NUMERIC	ALPHA-NUMERIC		
S. Korea	No License fees. On Criteria for selection, spend on R&D 5-10% Operators lobbying for reduction	99	1	9000 W 3000W VOICE MAIL	9000 W	No License Fee \$ 650K Comitted to R&D	0%
Taiwan	NT \$ 57,500 (1.8K) per channel (ch) islandwide NT \$ 25,000 (\$ 750) per ch North NT \$ 14,000 (\$ 430) per ch Central, NT \$ 17,000 (\$ 530) per ch, South Plus 1% of Revenue per year	98	2	250 NT .1	500 NT	\$ 92 K	8%

Thailand	3% of revenue plus B 1M (\$ 25K) new entrant one time fee	1	99	180 B (\$ 4.50)	290 - 380B (\$7.3 - \$ 9.6)	\$ 306 K	27 %
Singapore	3% of revenue to be reduced to 1% of revenue by year 2000	90	10	SS 7.8 - 13	SS 14 + S\$ 12.2 (\$ 8.6 + \$ 7.4)	\$ 265 K	23%
Malaysia	RM 15,000 (\$ 4K)/yr/yr/ch RM 250 (\$ 67)/yr/base stn RM12 (\$3.2) yr/subscriber	75	25	25 RM (\$ 6.70)	50. RM (\$ 13.30)	\$ 325 K	29%
China	City wide operator \$ 12K/yr/ch	70	30	35 - 60 RMB (\$ 4.23 - \$ 7.25)	75 - 100 RMB (\$ 9.06 - \$ 12.08)	\$ 12 K	1%

...Contd.

Annex II (Contd.)

Hong Kong	HK \$ 100 (\$ 12.9)/sub/ Year	5	95	Auto page 50-60 HK (\$ 6.5 - \$ 7.8) Op.Ast 130 -140 HK (\$ 16.81 - \$ 18.1)	CCD 160-200HK (\$20.7 - \$25.9)	\$ 1.25 M	110%
Philippines	500 P (\$ 14.4) per transmitter/year	2	98	180P (\$ 5.20)	280 - 350 P (\$ 8.1 - \$ 10.1)	\$ 216	0%

India	Bombay license Rs. 105 M (\$ 2.7M) for 3 years/ operator to be paid 1/6, 1/3, 1/2 Plus Rs.100 per sub/yr	15	85	Rs. 150 (\$ 3.75)	Rs. 250 (\$6.25)	\$ 1.13 M	100%
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Source: IPSA.

							Annex - III
1. No. of Subscribers (Closing)							
SERVICE		Actuals			Projections		
PROVIDER	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	21106	47528	73114	100396	141408	182714	232668
B		10177	12877	15718	18860	22031	25727
C		13848	37938	60110	83135	107512	
D		61533	72846	96330	123201	157119	
E		11287	20842	27910	35448	43613	
F		11195	19767	26460	33597	41329	
G		11718	19906	25778	32097	38997	
H		35867	72208	69727	74440	86307	100157
I	27179	103541	170000	214000	257635	302298	348593
J	31000	53000	53000	78000	108000	143000	183000
Total	79285	359694	552498	714429	907821	1124920	890145
2. Rate of Growth (%)in subscribers base							
SERVICE		Actuals			Projections		
PROVIDER	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	
A	125.19	53.83	37.31	40.85	29.21	27.34	
B		26.53	22.06	19.99	16.81	16.78	
C		173.96	58.44	38.30	29.32		
D		18.39	32.24	27.89	27.53		
E		84.65	33.91	27.01	23.03		
F		76.57	33.86	26.97	23.01		
G		69.88	29.50	24.51	21.50		
H		101.32	-3.44	6.76	15.94	16.05	

I	280.96	64.19	25.88	20.39	17.34	15.31
J	70.97	0.00	47.17	38.46	32.41	27.97
Total	0.78	0.35	0.23	0.21	0.19	-0.26

Annex - III

3. Capacity Utilization (%)

SERVICE PROVIDER	Actuals			Projections			
	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A							
B		15%	18%	22%	27%	31%	37%
C		11%	30%	29%	41%	52%	
D		68%	56%	57%	72%	75%	
E		6%	12%	16%	20%	25%	
F		6%	11%	15%	19%	24%	
G		8%	13%	17%	21%	26%	
H							
I							
J							

4. Cumulative Capex per Average No. of Subscriber (Rs.)

SERVICE PROVIDER	Actuals			Projections			
	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	-	5723.11	7717.04	5417.55	4424.24	3655.41	-
B		1601.65	1731.76	1705.05	1580.06	1488.81	1372.09
C		2484.11	1892.40	1889.21	861.46	810.92	-
D		675.41	688.15	1146.73	1248.10	1346.55	-
E		1771.95	2792.43	2375.49	2110.13	1909.98	-
F		1545.33	2144.98	1885.86	2038.87	2942.24	-
G		1280.08	1748.21	1656.45	1567.12	1492.42	-
H		1557.48	1401.32	2927.14	3247.35	3335.76	3155.24
I	13617.13	4390.53	3952.94	3883.17	3813.53	3801.21	3822.22
J	10886.48	9752.38	11845.28	14145.03	13391.39	12623.90	11985.88

5. Average Network Revenue /Avg. No. of Subscribers (Rs.)

SERVICE	Actuals		Projections				
PROVIDER	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	1383.49	2587.63	2655.79	3436.11	3822.10	3859.04	4824.47
B		1749.04	2345.26	2042.24	2173.91	2192.36	2192.24
C		2043.61	2148.24	2304.10	2393.69	2443.44	-
D		2472.02	2558.41	2931.85	3569.41	3677.86	-
E		2028.88	1727.28	2414.90	2454.29	2472.83	-
F		1991.96	2119.69	2407.40	2446.64	2478.61	-
G		1612.90	1979.30	2436.18	2455.08	2477.11	-
H		2799.77	1891.78	2719.04	2525.72	2531.31	2516.79
I	305.38	1493.12	2130.58	2078.97	2432.12	2636.47	2664.99
J	967.56	2083.33	2760.37	4560.30	3429.03	2700.39	2018.57
	-	-					

6. Operating Ratio (%) (Operating Exp/Network Revenue)

SERVICE	Actuals		Projections				
PROVIDER	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	849	223	163	101	72	64	51
B		211	114	143	131	122	114
C		390	197	136	70	59	
D		155	123	66	47	54	
E		395	375	137	112	99	
F		329	272	132	109	97	
G		373	281	136	116	104	
H		162	127	94	92	83	79
I	2447	234	86	87	67	63	61
J	461	202	157	134	106	91	81

Annex III

7. Salary & Wages and Personnel Exp./Network Revenue (%)

SERVICE	Actuals		Projections				
PROVIDER	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	270.55	80.07	62.67	37.63	28.2	25.14	18.87
B		64	43	42	36	33	31

C		188	82	52	39	32	
D		65	53	39	27	25	
E		166	180	101	85	75	
F		151	136	97	83	74	
G		189	159	108	96	86	
H		21	20	17	19	18	17
I	915.66	105.05	64.59	40.2	30.8	29.6	29.2
J	195.11	72.81	58.18	52.88	44.72	39.41	36.5

8. Adv. & Publicity - Market Exp./ Network Revenue (%)

SERVICE	Actuals			Projections			
PROVIDER	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	174.65	10.25	2.06	3.77	3.59	3.49	3.36
B		7.00	4.00	4.00	3.00	3.00	2.00
C		35.00	15.00	16.00	10.00	9.00	
D		27.00	11.00	11.00	8.00	7.00	
E		32.00	16.00	16.00	8.00	8.00	
F		23.00	9.00	13.00	8.00	8.00	
G		27.00	11.00	13.00	8.00	7.00	
H		59.00	22.00	14.00	18.00	17.00	17.00
I	621.69	31.89	34.29	17.70	12.90	11.90	11.25
J	34.08	29.14	16.61	14.82	11.45	9.35	7.11

9. Bad Debts/ Network Revenue (%)

SERVICE	Actuals			Projections			
PROVIDER	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A		1.01	3.43	1.27	1.19	1.17	1.12
B		5	15	14	22	22	22
C		11	7	6	5	5	
D							
E		11	10	8	7	6.5	
F		12	10	8.5	7	6	
G		10	10	8	6	5	
H		5	3	2	2	2	2
I							
J		11.15	10.05	10.05	10.07	10.08	10.09

10. Interest payment per Average No. of Subscriber (Rs.)

SERVICE PROVIDER	Actuals			Projections			
	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02
A	322.18	1235.54	1215.17	1549.19	1344.89	1086.46	780.49
				(1584.40)*	(709.00)*	(525.09)*	(274.06)*
B		1306.86	1273.58	1246.97	1203.60	1171.07	1002.83
C				34.68	40.49	23.08	
D		412.00	256.91	526.08	380.81	270.79	
E							
F							
G							
H		687.89	459.63	707.50	634.54	547.02	494.79
I	883.03	958.07	725.29	1044.86	905.93	662.92	428.29
J	794.59	1016.67	886.79	603.05	243.01	137.85	74.23
Note:	* Operator A now proposes to inject equity of Rs. 43 crore during 1999-2000 as against earlier projections of only term loan.						

Annex - IV			
Debt - Equity Ratio (as on 31.3.97)			
Service provider	Debts (Rs. Lakhs)	Equity (Rs. Lakhs)	Ratio
A	3727.37	1847.37	2.02
B	367.84	1436.17	0.26
C			
D	819.99	2439.60	0.34
E			
F			
G			
H			
I	3995.42	3200.00	1.25
J	1824.57	1551.27	1.18
X	236.57	2318.98	0.10

Annex - V

1. Estimated Profit/Loss on the basis of Actual Operating Cost and effect of Revenue Shared Licence Fee

1998 - 1999

(Rs. Crores)

Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L
A	36.56	-14.09	1.83	-15.92	3.66	-17.75	5.48	-19.57
B	4.36	-1.55	0.22	-1.77	0.44	-1.98	0.65	-2.20
C	18.27	-1.67	0.91	-2.59	1.83	-3.50	2.74	-4.41
D	31.88	2.01	1.59	0.41	3.19	-1.18	4.78	-2.78
E	8.79	-4.03	0.44	-4.47	0.88	-4.91	1.32	-5.35
F	8.32	-2.93	0.42	-3.35	0.83	-3.76	1.25	-4.18
G	8.17	-3.20	0.41	-3.61	0.82	-4.02	1.23	-4.42
H	24.90	-3.50	1.25	-4.74	2.49	-5.99	3.74	-7.23
I	60.22	-19.03	3.01	-22.04	6.02	-25.05	9.03	-28.07
J	23.81	-8.58	1.19	-9.77	2.38	-10.96	3.57	-12.15
TOTAL	225.27		11.26		22.53		33.79	

1999 - 2000

Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L
A	56.60	-1.68	2.83	-4.51	5.66	-7.34	8.49	-10.17
B	5.49	-2.55	0.27	-2.83	0.55	-3.10	0.82	-3.38
C	26.01	4.51	1.30	3.21	2.60	1.91	3.90	0.61
D	45.83	15.14	2.29	12.84	4.58	10.55	6.87	8.26
E	11.31	-2.27	0.57	-2.84	1.13	-3.40	1.70	-3.97
F	10.68	-1.53	0.53	-2.06	1.07	-2.59	1.60	-3.13
G	10.24	-1.93	0.51	-2.44	1.02	-2.95	1.54	-3.46
H	26.21	-4.79	1.31	-6.10	2.62	-7.41	3.93	-8.72
I	75.38	-2.80	3.77	-6.57	7.54	-10.34	11.31	-14.11
J	33.80	-2.10	1.69	-3.79	3.38	-5.48	5.07	-7.17
TOTAL	301.55		15.08		30.15		45.23	

2000 - 2001

Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L
A	75.97	9.21	3.80	5.41	7.60	1.61	11.40	-2.19
B	6.45	-2.48	0.32	-2.80	0.64	-3.13	0.97	-3.48
C	38.83	10.47	1.94	8.53	3.88	6.59	5.82	4.65
D	52.25	25.14	2.61	22.53	5.23	19.91	7.84	17.30
E	14.02	-0.88	0.70	-1.59	1.40	-2.29	2.10	-2.99
F	13.26	-0.68	0.66	-1.35	1.33	-2.01	1.99	-2.67
G	12.53	-0.88	0.63	-1.51	1.25	-2.14	1.88	-2.76
H	30.35	-1.85	1.52	-3.37	3.04	-4.88	4.55	-6.40
I	89.58	8.69	4.48	4.21	8.96	-0.27	13.44	-4.75
J	45.15	4.52	2.26	2.26	4.51	0.00	6.77	-2.26
TOTAL	378.37		18.92		37.84		56.76	

* Profit/ Loss does not include Licence Fee.

** Network Revenue as per Tariff Proposal

LF - License Fee

P/L - Profit/Loss

Annex - V

2. Estimated Profit/Loss on the basis of Normative Operating Cost (= 60% of the Network Revenue) and effect of Revenue Shared Licence Fee

1998 - 1999

(Rs. Crores)

Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 7.5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L	L.F.	P/L
A	36.56	-11.44	1.83	-13.26	2.74	-14.18	3.66	-15.09	5.48	-16.92
B	4.36	-0.64	0.22	-0.85	0.33	-0.96	0.44	-1.07	0.65	-1.29
C	18.27	0.62	0.91	-0.30	1.37	-0.75	1.83	-1.21	2.74	-2.12
D	27.15	2.01	1.36	0.65	2.04	-0.03	2.72	-0.71	4.07	-2.07

E	8.79	-0.07	0.44	-0.51	0.66	-0.73	0.88	-0.95	1.32	-1.36
F	8.32	0.49	0.42	0.07	0.62	-0.14	0.83	-0.34	1.25	-0.76
G	8.17	0.47	0.41	0.06	0.61	-0.14	0.82	-0.35	1.23	-0.76
H	24.90	-1.44	1.25	-2.68	1.87	-3.31	2.49	-3.93	3.74	-5.17
I	40.58	-19.03	2.03	-21.06	3.04	-22.08	4.06	-23.09	6.09	-25.12
J	23.81	-3.75	1.19	-4.94	1.79	-5.53	2.38	-6.13	3.57	-7.32
TOTAL	200.91		10.05		15.07		20.09		30.14	

1999 - 2000

Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 7.5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L	L.F.	P/L
A	47.70	-1.68	2.39	-4.06	3.58	-5.25	4.77	-6.45	7.16	-8.83
B	5.49	-1.56	0.27	-1.83	0.41	-1.97	0.55	-2.10	0.82	-2.38
C	23.38	4.51	1.17	3.34	1.75	2.76	2.34	2.18	3.51	1.01
D	30.55	15.14	1.53	13.61	2.29	12.84	3.06	12.08	4.58	10.55
E	11.31	0.64	0.57	0.08	0.85	-0.21	1.13	-0.49	1.70	-1.05
F	10.68	1.05	0.53	0.52	0.80	0.25	1.07	-0.01	1.60	-0.55
G	10.24	1.04	0.51	0.52	0.77	0.27	1.02	0.01	1.54	-0.50
H	26.21	-1.82	1.31	-3.13	1.97	-3.78	2.62	-4.44	3.93	-5.75
I	50.25	-2.80	2.51	-5.31	3.77	-6.57	5.03	-7.83	7.54	-10.34
J	33.80	0.50	1.69	-1.19	2.54	-2.03	3.38	-2.88	5.07	-4.57
TOTAL	249.61		12.48		18.72		24.96		37.44	

2000 - 2001

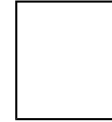
Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 7.5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L	L.F.	P/L
A	56.97	9.21	2.85	6.36	4.27	4.94	5.70	3.51	8.55	0.66
B	6.45	-1.58	0.32	-1.90	0.48	-2.06	0.64	-2.23	0.97	-2.55
C	25.88	10.47	1.29	9.18	1.94	8.53	2.59	7.88	3.88	6.59
D	34.83	25.14	1.74	23.40	2.61	22.53	3.48	21.65	5.23	19.91
E	14.02	1.41	0.70	0.71	1.05	0.36	1.40	0.00	2.10	-0.70
F	13.26	1.29	0.66	0.63	0.99	0.30	1.33	-0.03	1.99	-0.70
G	12.53	1.67	0.63	1.04	0.94	0.73	1.25	0.42	1.88	-0.21
H	30.35	-0.46	1.52	-1.98	2.28	-2.74	3.04	-3.49	4.55	-5.01
I	59.72	8.69	2.99	5.70	4.48	4.21	5.97	2.72	8.96	-0.27
J	45.15	4.62	2.26	2.36	3.39	1.23	4.51	0.10	6.77	-2.15
TOTAL	299.15		14.96		22.44		29.91		44.87	

* Profit/ Loss does not include Licence Fee.

** Network Revenue as per Tariff Proposal

LF - License Fee

P/L - Profit/Loss



Annex - V

3. Estimated Profit/Loss on the basis of Normative Operating Cost (= 40% of the Network Revenue) and effect of Revenue Shared Licence Fee

1998 - 1999

(Rs. Crores)

Service Provider	Network Revenue** (A)	Profit/ Loss*	With LF = 5% of A		With LF = 7.5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L	L.F.	P/L
A	36.56	-4.12	1.83	-5.95	2.74	-6.87	3.66	-7.78	5.48	-9.61
B	4.36	0.24	0.22	0.02	0.33	-0.09	0.44	-0.20	0.65	-0.42
C	18.27	4.27	0.91	3.36	1.37	2.90	1.83	2.44	2.74	1.53
D	31.88	5.55	1.59	3.95	2.39	3.16	3.19	2.36	4.78	0.76
E	8.79	1.68	0.44	1.24	0.66	1.02	0.88	0.80	1.32	0.37
F	8.32	2.15	0.42	1.74	0.62	1.53	0.83	1.32	1.25	0.90
G	8.17	2.10	0.41	1.69	0.61	1.49	0.82	1.29	1.23	0.88
H	24.90	3.54	1.25	2.30	1.87	1.67	2.49	1.05	3.74	-0.19
I	60.22	-18.77	3.01	-21.78	4.52	-23.29	6.02	-24.79	9.03	-27.80
J	23.81	1.02	1.19	-0.18	1.79	-0.77	2.38	-1.37	3.57	-2.56
TOTAL	225.27		11.26		16.90		22.53		33.79	

1999 - 2000

Service Provider	Network Revenue** (A)	Profit/ Loss*	With LF = 5% of A		With LF = 7.5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L	L.F.	P/L
A	56.60	4.30	2.83	1.47	4.25	0.06	5.66	-1.36	8.49	-4.19
B	5.49	-0.46	0.27	-0.73	0.41	-0.87	0.55	-1.01	0.82	-1.28
C	26.01	8.14	1.30	6.84	1.95	6.19	2.60	5.54	3.90	4.24
D	45.83	15.14	2.29	12.84	3.44	11.70	4.58	10.55	6.87	8.26
E	11.31	2.90	0.57	2.34	0.85	2.06	1.13	1.77	1.70	1.21
F	10.68	3.19	0.53	2.66	0.80	2.39	1.07	2.12	1.60	1.56

G	10.24	3.08	0.51	2.57	0.77	2.32	1.02	2.06	1.54	1.55
H	26.21	3.42	1.31	2.11	1.97	1.46	2.62	0.80	3.93	-0.51
I	75.38	-2.80	3.77	-6.57	5.65	-8.45	7.54	-10.34	11.31	-14.11
J	33.80	7.26	1.69	5.57	2.54	4.73	3.38	3.88	5.07	2.19
TOTAL	301.55		15.08		22.62		30.15		45.23	

2000 - 2001

Service Provider	Network Revenue** (A)	Profit/Loss*	With LF = 5% of A		With LF = 7.5% of A		With LF = 10% of A		With LF = 15% of A	
			L.F.	P/L	L.F.	P/L	L.F.	P/L	L.F.	P/L
A	75.97	13.00	3.80	9.20	5.70	7.30	7.60	5.40	11.40	1.61
B	6.45	-0.29	0.32	-0.61	0.48	-0.77	0.64	-0.94	0.97	-1.26
C	38.83	10.47	1.94	8.53	2.91	7.56	3.88	6.59	5.82	4.65
D	52.25	25.14	2.61	22.53	3.92	21.22	5.23	19.91	7.84	17.30
E	14.02	4.21	0.70	3.51	1.05	3.16	1.40	2.81	2.10	2.11
F	13.26	3.94	0.66	3.28	0.99	2.95	1.33	2.62	1.99	1.96
G	12.53	4.18	0.63	3.55	0.94	3.24	1.25	2.92	1.88	2.30
H	30.35	5.61	1.52	4.09	2.28	3.34	3.04	2.58	4.55	1.06
I	89.58	8.69	4.48	4.21	6.72	1.97	8.96	-0.27	13.44	-4.75
J	45.15	13.65	2.26	11.39	3.39	10.26	4.51	9.13	6.77	6.88
TOTAL	378.37		18.92		28.38		37.84		56.76	

* Profit/ Loss does not include Licence Fee.

** Network Revenue as per Tariff Proposal

LF - License Fee

P/L - Profit/Loss

Annex

Viability Study

Name of the Service Provider	A			
Subscriber's Base	100396	100396	141408	182

On Existing Tariff

Projections**

	1998 - 99	1998 - 99	1999-2000	2000-
Scenario As per Tariff consultation Proposal				
a) EBIDT	-9.41	-9.41	3.94	
b) Add back Licence Fee	5.01	5.01	4.53	
c) Total	-4.40	-4.40	8.47	
ADD :Additional Revenue :				
i) Revenue from Rental	0	5.57	7.85	
ii) Revenue sharing arrangement	0	1.81	2.55	
e) Revised EBIDT (Total)	-4.40	2.98	18.86	
MINUS :				
i) Depreciation	3.63	3.63	4.28	
ii) Interest	13.44	13.44	16.26	
f) profit / Loss	-21.47	-14.09	-1.68	
Add back: Operating Expenses	24.59	24.59	28.62	
Total	3.12	10.50	26.94	
Scenario - I				
(-) Operating Exp. @ 60% of the Total Network Revenue	17.51	21.94	28.62*	3
Profit/ Loss	-14.39	-11.44	-1.68	
Scenario - II				
(-) Operating Exp. @ 40% of the Total Network Revenue	11.67	14.62	22.64	
Profit/ Loss	-8.55	-4.12	4.30	
*	Operating Ratio projected by the operator for the year 1999-2000 & 2000-2001 is lower than the normative operating ratio. Hence, while calculating scenario I, the projected figures have been taken.			
**	Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998			

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Viability Study

Name of the Service Provider	B			
Subscriber's Base	15718	15718	18860	22000

(in Rs. Cr)

	On Existing Tariff	Projections**		
	1998 - 99	1998 - 99	1999-2000	2000-
Scenario As per Tariff consultation Proposal				
a) EBIDT	-1.15	-1.15	-2.09	
b) Add back Licence Fee	1.07	1.07	1.10	
c) Total	-0.08	-0.08	-0.99	
ADD :Additional Revenue :				
i) Revenue from Rental	0	0.87	1.05	
ii) Revenue sharing	0	0.28	0.34	
e) Revised EBIDT (Total)	-0.08	1.07	0.40	
MINUS :				
i) Depreciation	0.66	0.66	0.68	
ii) Interest	1.96	1.96	2.27	
f) profit / Loss	-2.70	-1.55	-2.55	
Add back: Operating Expenses	3.53	3.53	4.29	
Total	0.83	1.98	1.74	
Scenario - I				
(-) Operating Exp. @ 60% of the Total Network Revenue	1.93	2.62	3.29	
Profit/ Loss	-1.10	-0.64	-1.56	
Scenario - II				
(-) Operating Exp. @ 40% of the Total Network Revenue	1.28	1.74	2.19	
Profit/ Loss	-0.45	0.24	-0.46	

** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex

Viability Study

Name of the Service Provider	C			
Subscriber's Base	60110	60110	83135	107

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	On Existing Tariff	Projections**		
	1998 - 99	1998 - 99	1999-2000	2000-2001
Scenario As per Tariff consultation Proposal				
a) EBIDT	-8.89	-8.89	1.40	
b) Add back Licence Fee	5.61	5.61	0.00	
c) Total	-3.28	-3.28	1.40	
ADD :Additional Revenue :				
i) Revenue from Rental	0	3.34	4.61	
ii) Revenue sharing	0	1.08	1.50	
e) Revised EBIDT (Total)	-3.28	1.14	7.51	
MINUS :				
i) Depreciation	2.64	2.64	2.71	
ii) Interest	0.17	0.17	0.29	
f) profit / Loss	-6.09	-1.67	4.51	
Add back: Operating Expenses				
	13.25	13.25	14.03	
Total	7.16	11.58	18.54	
Scenario - I				
(-) Operating Exp. @ 60% of the Total Network Revenue	8.31	10.96	14.03*	1
Profit/ Loss	-1.15	0.62	4.51	
Scenario - II				
(-) Operating Exp. @ 40% of the Total Network Revenue	5.54	7.31	10.41	1
Profit/ Loss	1.62	4.27	8.14	
*	Operating Ratio projected by the operator for the year 1999-2000 & 2000-2001 is lower than the normative operating ratio of 40%. Hence, while calculating scenario I & II, the projected figures have been taken.			
**	Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998			

Annex

Viability Study

Name of the Service Provider	D			
Subscriber's Base	96330	96330	123201	157

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	On Existing Tariff	Projections**		
	1998 - 99	1998 - 99	1999-2000	2000-
Scenario As per Tariff consultation Proposal				
a) EBIDT	1.85	1.85	12.90	
b) Add back Licence Fee	0.00	0.00	0.00	
c) Total	1.85	1.85	12.90	
ADD :Additional Revenue :				
i) Revenue from Rental	0	5.35	6.84	
ii) Revenue sharing	0	1.73	2.22	
e) Revised EBIDT (Total)	1.85	8.93	21.96	
MINUS :				
i) Depreciation	2.47	2.47	2.64	
ii) Interest	4.45	4.45	4.18	
f) profit / Loss	-5.07	2.01	15.14	
Add back: Operating Expenses	16.29	16.29	18.33	
Total	11.22	18.30	33.47	
Scenario - I				
(-) Operating Exp. @ 60% of the Total Network Revenue	12.04	16.29*	18.33*	2
Profit/ Loss	-0.82	2.01	15.14	
Scenario - II				
(-) Operating Exp. @ 40% of the Total Network Revenue	9.92	12.75	18.33*	2
Profit/ Loss	1.30	5.55	15.14	

* Operating Ratio projected by the operator for the year 1998-99, 1999-2000 & 2000-2001 is lower than the normative of 60% and for the year 1999-2000, 200-2001 is lower than the normative operating ratio of 40%. Hence, while calc & II, the respective projected figures have been taken.

** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex

Viability Study

Name of the Service Provider || E

Subscriber's Base	27910	27910	35448	436
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On Existing Tariff
1998 - 99

Projections**		
1998 - 99	1999-2000	2000-

Scenario As per Tariff consultation Proposal

a) EBIDT	-3.72	-3.72	-2.43	
b) Add back Licence Fee	0.00	0.00	0.00	
c) Total	-3.72	-3.72	-2.43	
ADD :Additional Revenue :				
i) Revenue from Rental	0	1.55	1.97	
ii) Revenue sharing	0	0.50	0.64	
e) Revised EBIDT (Total)	-3.72	-1.67	0.18	
MINUS :				
i) Depreciation	2.36	2.36	2.45	
ii) Interest	0.00	0.00	0.00	
f) profit / Loss	-6.08	-4.03	-2.27	

Add back: Operating Expenses	9.23	9.23	9.70	
Total	3.15	5.20	7.43	

Scenario - I

(-) Operating Exp. @ 60% of the Total Network Revenue	4.04	5.27	6.78	
Profit/ Loss	-0.89	-0.07	0.64	

Scenario - II

(-) Operating Exp. @ 40% of the Total Network Revenue	2.70	3.52	4.52	
Profit/ Loss	0.45	1.68	2.90	

** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex

Viability Study

Name of the Service Provider	F
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Subscriber's Base	26460	26460	33597	413
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	On Existing Tariff	Projections**		
	1998 - 99	1998 - 99	1999-2000	2000-

Scenario As per Tariff consultation Proposal

a) EBIDT	-3.19	-3.19	-2.10	
b) Add back Licence Fee	0.00	0.00	0.00	
c) Total	-3.19	-3.19	-2.10	

ADD :Additional Revenue :

i) Revenue from Rental	0	1.47	1.86	
ii) Revenue sharing	0	0.48	0.60	
e) Revised EBIDT (Total)	-3.19	-1.24	0.36	

MINUS :	i) Depreciation	1.69	1.69	1.89	
	ii) Interest	0.00	0.00	0.00	

f) profit / Loss	-4.88	-2.93	-1.53	
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Add back: Operating Expenses	8.41	8.41	8.99	
Total	3.53	5.48	7.46	

Scenario - I

(-) Operating Exp. @ 60% of the Total Network Revenue	3.82	4.99	6.41	
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Profit/ Loss	-0.29	0.49	1.05	
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Scenario - II

(-) Operating Exp. @ 40% of the Total Network Revenue	2.55	3.33	4.27	
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Profit/ Loss	0.98	2.15	3.19	
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** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex

Viability Study

Name of the Service Provider	G
Subscriber's Base	25778

25778	32097	389
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On Existing Tariff
1998 - 99

Projections**		
1998 - 99	1999-2000	2000-

Scenario As per Tariff consultation Proposal

a) EBIDT	-3.32
b) Add back Licence Fee	0.00
c) Total	-3.32

-3.32	-2.43	
0.00	0.00	
-3.32	-2.43	

ADD :Additional Revenue :

i) Revenue from Rental	0
ii) Revenue sharing	0
e) Revised EBIDT (Total)	-3.32

1.43	1.78	
0.46	0.58	
-1.43	-0.07	

MINUS :	i) Depreciation	1.77
	ii) Interest	0.00
	f) profit / Loss	-5.09

1.77	1.86	
0.00	0.00	
-3.20	-1.93	

Add back: Operating Expenses	8.57
Total	3.48

8.57	9.11	
5.37	7.18	

Scenario - I

(-) Operating Exp. @ 60% of the Total Network Revenue	3.77
Profit/ Loss	-0.29

4.90	6.14	
0.47	1.04	

Scenario - II

(-) Operating Exp. @ 40% of the Total Network Revenue	2.51
Profit/ Loss	0.97

3.27	4.10	
2.10	3.08	

**	Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998
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Annex

Viability Study

Name of the Service Provider	H
Subscriber's Base	72084

72084	80373	932
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On Existing Tariff
1998 - 99

Projections**		
1998 - 99	1999-2000	2000-

Scenario As per Tariff consultation Proposal

a) EBIDT	-0.70	-0.70	-0.70
b) Add back Licence Fee	1.40	0.00	
c) Total	0.70	-0.70	
ADD :Additional Revenue :			
i) Revenue from Rental	0	4.00	4.46
ii) Revenue sharing	0	1.30	1.45
e) Revised EBIDT (Total)	0.70	6.00	5.21
MINUS : i) Depreciation	3.40	3.40	3.90
ii) Interest	6.10	6.10	6.10
f) profit / Loss	-8.80	-3.50	-4.79

Add back: Operating Expenses	17.00	17.00	18.70
Total	8.20	13.50	13.91

Scenario - I

(-) Operating Exp. @ 60% of the Total Network Revenue	11.76	14.94	15.72
Profit/ Loss	-3.56	-1.44	-1.82

Scenario - II

(-) Operating Exp. @ 40% of the Total Network Revenue	7.84	9.96	10.48
Profit/ Loss	0.36	3.54	3.42

** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex

Viability Study

Name of the Service Provider	I			
Subscriber's Base	214000	214000	257635	302

	On Existing Tariff	Projections**		
	1998 - 99	1998 - 99	1999-2000	2000-
Scenario As per Tariff consultation Proposal				
a) EBIDT	-17.70	-17.70	-2.19	
b) Add back Licence Fee	14.58	14.58	14.58	
c) Total	-3.12	-3.12	12.39	
ADD :Additional Revenue :				
i) Revenue from Rental	0	11.88	14.30	
ii) Revenue sharing	0	3.85	4.64	
e) Revised EBIDT (Total)	-3.12	12.61	31.33	
MINUS :				
i) Depreciation	9.28	9.28	10.79	
ii) Interest	22.36	22.36	23.34	
f) profit / Loss	-34.76	-19.03	-2.80	
Add back: Operating Expenses	24.35	24.35	30.15	
Total	-10.41	5.32	27.35	
Scenario - I				
(-) Operating Exp. @ 60% of the Total Network Revenue	14.91	24.35*	30.15*	3
Profit/ Loss	-25.32	-19.03	-2.80	
Scenario - II				
(-) Operating Exp. @ 40% of the Total Network Revenue	17.80	24.09	30.15*	3
Profit/ Loss	-28.21	-18.77	-2.80	

* Operating Ratio projected by the operator for the year 1998-99, 1999-2000 & 2000-2001 is lower than the normative of 60% and for the year 1999-2000, 200-2001 is lower than the normative operating ratio of 40%. Hence, while calc & II, the respective projected figures have been taken.

** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex

Viability Study

Name of the Service Provider	J		
Subscriber's Base	78000	78000	108000 143

	On Existing Tariff	Projections**		
	1998 - 99	1998 - 99	1999-2000	2000-
Scenario As per Tariff consultation Proposal				
a) EBIDT	-13.54	-13.54	-10.18	
b) Add back Licence Fee	5.09	5.09	4.39	
c) Total	-8.45	-8.45	-5.79	
ADD :Additional Revenue :				
i) Revenue from Rental	0	4.33	5.99	
ii) Revenue sharing	0	1.40	1.94	
e) Revised EBIDT (Total)	-8.45	-2.72	2.14	
MINUS :				
i) Depreciation	1.91	1.91	1.98	
ii) Interest	3.95	3.95	2.26	
f) profit / Loss	-14.31	-8.58	-2.10	
Add back: Operating Expenses				
Total	19.12	19.12	22.88	
	4.81	10.54	20.78	
Scenario - I				
(-) Operating Exp. @ 60% of the Total Network Revenue	10.85	14.29	20.28	
Profit/ Loss	-6.04	-3.75	0.50	
Scenario - II				
(-) Operating Exp. @ 40% of the Total Network Revenue	7.23	9.52	13.52	
Profit/ Loss	-2.42	1.02	7.26	

** Projections based on tariff proposals contained in the Consultation Paper on Telecom Pricing (No. 98/3) released on 9th Sept., 1998

Annex VI

A. Net Profit / Loss (without Licence Fee) under Alternate Proposals

(Rs. Crore)

1998 - 1999

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	-7.77	-9.57	-9.12	-12.89	-4.15
B	-0.55	-0.84	-0.77	-1.36	0.01
C	2.12	1.03	1.30	-0.95	4.28
D	8.08	6.35	6.78	3.17	11.55
E	-2.27	-2.77	-2.65	-3.69	-1.27
F	-1.27	-1.74	-1.63	-2.62	-0.32
G	-1.57	-2.04	-1.92	-2.89	-0.64
H	1.04	-0.26	0.07	-2.64	3.63
I	-5.55	-9.40	-8.44	-16.46	2.16
J	-3.66	-5.07	-4.72	-7.64	-0.86

1999 - 2000

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	7.23	4.69	5.32	0.02	12.32
B	-1.37	-1.71	-1.62	-2.33	-0.69
C	9.75	8.25	8.63	5.51	12.74
D	22.90	20.68	21.23	16.61	27.33
E	-0.04	-0.68	-0.52	-1.85	1.23
F	0.60	-0.01	0.14	-1.12	1.81
G	0.09	-0.49	-0.34	-1.55	1.25
H	0.27	-1.18	-0.81	-3.83	3.16
I	13.43	8.79	9.95	0.29	22.70
J	4.71	2.77	3.25	-0.80	8.60

2000 - 2001

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	20.72	17.43	18.25	11.40	27.30
B	-1.09	-1.49	-1.39	-2.22	-0.30
C	17.25	15.31	15.79	11.76	21.12

D	35.04	32.21	32.92	27.02	40.69
E	1.86	1.08	1.27	-0.36	3.43
F	1.92	1.18	1.36	-0.19	3.41
G	1.57	0.87	1.05	-0.42	2.98
H	4.03	2.35	2.77	-0.73	7.38
I	27.73	22.29	23.65	12.32	38.62
J	13.53	10.96	11.60	6.24	18.68

Annex VI

**B. Net Profit / Loss with Licence Fee (=5% of Network Rev.)
under Alternate Proposals**

(Rs. Crore)

Service Provider	1998 - 1999				
	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	-9.91	-11.63	-11.20	-14.77	-6.48
B	-0.78	-1.09	-1.02	-1.52	-0.24
C	1.01	-0.02	0.24	-1.90	3.07
D	6.18	4.53	4.95	1.51	9.48
E	-2.80	-3.28	-3.16	-4.15	-1.84
F	-1.77	-2.22	-2.11	-3.05	-0.86
G	-2.06	-2.50	-2.39	-3.31	-1.18
H	-0.43	-1.67	-1.36	-3.92	2.03
I	-9.23	-12.89	-11.98	-19.60	-1.92
J	-5.10	-6.43	-6.10	-8.88	-2.43

Service Provider	1999 - 2000				
	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	3.96	1.54	2.14	-2.89	8.79
B	-1.65	-2.02	-1.94	-2.53	-1.00
C	8.19	6.76	7.12	4.16	11.03
D	20.10	17.99	18.52	14.13	24.31
E	-0.72	-1.32	-1.17	-2.44	0.49
F	-0.04	-0.62	-0.48	-1.67	1.10
G	-0.52	-1.07	-0.93	-2.08	0.58
H	-1.29	-2.67	-2.32	-5.19	1.46
I	8.54	4.13	5.23	-3.95	17.35
J	2.68	0.83	1.30	-2.55	6.38

		2000 - 2001			
Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	16.35	13.22	14.00	7.49	22.60
B	-1.42	-1.86	-1.77	-2.46	-0.67
C	15.20	13.36	13.82	9.99	18.88
D	31.48	28.79	29.46	23.87	36.85
E	1.03	0.28	0.47	-1.09	2.52
F	1.13	0.42	0.60	-0.87	2.54
G	0.82	0.16	0.32	-1.07	2.16
H	2.21	0.62	1.02	-2.30	5.40
I	21.69	16.52	17.81	7.04	32.02
J	10.82	8.38	8.99	3.89	15.71



Annex VI

**C. Net Profit / Loss with Licence Fee (=7.5% of Network Rev.)
under Alternate Proposals**

(Rs. Crore)

		1998 - 1999			
Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	-10.98	-12.65	-12.24	-15.72	-7.64
B	-0.89	-1.22	-1.15	-1.60	-0.37
C	0.46	-0.54	-0.29	-2.37	2.46
D	5.23	3.63	4.03	0.69	8.44
E	-3.06	-3.53	-3.41	-4.38	-2.13
F	-2.02	-2.46	-2.35	-3.27	-1.14
G	-2.31	-2.74	-2.63	-3.52	-1.45
H	-1.17	-2.37	-2.07	-4.57	1.23
I	-11.08	-14.64	-13.75	-21.17	-3.95
J	-5.82	-7.12	-6.79	-9.50	-3.22

		1999 - 2000			
Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V

A	2.32	-0.04	0.55	-4.35	7.03
B	-1.79	-2.18	-2.10	-2.63	-1.16
C	7.40	6.02	6.37	3.48	10.17
D	18.70	16.65	17.16	12.89	22.80
E	-1.06	-1.65	-1.50	-2.73	0.12
F	-0.36	-0.92	-0.78	-1.95	0.75
G	-0.83	-1.36	-1.23	-2.34	0.24
H	-2.07	-3.41	-3.08	-5.87	0.60
I	6.09	1.80	2.87	-6.06	14.67
J	1.67	-0.13	0.32	-3.43	5.26

Service Provider	2000 - 2001				
	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	14.16	11.12	11.88	5.54	20.24
B	-1.59	-2.05	-1.96	-2.58	-0.86
C	14.17	12.38	12.83	9.10	17.75
D	29.70	27.08	27.74	22.29	34.93
E	0.61	-0.12	0.06	-1.45	2.06
F	0.73	0.04	0.22	-1.22	2.11
G	0.45	-0.20	-0.04	-1.39	1.75
H	1.31	-0.24	0.14	-3.09	4.41
I	18.66	13.63	14.89	4.40	28.73
J	9.47	7.09	7.68	2.72	14.23

Annex VI

**D. Net Profit / Loss with Licence Fee (=10% of Network Rev.)
under Alternate Proposals**

(Rs. Crores)					
Service Provider	1998 - 1999				
	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	-12.05	-13.68	-13.27	-16.66	-8.80
B	-1.00	-1.34	-1.28	-1.68	-0.49
C	-0.09	-1.06	-0.82	-2.85	1.86
D	4.28	2.72	3.11	-0.14	7.41
E	-3.33	-3.78	-3.66	-4.61	-2.42
F	-2.27	-2.70	-2.59	-3.48	-1.41
G	-2.55	-2.97	-2.86	-3.73	-1.72
H	-1.90	-3.07	-2.78	-5.21	0.43
I	-12.92	-16.39	-15.52	-22.74	-5.99

J	-6.54	-7.80	-7.48	-10.12	-4.01
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1999 - 2000

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	0.68	-1.61	-1.04	-5.81	5.26
B	-1.93	-2.34	-2.26	-2.74	-1.32
C	6.62	5.28	5.61	2.81	9.32
D	17.30	15.30	15.80	11.64	21.29
E	-1.40	-1.97	-1.83	-3.02	-0.25
F	-0.68	-1.23	-1.09	-2.23	0.40
G	-1.13	-1.65	-1.52	-2.61	-0.09
H	-2.86	-4.16	-3.83	-6.55	-0.25
I	3.64	-0.53	0.51	-8.18	11.99
J	0.65	-1.10	-0.66	-4.31	4.15

2000 - 2001

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	11.97	9.01	9.75	3.59	17.89
B	-1.75	-2.23	-2.14	-2.70	-1.04
C	13.15	11.41	11.84	8.22	16.63
D	27.92	25.38	26.01	20.71	33.01
E	0.19	-0.52	-0.34	-1.81	1.60
F	0.34	-0.33	-0.17	-1.56	1.67
G	0.07	-0.56	-0.40	-1.72	1.34
H	0.40	-1.11	-0.73	-3.88	3.42
I	15.64	10.74	11.96	1.76	25.43
J	8.11	5.80	6.38	1.55	12.75



Annex VI

***E. Net Profit / Loss with Licence Fee (=15% of Network Rev.)
under Alternate Proposals***

(Rs. Crores)

1998 - 1999

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	-14.20	-15.73	-15.35	-18.55	-11.13
B	-1.23	-1.60	-1.54	-1.84	-0.75
C	-1.19	-2.11	-1.88	-3.80	0.65
D	2.39	0.91	1.28	-1.79	5.33
E	-3.85	-4.28	-4.17	-5.06	-3.00
F	-2.77	-3.17	-3.07	-3.91	-1.96
G	-3.04	-3.44	-3.34	-4.16	-2.25
H	-3.38	-4.48	-4.20	-6.50	-1.17
I	-16.60	-19.88	-19.06	-25.88	-10.06
J	-7.97	-9.17	-8.87	-11.35	-5.59

1999 - 2000

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	-2.59	-4.76	-4.22	-8.72	1.73
B	-2.21	-2.66	-2.58	-2.94	-1.63
C	5.06	3.79	4.11	1.46	7.60
D	14.50	12.61	13.08	9.16	18.27
E	-2.07	-2.61	-2.48	-3.61	-0.99
F	-1.32	-1.84	-1.71	-2.78	-0.30
G	-1.75	-2.24	-2.12	-3.14	-0.77
H	-4.42	-5.65	-5.34	-7.90	-1.96
I	-1.25	-5.19	-4.20	-12.42	6.64
J	-1.38	-3.03	-2.62	-6.06	1.93

2000 - 2001

Service Provider	Proposal I	Proposal II	Proposal III	Proposal IV	Proposal V
A	7.60	4.80	5.50	-0.32	13.19
B	-2.08	-2.61	-2.52	-2.94	-1.41
C	11.10	9.46	9.87	6.44	14.39
D	24.36	21.96	22.56	17.55	29.17
E	-0.65	-1.32	-1.15	-2.54	0.68
F	-0.46	-1.09	-0.93	-2.25	0.81
G	-0.67	-1.27	-1.12	-2.36	0.52
H	-1.41	-2.83	-2.48	-5.45	1.45
I	9.59	4.96	6.12	-3.52	18.84
J	5.41	3.22	3.76	-0.79	9.78

Licence Fee as a percentage of Network Revenue

(As per Consultation Paper on Telecom Pricing)

(Rs. Crore)

Companies	Licence Fee		Network Revenue	
	1999-2000	2000-01	1999-2000	2000-01
J	5.09	4.39	27.46	38.03
D	7.57	9.60	43.38	55.32
X	7.19	7.08	31.12	56.20
Y	5.71	7.05	48.47	65.78
Total	25.56	28.12	150.42	215.34

L.F./Network Rev.	16.99%	13.06%
Average Ratio		15.02%

Licence Fee as Percentage of Network Revenue (Actuals)

Service Provider	Licence Fee			Network revenue			Ratio	
	1995 - 96	1996 - 97	1997 - 98	1995 - 96	1996 - 97	1997 - 98	1995 - 96	1996 - 97
A	2.15	4.74	7.33	1.46	8.88	16.02	1.47	0.53
B		0.57	-0.40		1.78	3.02		0.32
C		0.71	0.76		2.83	8.15		0.25
D		4.22	6.59		10.98	17.19		0.38
E		3.66	5.48		2.29	3.60		1.60
F		2.75	4.13		2.23	4.19		1.23
G		2.41	3.62		1.89	3.94		1.28
H		2.90	3.30		15.10	13.50		0.19
I	3.58	9.90	16.10	0.83	15.48	36.22	4.31	0.64
J	2.11	4.09	6.28	1.79	8.75	14.63	1.18	0.47
Total	7.84	35.95	53.19	4.08	70.21	120.46	1.92	0.51
Average During 1996 - 1998 =		47%						

A. Licence Fee Calculations (1998 - 1999)

(In Rs. Crores)

Service Provider	Avg Annual Licence Fee during			Proposal I (Rental AN:N = 300 : 175, Rev. sharing = .90 per call)					Proposal II (Rental AN:N = 300 : 175, Rev. sharing = .70 per call)					Lic
	1995 - 1996	1996 - 1997	1997 - 1998	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)		
A	2.15	4.74	7.33	42.88	2.14	3.22	4.29	6.43	41.08	2.05	3.08	4.11		
B		0.57	-0.40	4.48	0.22	0.34	0.45	0.67	5.07	0.25	0.38	0.51		
C		0.71	0.76	22.06	1.10	1.65	2.21	3.31	20.97	1.05	1.57	2.10		
D		4.22	6.59	37.95	1.90	2.85	3.79	5.69	36.22	1.81	2.72	3.62		
E		3.66	5.48	10.55	0.53	0.79	1.05	1.58	10.05	0.50	0.75	1.00		
F		2.75	4.13	9.98	0.50	0.75	1.00	1.50	9.51	0.48	0.71	0.95		
G		2.41	3.62	9.80	0.49	0.73	0.98	1.47	9.33	0.47	0.70	0.93		
H		2.90	3.30	29.44	1.47	2.21	2.94	4.42	28.14	1.41	2.11	2.81		
I	3.58	9.90	16.10	73.70	3.69	5.53	7.37	11.06	69.85	3.49	5.24	6.98		
J	2.11	4.09	6.28	28.73	1.44	2.15	2.87	4.31	27.32	1.37	2.05	2.73		
Total	7.84	35.95	53.19	269.57	13.48	20.22	26.96	40.44	257.54	12.88	19.32	25.75		



Service Provider	Avg Annual Licence Fee during			Proposal III (Rental AN:N = 300 : 175, Rev. sharing = .75 per call)					Proposal IV (Rental AN:N = 325 : 200, Rev. sharing = Nil)					P N R
	1995 - 1996	1996 - 1997	1997 - 1998	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	
A	2.15	4.74	7.33	41.53	2.08	3.11	4.15	6.23	37.76	1.89	2.83	3.78	5.66	4
B		0.57	-0.40	5.14	0.26	0.39	0.51	0.77	3.21	0.16	0.24	0.32	0.48	
C		0.71	0.76	21.24	1.06	1.59	2.12	3.19	18.99	0.95	1.42	1.90	2.85	2
D		4.22	6.59	36.65	1.83	2.75	3.66	5.50	33.04	1.65	2.48	3.30	4.96	4
E		3.66	5.48	10.17	0.51	0.76	1.02	1.53	9.13	0.46	0.68	0.91	1.37	1

F		2.75	4.13	9.62	0.48	0.72	0.96	1.44	8.63	0.43	0.65	0.86	1.29	
G		2.41	3.62	9.45	0.47	0.71	0.95	1.42	8.48	0.42	0.64	0.85	1.27	
H		2.90	3.30	28.47	1.42	2.13	2.85	4.27	25.76	1.29	1.93	2.58	3.86	
I	3.58	9.90	16.10	70.81	3.54	5.31	7.08	10.62	62.79	3.14	4.71	6.28	9.42	
J	2.11	4.09	6.28	27.67	1.38	2.08	2.77	4.15	24.75	1.24	1.86	2.47	3.71	
Total	7.84	35.95	53.19	260.76	13.04	19.56	26.08	39.11	232.54	11.63	17.44	23.25	34.88	2

B. Licence Fee Calculations (1999 - 2000)

(In Rs. Cro)

Service Provider	Avg Annual Licence Fee during			Proposal I (Rental AN:N = 300 : 175, Rev. sharing = .90 per call)					Proposal II (Rental AN:N = 300 : 175)					Lic
	1995 - 1996	1996 - 1997	1997 - 1998	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)		
A	2.15	4.74	7.33	65.51	3.28	4.91	6.55	9.83	62.97	3.15	4.72	6.30	9.45	
B		0.57	-0.40	5.63	0.28	0.42	0.56	0.84	6.33	0.32	0.48	0.63		
C		0.71	0.76	31.25	1.56	2.34	3.12	4.69	29.75	1.49	2.23	2.98		
D		4.22	6.59	56.00	2.80	4.20	5.60	8.40	53.78	2.69	4.03	5.38		
E		3.66	5.48	13.54	0.68	1.02	1.35	2.03	12.90	0.65	0.97	1.29		
F		2.75	4.13	12.81	0.64	0.96	1.28	1.92	12.20	0.61	0.92	1.22		
G		2.41	3.62	12.26	0.61	0.92	1.23	1.84	11.68	0.58	0.88	1.17		
H		2.90	3.30	31.27	1.56	2.35	3.13	4.69	29.82	1.49	2.24	2.98		
I	3.58	9.90	16.10	97.83	4.89	7.34	9.78	14.67	93.19	4.66	6.99	9.32		
J	2.11	4.09	6.28	40.61	2.03	3.05	4.06	6.09	38.67	1.93	2.90	3.87		
Total	7.84	35.95	53.19	366.70	18.34	27.50	36.67	55.01	351.30	17.56	26.35	35.13		

Service Provider	Avg Annual Licence Fee during			Proposal III (Rental AN:N = 300 : 175, Rev. sharing = .75 per call)					Proposal IV (Rental AN:N = 325 : 200, Rev. sharing = Nil)					P
	1995 - 1996	1996 - 1997	1997 - 1998	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	
A	2.15	4.74	7.33	63.60	3.18	4.77	6.36	9.54	58.30	2.92	4.37	5.83	8.75	
B		0.57	-0.40	6.42	0.32	0.48	0.64	0.96	4.10	0.21	0.31	0.41	0.62	
C		0.71	0.76	30.13	1.51	2.26	3.01	4.52	27.01	1.35	2.03	2.70	4.05	
D		4.22	6.59	54.33	2.72	4.08	5.43	8.15	49.71	2.49	3.73	4.97	7.46	

E		3.66	5.48	13.06	0.65	0.98	1.31	1.96	11.73	0.59	0.88	1.17	1.76	
F		2.75	4.13	12.35	0.62	0.93	1.24	1.85	11.09	0.55	0.83	1.11	1.66	
G		2.41	3.62	11.83	0.59	0.89	1.18	1.77	10.62	0.53	0.80	1.06	1.59	
H		2.90	3.30	30.19	1.51	2.26	3.02	4.53	27.17	1.36	2.04	2.72	4.08	
I	3.58	9.90	16.10	94.35	4.72	7.08	9.43	14.15	84.69	4.23	6.35	8.47	12.70	
J	2.11	4.09	6.28	39.15	1.96	2.94	3.92	5.87	35.10	1.76	2.63	3.51	5.27	
Total	7.84	35.95	53.19	355.41	17.77	26.66	35.54	53.31	319.53	15.98	23.97	31.95	47.93	3

C. Licence Fee Calculations (2000 - 2001)

(In Rs. Crores)

Service Provider	Avg Annual Licence Fee during			Proposal I (Rental AN:N = 300 : 175, Rev. sharing = .90 per call)					Proposal II (Rental AN:N = 300 : 175, Rev. sharing = .90 per call)					Lic
	1995 - 1996	1996 - 1997	1997 - 1998	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)		
A	2.15	4.74	7.33	87.48	4.37	6.56	8.75	13.12	84.19	4.21	6.31	8.42		
B		0.57	-0.40	6.61	0.33	0.50	0.66	0.99	7.44	0.37	0.56	0.74		
C		0.71	0.76	40.95	2.05	3.07	4.09	6.14	39.01	1.95	2.93	3.90		
D		4.22	6.59	71.16	3.56	5.34	7.12	10.67	68.33	3.42	5.12	6.83		
E		3.66	5.48	16.76	0.84	1.26	1.68	2.51	15.98	0.80	1.20	1.60		
F		2.75	4.13	15.86	0.79	1.19	1.59	2.38	15.12	0.76	1.13	1.51		
G		2.41	3.62	14.98	0.75	1.12	1.50	2.25	14.28	0.71	1.07	1.43		
H		2.90	3.30	36.23	1.81	2.72	3.62	5.43	34.55	1.73	2.59	3.45		
I	3.58	9.90	16.10	120.96	6.05	9.07	12.10	18.14	115.52	5.78	8.66	11.55		
J	2.11	4.09	6.28	54.16	2.71	4.06	5.42	8.12	51.59	2.58	3.87	5.16		
Total	7.84	35.95	53.19	465.15	23.26	34.89	46.52	69.77	446.00	22.30	33.45	44.60		

Service Provider	Avg Annual Licence Fee during			Proposal III (Rental AN:N = 300 : 175, Rev. sharing = .75 per call)					Proposal IV (Rental AN:N = 325 : 200, Rev. sharing = Nil)					Lic
	1995 - 1996	1996 - 1997	1997 - 1998	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	Total Network Revenue	Licence Fee (5% of Total Network Revenue)	Licence Fee (7.5% of Total Network Revenue)	Licence Fee (10% of Total Network Revenue)	Licence Fee (15% of Total Network Revenue)	
A	2.15	4.74	7.33	85.01	4.25	6.38	8.50	12.75	78.16	3.91	5.86	7.82	11.72	
B		0.57	-0.40	7.54	0.38	0.57	0.75	1.13	4.83	0.24	0.36	0.48	0.72	

C		0.71	0.76	39.49	1.97	2.96	3.95	5.92	35.46	1.77	2.66	3.55	5.32	4
D		4.22	6.59	69.04	3.45	5.18	6.90	10.36	63.14	3.16	4.74	6.31	9.47	7
E		3.66	5.48	16.17	0.81	1.21	1.62	2.43	14.54	0.73	1.09	1.45	2.18	1
F		2.75	4.13	15.30	0.77	1.15	1.53	2.30	13.75	0.69	1.03	1.38	2.06	1
G		2.41	3.62	14.46	0.72	1.08	1.45	2.17	12.99	0.65	0.97	1.30	1.95	1
H		2.90	3.30	34.97	1.75	2.62	3.50	5.25	31.47	1.57	2.36	3.15	4.72	3
I	3.58	9.90	16.10	116.88	5.84	8.77	11.69	17.53	105.55	5.28	7.92	10.55	15.83	1
J	2.11	4.09	6.28	52.23	2.61	3.92	5.22	7.83	46.87	2.34	3.51	4.69	7.03	5
Total	7.84	35.95	53.19	451.10	22.55	33.83	45.11	67.66	406.77	20.34	30.51	40.68	61.02	5

Annex IX

Consultation Paper on Telecom Pricing

Table AVII.2 : Numeric & AlphaNumeric Paging Ratio and Monthly Tariffs

COUNTRIES	NUMERIC PAGING			ALPHANUMERIC PAGING			PAN Pn	In equivalent US\$	% comparison to INDIA	In equivalent US\$
	% of total paging Subscribers	Monthly Paging Tariff		% of total paging Subscribers	Monthly Paging Tariff					
			TAIWAN		98%	7.70	205%		2%	1
			SINGAPORE		90%	6.40	171%		10%	1
MALAYSIA	75%	6.70	179%	25%	13.30	213%	1.99			
HONGKONG	5%	AP 6.65 OAP 17.46	177% 466%	95%	23.30	373%	1.33			
PHILIPPINES	2%	5.20	139%	98%	9.10	146%	1.75			

THAILAND	1%	4.50	120%	99%	8.45	135%	1.88
Source : MOTOROLA							
Note : AP : Auto Paging							
OAP : Operator Assisted Paging							
PAN : Monthly tariff for Alphanumeric							
PN : Monthly tariff for Numeric							

¹Schematic diagram of a typical paging network is depicted in Diagram-I.

²See Annex-III.

³The industry average in other countries is close to US\$ 50 (Rs. 2000) per subscriber. The median value of capex in the Consultation Paper on Telecom Tariff has been taken at Rs. 3500 per subscriber in 1999-00 and Rs. 2700 per subscriber in 2000-01.

⁴See Annex-IV. Reference to Operator X for the debt-equity ratio is only for illustration. It does not form part of the analysis, as it is operative in Circles and not in the Cities.

⁵For a service industry having a fair degree of risk associated with it, the financing agency would normally not be willing to fund beyond the level of equity, keeping the debt-equity ratio close to 1:1 in the initial years of operation.

⁶Rental cap of Rs. 150 per month for numeric and alphanumeric pagers was fixed as per 'Bid Document' in 1992 itself, which was subsequently revised to Rs. 250 per month for alpha-numeric pagers as per DOT's notification dated 3.4.96.

⁷The import duty was 80% in 1995-96, which has progressively come down. The custom duty at present for network equipment (for development of infrastructure) is 22%, whereas that for the pager equipment is around 60%.

⁸Paper No. 98/3, released on September 9, 1998.

⁹This sample size included six operators with exclusive operations in the cities.

¹⁰The above tariff structure assumes that each paging subscriber on an average receives two calls per day.

¹¹Refer Table AVII.2 on page 78 of the Consultation Paper on Telecom Pricing – reproduced in this document at Annex IX.

¹²The proposed call charges and rentals are caps on these rates. The revenue to the paging operator (20 paise), however, is a fixed quantum and not a cap. The proposed rental caps are based on the median for the years 1999-00 and 2000-01. These proposed rentals and shared call charges together include the license fee as given by the paging operators.

¹³Condition 18.2 (Schedule C Part III) of the License Agreement also stipulates review and refixing of the license fee / paging levy (which may relate to turn over), and review of tariff structure after completion of three years.

¹⁴Profit/loss of the service providers as shown above compares well with the figures above in

aggregate terms.

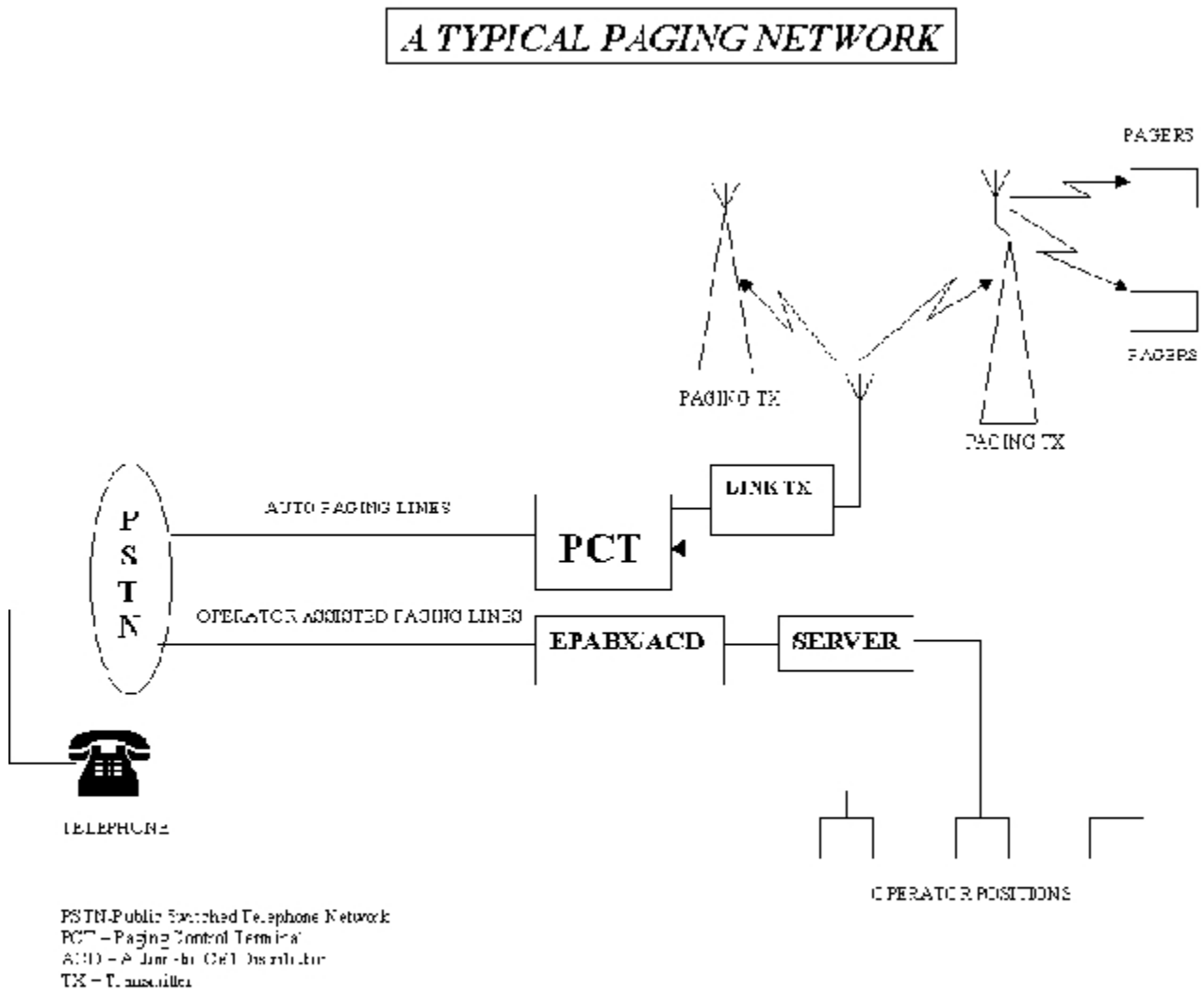
15This is the best-projected operating ratio in 1998-99, and continues to be the best in the years 1999-00 and 2000-01.

16See Annex-VII.

17This proposal was made by IPSA in the meeting of the Operators with the Authority in connection with the discussions on Consultation Paper on Telecom Pricing on 13th November 1998.

18Assumptions adopted are the same as in the consultation Paper on Telecom Pricing, namely that the Alphanumeric subscriber and Numeric subscriber are in the ratio of 85:15, and that each paging subscriber generates on an average two calls per day.

Diag.-1



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