

Telecom Regulatory Authority of India

The Indian Telecom Services
Performance Indicators Oct-Dec'03

March 2004

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Contents

OBSERVATIONS: -

- (i) Introduction
- (ii) Quarterly results at a glance

- Chapter One: Performance of Fixed Services
- Chapter Two: Performance of Mobile Service
- Chapter Three: Performance of Internet Service
- Chapter Four: Other Value Added Services
 - (i) PMRTS
 - (ii) VSAT
- Chapter Five: Quality of Service (QOS) Performance

TABLES:

- 1.1 Subscribers Base of Fixed Services
- 1.2 Details of Public Call Offices (PCO)
- 1.3 Details of Village Public Telephone (VPT)
- 1.4 Equipped Switching Capacity
- 2.1 Subscribers Base of Mobile Service (Cellular + WLL(M))
- 2.2 Market Share of Cellular + WLL (M) Service Providers
- 2.3 Growth pattern of Cellular Subscribers Base
- 3.1 Subscribers Base of Internet Service
- 4.1 Subscribers Base of Public Mobile Radio Trunk Service
- 4.2 Subscribers Base of VSAT Service Providers

ANNEXES:

- 1.1 Circle-wise details of Operator's Migration to Unified Access Service Regime
- 1.2 Growth of Transmission Infrastructure in the country
- 2.1 Growth Rate of Cellular Mobile Subscribers.
- 2.2 Growth of Cellular Infrastructure and Points of Interconnections (POIs).
- 2.3 Growth Pattern of Cellular Traffic.
- 2.4 Trends in usage pattern (MOU), ARPU & Average Airtime charges.
- 2.5 Revenue Pattern for Cellular Services.
- 3.1 Growth Pattern of Internet subscribers
- 4.1 Growth Rate of PMRTS Subscribers
- 4.2 Growth Rate of VSAT Subscribers
- 5.1 Quality of Service Parameters for Basic Services
- 5.2 Quality of Service Parameters for Cellular Services
- 5.3 Quality of Service Parameters for ISPs

(i) Introduction

1.1 This report provides an update on the growth trends for the telecom services for the period October-December 2003. This report presents a broad perspective on the Telecom Services to serve as a reference document for various stakeholders, research agencies and analysts as an update over the previous three report, which pertained to financial year 2002-2003 and first & second quarters of financial year 2003-2004. Due to the Unified Access Service Regime, the details under mobile services combines both Cellular & WLL (M). Chapter 5 contains the QOS Performance for various telecom services. The summary of the growth pattern of Fixed, Mobile and Internet services in form of 'Quarterly results at a Glance' is given at the beginning of this compilation.

1.2 The information for this report has been collected from various telecom operators and service providers. TRAI collects performance-oriented data from various service providers on a quarterly basis to monitor the growth trend in the sector and to decide upon pro-active and suo motto measures to fuel the growth of the telecom services in the country. The data provided in this report is purely provisional and subject to change. TRAI regularly conducts review of its data collection programme to ensure that its processes remains appropriate/relevant in the rapidly growing telecom sector and are consistent with changing regulatory framework.

1.3 This quarterly report is being launched on the TRAI website (www.traigov.in) and will be updated on quarterly basis. Some of the suggestions made by stakeholders have been considered for modifying the report. Any further suggestions pertaining to this may please be addressed to S. N. Gupta, Advisor (CN), TRAI; Tel. 26167914, Fax. 26103294 and e-mail: traio9@bol.net.in.

(ii) Quarterly Results at a Glance

Performance Indicators of Telecom Services QE Dec 2003

A. Growth of Fixed & Mobile Services:-

	FE 2002	QE Dec 2002	FE 2003	QE Sept 2003	QE Dec 2003	%age growth over QE Dec 2002 (12 months)	%age growth over FE 2003 (9 months)	%age growth over last quarter (3 months)
1) Subscriber's Base (in millions)								
i) Fixed Line including WLL(F)	38.33	39.86	41.48	41.74	42.09	5.59	1.47	0.84
ii) WLL(M)	0.1	0.24	0.31	4.73	6.45	2587.50	1980.65	36.36
iii) Cellular	6.44	10.53	12.69	18.3	21.99	108.83	73.29	20.16
iv) Mobile (Cellular + WLL (M))	6.54	10.77	13	23.03	28.44	164.07	118.77	23.49
Gross Total	44.87	50.63	54.48	64.77	70.53	39.30	29.46	8.89
2) Traffic								
Mobile (minutes of use/ sub/month)	210	NA	222	298****	301		35.59	1.01
3) ARPU (Rs./sub/month)								
i) Fixed including WLL(F)		NA*	514 ** 1254 ***	NA*	NA*			
ii) Mobile	871	NA	537	516****	457		-14.90	-9.30
4) Teledensity								
Population in million (Estimated)	1048	1065	1069	1080	1084	1.78	1.40	0.37
i) Fixed including WLL(F)	3.66	3.74	3.88	3.86	3.88	3.79	0.11	0.51
ii) WLL (M)	0.01	0.02	0.03	0.44	0.60	2540.39	1951.85	35.86
iii) Cellular	0.61	0.99	1.19	1.69	2.03	105.17	70.89	19.72
iv) Mobile (Cellular + WLL (M))	0.62	1.01	1.22	2.13	2.62	159.44	115.74	23.04
Gross Total	4.28	4.75	5.10	6.00	6.51	36.90	27.71	8.52

* Data for BSNL, MTNL & Reliance was not made available.

** For BSNL

*** For Private Operators

**** Does not include data for MTNL, BSNL, Aircel DigiLink (Haryana, Rajasthan, UP-E)

B. Growth of Internet Services:-

	FE 2002	QE Dec 2002	FE 2003	QE Sept 2003	QE Dec 2003	%age growth over QE Dec 2002 (12 months)	%age growth over FE 2003 (9 months)	%age growth over last quarter (3 months)
1) Subscriber's Base (in million)	3.42	3.76	3.64	3.98	4.14	10.11	13.74	4.02
2) Minutes of Use (MOU)/ subs/month)				400	399			-0.25
3) ARPU (Rs/subs/month)				303	270			-10.89
4) Internet Telephony MOU (in Million)				14.2	20.1			41.55

C. Performance of service providers during the quarter: -

(I) Fixed Line including WLL(F) Subscribers Base(in Million)							
1) Basic Service Providers	QE Dec 2002	FE 2003	QE Sept 2003	QE Dec 2003	%age growth over QE Dec 2002 (12 months)	%age growth over FE 2003 (9 months)	%age growth over last quarter (3 months)
BSNL	34.42	35.9	35.82	35.71	3.75	-0.53	-0.31
MTNL	4.51	4.63	4.45	4.46	-1.11	-3.67	0.22
Reliance	0.0002	0.0002	0.1	0.29	-	-	-
Tata/ Hughes	0.44	0.45	0.71	0.87	97.73	93.33	22.54
Bharti	0.32	0.37	0.5	0.57	78.13	54.05	14.00
HFCL	0.11	0.08	0.09	0.1	-9.09	25.00	11.11
Shyam	0.06	0.05	0.07	0.09	50.00	80.00	28.57
Total	39.86	41.48	41.74	42.09	5.59	1.47	0.84

(II) Mobile (Cellular & WLL (M)) Services Subscriber Base (in Million)							
Service Providers	QE Dec 2002	FE 2003	QE Sept 2003	QE Dec 2003	%age growth over QE Dec 2002 (12 months)	%age growth over FE 2003 (9 months)	%age growth over last quarter (3 months)
Bharti	2.77	3.07	4.62	5.5	98.56	79.15	19.05
BSNL	0.88	2.29	4.04	4.94	461.36	115.72	22.28
Hutch	2.02	2.16	3.22	3.77	86.63	74.54	17.08
MTNL	0.29	0.35	0.38	0.42	44.83	20.00	10.53
Spice	0.64	0.64	0.75	1.05	64.06	64.06	40.00
BPL Group	1.08	1.13	1.31	1.54	42.59	36.28	17.56
Escotel	0.57	0.59	0.69	0.83	45.61	40.68	20.29
Idea	1.2	1.28	1.9	2.24	86.67	75.00	17.89
Reliance	0.5	0.54	4.81	6.24	1148.00	1055.56	29.73
Tata/ Hughes	0.12	0.16	0.37	0.56	366.67	250.00	51.35
HFCL	0.02	0.03	0.03	0.03	50.00	0.00	0.00
Shyam	0.02	0.03	0.03	0.03	50.00	0.00	0.00
Others	0.66	0.73	0.88	1.29	95.45	76.71	46.59
Total	10.77	13	23.03	28.44	164.07	118.77	23.49

(iii) Cellular Services Subscriber Base (in Million)							
2) Cellular Service Providers	QE Dec 2002	FE 2003	QE Sept 2003	QE Dec 2003	%age growth over QE Dec 2002 (12 months)	%age growth over FE 2003 (9 months)	%age growth over last quarter (3 months)
Bharti	2.77	3.07	4.62	5.50	98.56	79.15	19.05
BSNL	0.85	2.26	4.01	4.77	461.18	111.06	18.95
Hutch	2.02	2.16	3.22	3.77	86.63	74.54	17.08
MTNL	0.24	0.29	0.31	0.33	37.50	13.79	6.45
Spice	0.64	0.64	0.75	1.05	64.06	64.06	40.00
BPL Group	1.08	1.13	1.31	1.54	42.59	36.28	17.56
Escotel	0.57	0.59	0.69	0.83	45.61	40.68	20.29
Idea	1.2	1.28	1.9	2.24	86.67	75.00	17.89
Reliance	0.5	0.54	0.61	0.67	34.00	24.07	9.84
Others	0.66	0.73	0.88	1.29	95.45	76.71	46.59
Total	10.53	12.69	18.3	21.99	108.83	73.29	20.16

(iv) WLL(M) Subscribers Base (in Million)							
1) Basic Service Providers	QE Dec 2002	FE 2003	QE Sept 2003	QE Dec 2003	%age growth over QE Dec 2002 (12 months)	%age growth over FE 2003 (9 months)	%age growth over last quarter (3 months)
BSNL	0.03	0.03	0.03	0.17	466.67	466.67	466.67
MTNL	0.05	0.06	0.07	0.09	80.00	50.00	28.57
Reliance			4.2	5.57			32.62
Tata/ Hughes	0.12	0.16	0.37	0.56	366.67	250.00	51.35
Bharti	0	0		0			
HFCL	0.02	0.03	0.03	0.03	50.00	0.00	0.00
Shyam	0.02	0.03	0.03	0.03	50.00	0.00	0.00
Total	0.24	0.31	4.73	6.45	2587.50	1980.65	36.36

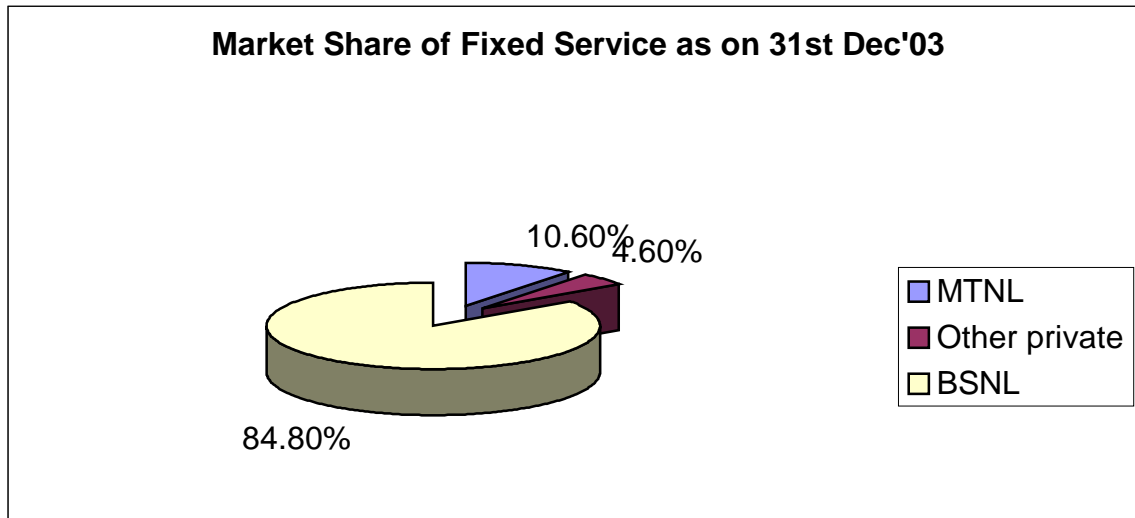
Chapter One

Performance of Fixed Services

1.1 Subscribers Base: -

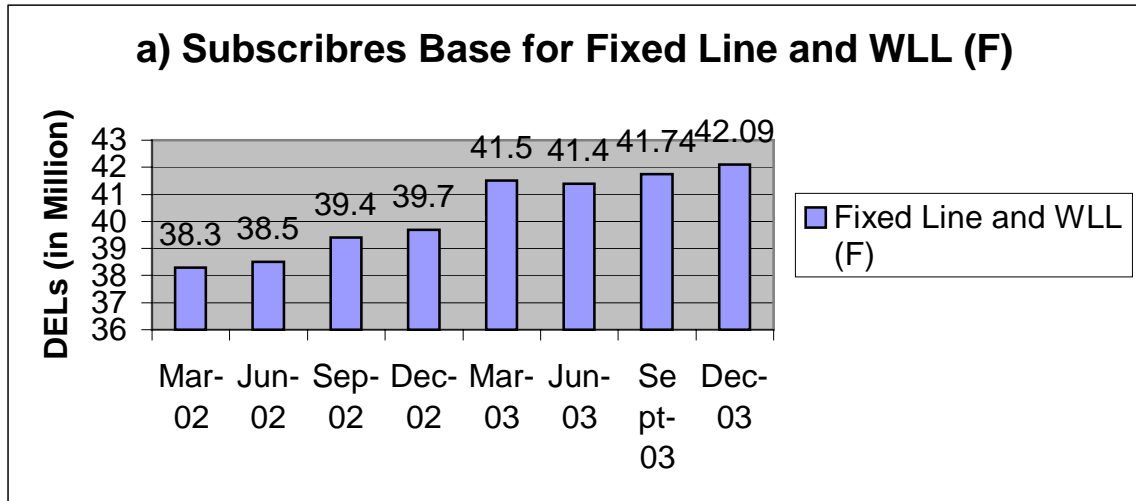
1.1.1 As on 31st December 2003, the Fixed Service sector has 5 licensed private operators providing services in their respective licensed areas in addition to incumbents MTNL and BSNL. However all the 5 private Basic Service Operators have migrated to Unified Access Service License (UASL). The circle-wise details of the migration to UASL as on 31.12.03 at Annex 1.1. As on 31st December 2003, the total subscriber base of fixed telephony [Including WLL (F)] stood at 42.09 millions.

1.1.2 The incumbents BSNL and MTNL had 84.80% and 10.60% market share respectively in the subscriber base, while all the five private operators have 4.60% share.

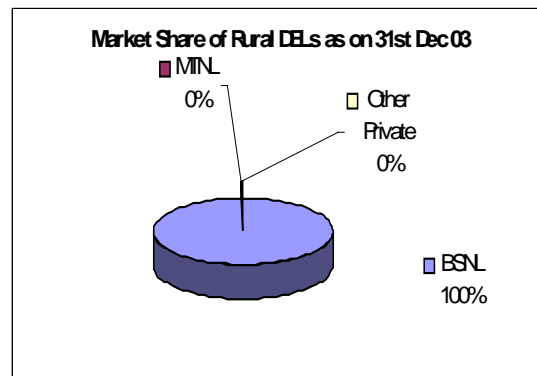
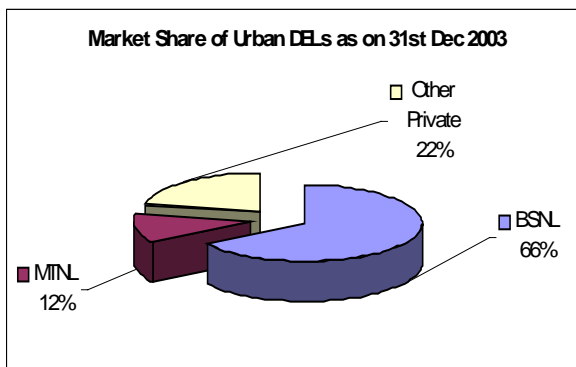


1.1.3 The Fixed Service sector registered a growth of 31,14,982 lines during the Quarter from 1st October 2003 to 31st December 2003. The actual number of DELs has increased from 4,64,73,236 as on 30th September 2003 to 4,84,35,177 as on 31st December 2003. The overall percentage of growth in subscriber base during the Quarter was around 1%.

1.1.4 The subscriber base of the Fixed service sector for last eight quarters is depicted in the bar chart below:



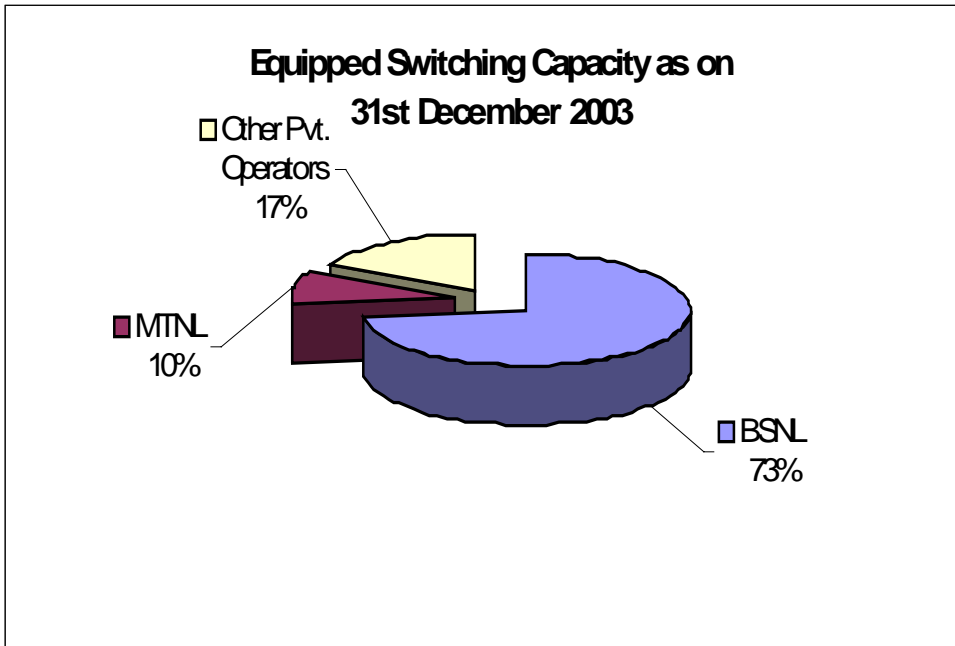
1.1.5 The market share of Fixed Service operators (including Basic Service Operators who have migrated to Unified Access Service License) in Urban DELs and Rural DELs is depicted in the chart below:



1.2 Other Performance Indicators: -

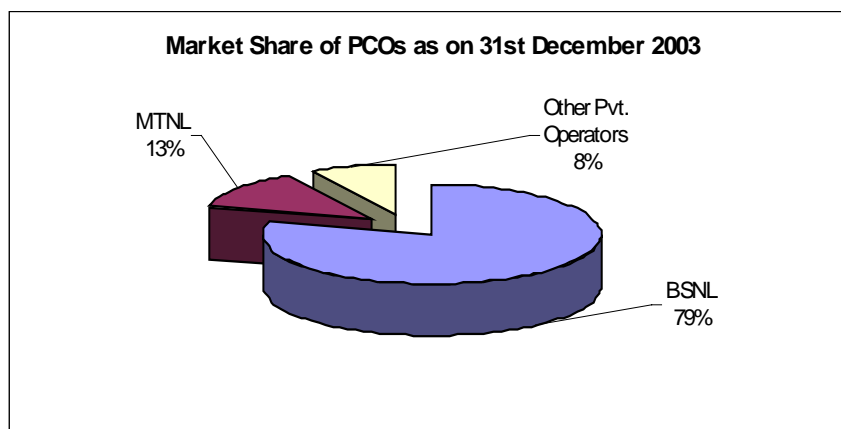
1.2.1 Switching Capacity [for Fixed & WLL (M)]:

Total equipped switching capacity of all the Basic service operators (including Basic Service Operators who have migrated to Unified Access Service License) in the country as on 31st December 2003 is 6,24,17,400 and net capacity added by them during this quarter is 3,43,745. BSNL contribution is 4,56,03,925 i.e. 73 % of total capacity. The total equipped switching Capacity of MTNL is 60,46,373 i.e. 10 % of total capacity and that of all private operators is 1,07,67,102 i.e. 17% of total capacity by the end of the quarter. Operator wise (BSNL/MTNL/Other Private Operators) switching capacity as on 31st December 2003 is depicted in the chart below. Operator-wise details of the same is available at Table 1.4.



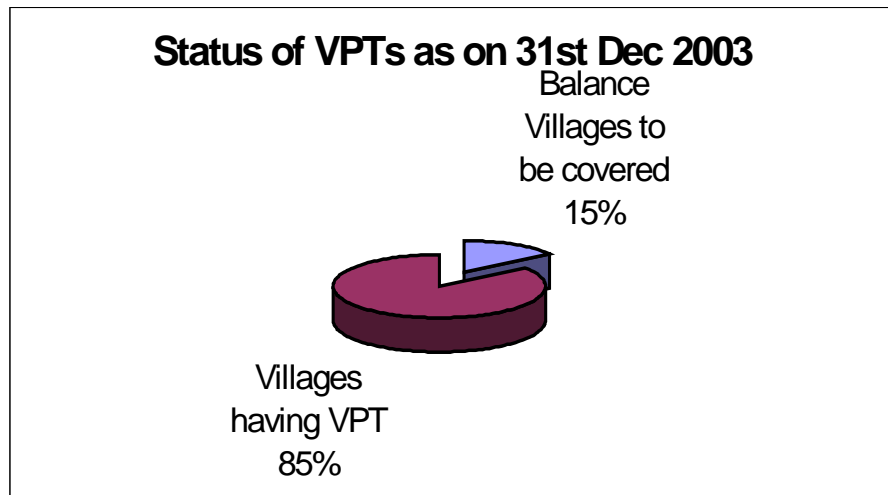
1.2.2 Public Call Office:

During the current quarter 1,34,225 new PCOs have been added. Total number of PCOs in the country as on 31st December 2003 is 17,90,205. The contribution of BSNL is 14,17,007 i.e. 79% of the total PCOs. The contribution of MTNL and other private operators is 2,28,349 (13 %) and 1,44,849 (8%) respectively. Operator wise (BSNL/MTNL/Other Private Operators) market share of PCO is depicted in the chart below. Operator wise details of PCOs is available at Table 1.2



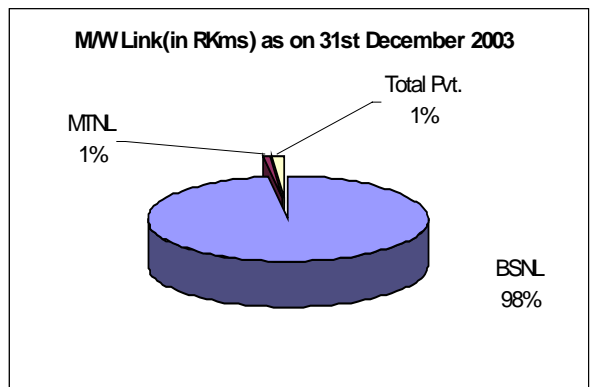
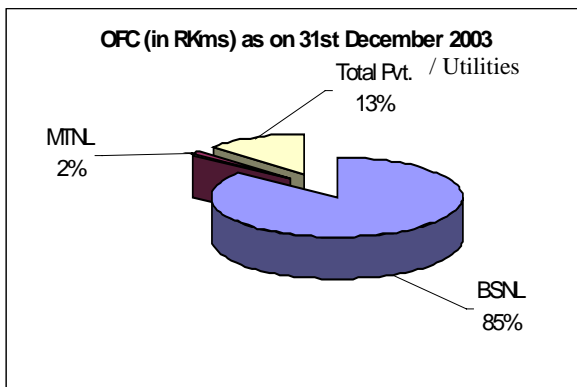
1.2.3 Village Public Telephones (Fixed + WLL (F)):

There are 6,07,491 villages in India. During the quarter ending 30th September 2003 there were 5,18,521 VPTs in the country whereas by the end of this quarter the total number of VPTs have marginally increased to 5,19,367. Thus 846 VPTs have been added during the current quarter. The total number of villages left uncovered, as on 31st December 2003 are 88731. During the quarter BSNL has added 392 VPTs , and among the five private operators M/s. Shyam Telelink has added largest number of 392 VPTS, M/s. Tata Teleservices (including Maharashtra) has added 59 VPTs and M/s. HFCL has added 3 VPTs. Operator-wise details of village public telephones as on 31st December 2003 and achievement during the quarter is available at Table 1.3



1.2.4 Transmission Network Infrastructure:

Following charts depict the Transmission Network Infrastructure (Optical Fiber Cable and Microwave Link in RKms) available with Basic Service Operators (including Basic Service Operators who were migrated to Unified Access Service License). Operator wise details of the same as on 31st December 2003 and addition made during the Quarter are available at Annex 1.2.



Chapter Two

Performance of Mobile Service

Additions during quarter exceeds 5.4 million

2.1 Growth of Subscribers Base: -

2.1.1 Total Subscribers Base:

The mobile Industry has almost touched 28.50 million subscriber mark at the end of quarter ending on 31-12-2003. The subscriber base stood at 28.44 millions as against 23.03 millions at the end of September 2003.

2.1.2 Addition in Subscribers Base:

Approximately 5.41 millions subscribers were added during the last quarter as against 5.52 millions subscribers added during the previous quarter.

2.1.3 Growth Rate:

All India growth rate in the quarter ending Dec.2003 is 23.64% as compared to 31.59% during the quarter ending Sept. 2003.

2.1.4 Launch of Mobile service (Cellular) in North-East Sector:

BSNL has started its mobile services in North East during this quarter. BSNL as third operator is providing its cellular services in 20 circles by the end of this quarter.

2.1.5 Company wise Market Share:

a) The market share of different Mobile operators is given in Table 2.1. The top five Mobile operators on the basis of market share are as under: -

Service provider	Dec'03	%age share on Dec'03
Reliance	62.46	21.96
Bharti	55.00	19.34
BSNL	49.30	17.34
Hutchison	37.71	13.26
Idea	22.41	7.88

The details of operator-wise subscribers of Cellular and WLL(M) are given in Table 2.2.

- b) Distribution of Subscriber Base (Cellular only) as on Dec'03 among Metro, Circles A to C is given below and quarterly growth pattern is given in Table 2.3.

Circle	Subscribers (lakhs)	Market Share
Metros	69.94	31.80%
Circles 'A'	80.48	36.53%
Circles 'B'	60.53	27.52%
Circles 'C'	8.97	4.15%
Total	219.92	

2.2 Mobile (Cellular) Service Trends: -

2.2.1 Highlights:

- Share of prepaid subscribers in total cellular subscriber base is 76.5% at the end of December 2003.
- Prepaid subscriber base has experienced a growth of 18.69% during the quarter, while postpaid subscriber base has grown by 26.81%.
- All India ARPU for cellular service for the quarter is Rs.457/- per month. ARPU figures for postpaid and prepaid are Rs. 1031 and Rs. 288 respectively.
- All India MOU per subscriber for cellular service for the quarter is 301 per month. MOU per subscriber per month for postpaid and prepaid are 602 and 213 respectively.
- The ratio of incoming – outgoing calls in cellular traffic is 62:38 during this period.
- The effective charge of a local call per minute in cellular service as per the minimum tariff plan available in the market for the quarter is Rs.0.77.
- Domestic SMS charge per message ranges between Rs. 0.25 to Rs. 1.5. Lowest rate of Rs. 0.25 is being offered by MTNL.
- Monthly ARPU of BSNL/MTNL is Rs. 443 that is lower by about 3.78% than the ARPU of private CMSPs (Rs. 461).
- Overall proportion of roaming revenue to the total revenue is 10.41%.
- Overall ARPU per month for WLL-M (Rs. 460) and Cellular (Rs. 457) are more or less same. WLL(M) essentially being a postpaid service and if comparison is made with postpaid cellular service ARPU is lower by 55%. WLL(M) subscriber constitutes 22.7% of the total Mobile subscriber base.

- Reliance has emerged as number one operator in the mobile segment (Cellular + WLL(M)) with a market share of 21.96%, followed by Bharti with 19.34% and BSNL 17.34%, during the quarter ending December 2003. (Details at table 2.1)

2.2.2 Growth of Prepaid Platform in Cellular Services:

At the end of December 2003, the proportion of prepaid subscribers to the total subscribers in cellular services is more or less constant at about 77% on an all India basis. The largest proportion of prepaid subscribers continues to be in Circle C, followed by Metro, Circle B and Circle A. The highest growth rate of postpaid subscription at 40.7% during September 2003 to December 2003 has been noticed in Circle C, followed by Circle A (35%). The highest growth rate of prepaid subscription at 23.9% has been noticed in Circle B, followed by Circle A (18.48%). Prepaid subscriber base have experienced a growth of 18.69% during the quarter, whereas, postpaid subscriber base have experienced a growth of 26.81%. It is worth mentioning here that there has been a continuous increase in the rate of growth of postpaid subscribers. But the growth rate for pre-paid has shown a decline. The growth in postpaid can probably be attributed to introduction of low rental plans by major operators. (Details at Annex 2.3).

2.2.3 ARPU:

The all India blended ARPU per month of Cellular Service for the quarter is Rs.457/-. The lowest blended ARPU is in Circle B (Rs. 430) and the highest is in Circle C (Rs. 480). The all India postpaid ARPU at Rs. 1031 per month is about 3.5 times that of all India prepaid ARPU at Rs. 288. Such difference between postpaid ARPU and prepaid ARPU is maximum in Metro, wherein the postpaid ARPU is about 5 times greater than that of prepaid ARPU, indicating the escalation of competition in Metro. Further, Metro provides both the highest ARPU for postpaid and the lowest ARPU for prepaid platform. Blended ARPU for private operators is Rs. 461/- as compared to Rs.508/- prevailed during the previous quarter showing thereby a decline of 9.2%. Highest decline is seen in Circle C (about 13.35%). Competition has begun in Circle C with the BSNL commencing operations in this quarter (Annex 2.4). Blended ARPU for Govt. operators at Rs. 443 is lower than that of Private operators by 4% during the quarter the quarter ending Dec-03. In postpaid stream, ARPU of BSNL/MTNL is about 34% lower than that of private operators. On the other hand, in prepaid stream, ARPU of BSNL/MTNL is about 7.4% higher than that of private CMSPs. The ARPU for prepaid service for private CMSPs is Rs.284/- that is lower by 5% in the quarter ending December 2003 as compared to Rs.300/- existed in the previous quarter.

2.2.4 Composition of Revenue of Cellular Service Providers:

Proportion of rental revenue to the total revenue for private CMSPs has declined from 29.82% in September 2003 to 27.29% in December 2003 on account of the introduction of lower rental plans. The revenue from call charges has increased from 34.92% to 37.36% during the same period in respect of postpaid subscription. While the proportion of roaming revenue in total revenue for private CMSPs has increased from 0.29% to 0.96% in respect of prepaid service, the same in respect of postpaid cellular service has declined from 23.77% in Sept-03 to 20.31% in Dec-03.

2.2.5 Usage Pattern in Cellular Service:

MOU per subscriber per month for Cellular service during the quarter ending December 2003 is 301. Considering private CMSPs alone, MOU per sub per month is about 288 as compared to 275 during the previous quarter, showing thereby an increase of about 5%. Highest increase has been seen in Circle B of about 23%. The incoming-outgoing call ratio is 62:38. Slight increase in the proportion of incoming calls (from 63% to 64%) has been noted for private CMSPs during the quarter. The highest MOU (blended) is observed in Circle A at 313 and the lowest in Circle C. In the postpaid platform, highest MOUs per subscriber has been observed in Metro. The lowest MOU per subscriber in prepaid segment has also been seen in Metro.

2.2.6 Gross Revenue Realization – Cellular Service:

On an average, the gross revenue realization per minute for cellular service providers stood at Rs.1.52 on an all India basis. The highest revenue realization in postpaid stream is noted in Circle C at Rs. 3.40 per minute, which is double than that of all-India average. Competition does not appear to be significant in Circle C as far as cellular service is concerned. These results are tabulated at Annex 2.5.

2.2.7 Minimum Tariff in Cellular Market:

Blended ARPU for Mobile services (GSM & CDMA) is Rs. 457.40 per month in the quarter ending December 2003.

Minimum Tariff in Mobile Services

Trends in Mobile tariffs on the basis of known weights for key parameters - The minimum charge (amongst tariffs reported from all circles) available for local calls for Mobile Service have been calculated for postpaid assuming 400 minutes of usage (both incoming and outgoing) per month.

Minimum effective charge for local calls (Rs. per minute)

Service	July-03 to Sept-03	Sept-03 to Dec-03	% decline
Mobile Service	0.67	0.57	14.74%

Assumptions:

1. Outgoing usage has been distributed in 70:25:5 for Fixed: Cellular:WLL(M)
2. 70:30 ratio has been applied for peak: off-peak hours
3. 60% of the total usage has been attributed to incoming calls
4. Average holding time for local calls has been taken as 1 minute
5. Interest on security deposit & advance monthly rental have been taken @ 8% p.a.

There has been a decline of 14.74% in minimum effective charge for Mobile services.

Chapter Three

Performance of Internet Services

Subscribers base crosses 4 million mark.

3.1 Service Providers & Subscribers Base: -

Around 189 Internet Service Providers were operational during quarter ending December 2004. Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of 10,04,246 against 8,17,528 during the last quarter. Mahanagar Telephone Nigam Limited (MTNL) follows it with a subscriber's base of 6,91,717 against 7,08,360 subscribers during the last quarter and retained its second position. (ref Table 3.1).

The reported subscriber base has touched 41.38 lakhs as on quarter ending 31st December 2003 as compared to 39.83 lakhs during the preceding quarter registering an increase of 3.9% during the quarter.

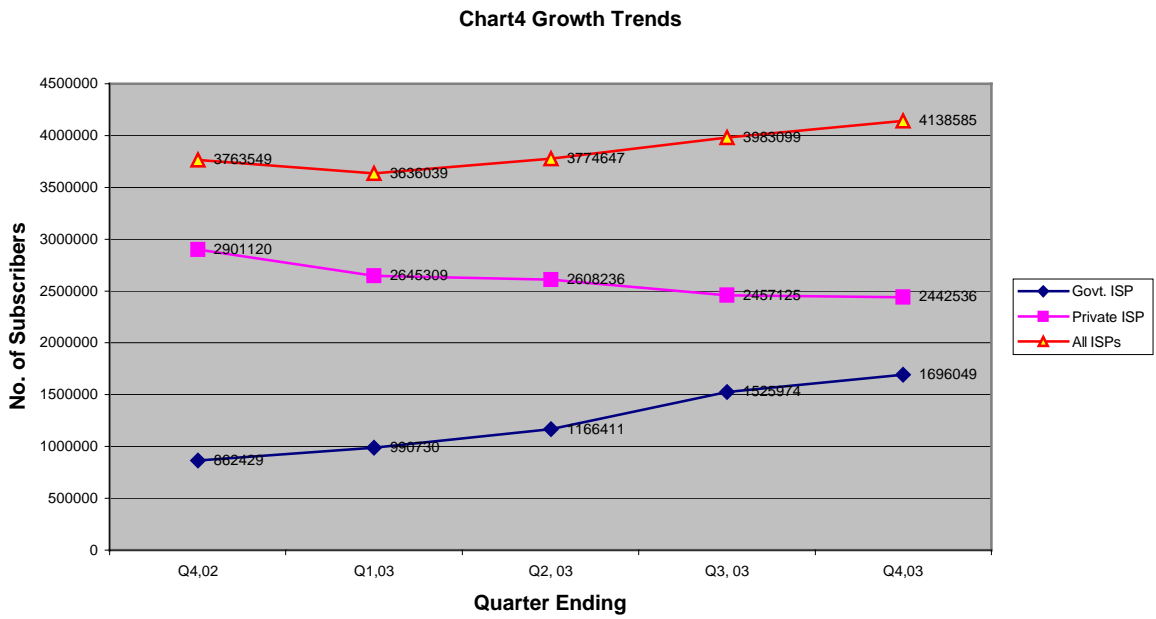
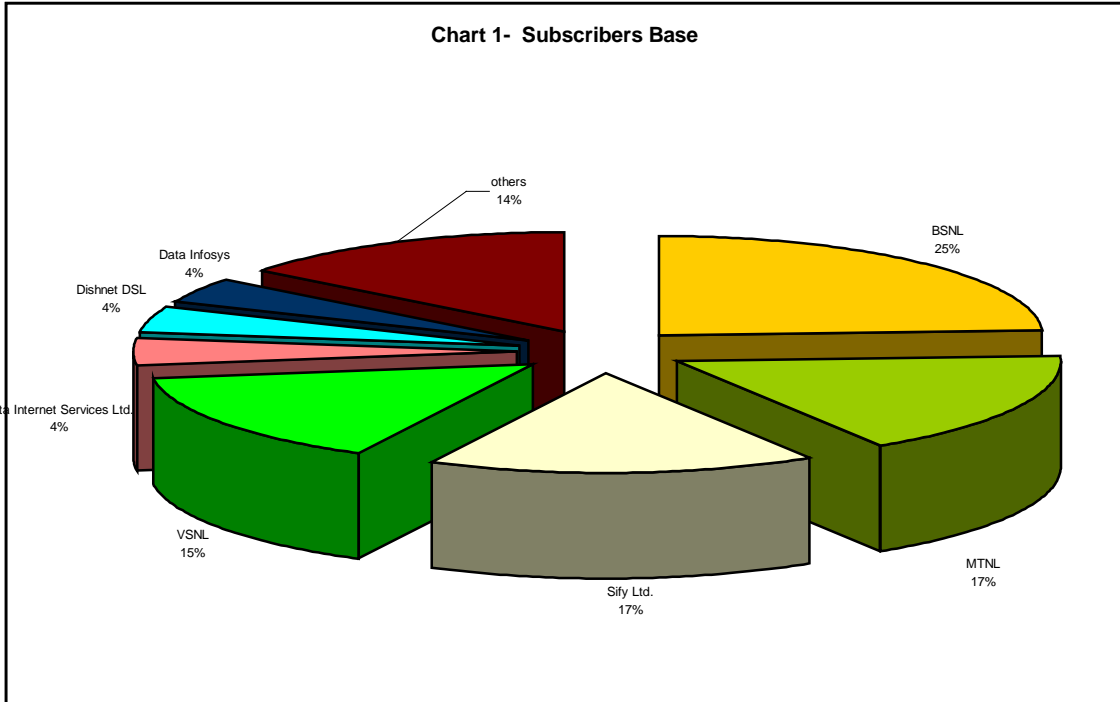
3.2 Internet Telephony: -

The Internet Telephony was thrown open for Internet service provider's w.e.f 1st April'02. DOT has given permission to 118 ISPs to offer Internet Telephony services as on 31st December 2003 and as per the report submitted to TRAI 43 ISPs have started Internet Telephony services and total minutes of the usage for Internet Telephony during the quarter were 20.1 million, shows a growth of 41.5% over the previous quarter.

3.3 Market Share: -

Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of 10,04,246 against 8,17,528 during the last quarter. Mahanagar Telephone Nigam Limited (MTNL) follows it with a subscriber's base of 6,91,717 against 7,08,360 subscribers during the last quarter and retained its second position. M/s Sify Ltd. has retained its third position during the quarter and has reported a subscriber base of 6,86,642. Videsh Sanchar Nigam Limited (VSNL) has retained its fourth position and reported a subscriber base of 6,29,411 during the quarter ending December 2003. Tata Internet Services has moved from sixth place to fifth place during the quarter and reported a subscriber base of 1,78,875.

Share of Government ISPs has shown an increase of 96.66% over the last year, increasing the number of subscribers from 8,62,429 as on December 2002 to 16,96,049 as on December 2003. During the same time the share of Private ISPs have shown a decline of 18.77% from 29,01,120 as on December 2002 to 24,42,536 as on December 2003.



3.4 Leased Lines Connectivity: -

The leased line customer base has risen to 8888, showing a growth of 9.6% over previous quarter.

3.5 Cafes/Community Internet Centres (CIC): -

There are reported to be 8850 Cyber Cafes during the quarter ending December 2003, out of which 6153 have been franchised by the ISPs and rest are non-franchised.

3.6 High Speed Connectivity: -

On the Broadband front, there are 53073 DSL customers, 4209 DIAS and 2475 radio-based customers, in addition to 87289 subscribers, who access the Internet through Cable TV network. The broadband connections have shown a growth of 25.55% over the previous quarter, totaling about 1.47 lakhs connection.

3.7 Minutes of use per subscriber: -

As reported by 49 ISPs the average minutes of use per subscriber/ month is approximately 399 minutes.

3.8 Average Revenue Per User (ARPU) for ISPs: -

A total of approx. Rs 322 crores revenue has been reported by 89 ISPs. The Average Revenue Per User (ARPU) per month for Internet usage was of the order of Rs 270.

3.9 International connectivity: -

The bandwidth owned by various IGSP for their ISP operations and Leased lines was 3.2 GB for downlinking and 2.8 GB for uplinking.

Chapter Four

Performance of Other Value Added Services

VSAT Service accelerates the growth rate

4.1 Public Mobile Radio Trunked Service (PMRTS): -

Public Mobile Radio Trunked Service (PMRTS) is being provided by 15 operators in 20 service areas.

4.1.1 During the Quarter Ending 31st December 2003:

- The subscriber base of PMRTS increased from 24322 in September 2003 to 24666 in December 2003 registering a growth rate of 1.41%.
- Delhi, Mumbai, Bangalore and Chennai together account for 70% of market share of the total subscribers. Delhi leads the tally with the market share of 8784 subscribers followed by Mumbai and Bangalore with the market share of 3080 and 2744 subscribers respectively.
- Procall Ltd leads the tally of subscribers with a subscriber base of 7227 followed by Arvind Mills and Quick Calls Pvt. Ltd with a subscriber base of 6156 and 3126 respectively.
- Out of 20 service areas, the subscriber base of 11 service areas has increased in the quarter ending 31st December 2003 as compared to previous quarter. These service areas are Bangalore, Chennai, Hyderabad, Vishakapatnam, Vadodra, Navi Mum Vasi, Navi Mum Belapur, Indore, Pune, Faridabad and Jaipur.
- In the present quarter, the subscriber base of PMRT services has shown an upward trend, this is due to the fact that Bangalore has added 370 new connections with respect to Arvind Mills and Quick Call Pvt. Ltd.
- In the present quarter, United Liner Agencies of India (Pvt. Ltd.) has terminated their service in Jamnagar.
- In the present quarter, Hofintel and ITI Ltd did not submit their report.

4.1.2 The subscriber base of service providers of PMRTS is given in Table 4.1.

4.2 VSAT services: -

VSAT services are being provided by 11 VSAT service providers.

4.2.1 During the quarter ending 31st December 2003:

- The present quarter added 3552 new subscribers. The total number of connections increased from 19778 in September 2003 to 23330 in December 2003 registering an overall percentage growth rate of 17.96% in this quarter.
- Hughes Escorts Communications Ltd. (HECL) remained the market leader with the total number of 7263 VSAT connections followed by HCL Comnet with 5833 and Comsat Max with 3833 VSAT connections respectively.
- Hughes added the maximum number of new connections (1335) with a percentage growth rate of 22.52%.
- The total number of connections remained same for HFCL, ITI and GNFC.

4.2.2 The number of subscribers of each service provider from quarter ending 31st March 2003 to 31st December 2003 along with the Market Share in terms of Percentage of Subscribers as on 31.12.2003 is given in Table 4.2:

Chapter Five

Quality of Service (QoS) Performance

5.1 Quality of Service Report of Basic Service Operators for the Quarter Ending December 2003

Based on Quality of Service Parameters reported by Basic Service Operators for the quarter ending December 2003, the information on QoS parameters is attached to this report as Annex 5.1 (Pages 1&2).

From perusal of the report (Annex 5.1 Page 1&2) following points emerges.

- (1) Provision of telephone within 7 days for exchange areas declared "On Demand".
Only Shyam Telelink, Rajasthan and HFCL, Punjab have met the TRAI's QoS requirement of providing connection within 7 days of Registration for exchanges declared "On Demand". Information regarding "DELs added in the licensed service area covering exchanges declared on demand availability for telephones has not been furnished by BSNL and Reliance and therefore this parameter can not be calculated for BSNL and Reliance. The performance of MTNL (Delhi), Bharti (HR, Delhi, TN), Tata (AP, TN, KTK, Delhi) is (58%), (74%, 49%, 79%), (79%, 76%, 76%, 73%) respectively, which is way below the benchmark of 100%.
- (2) Fault incidences per month per 100 telephones (should be less than 3 Fault per 100 phones per month)
BSNL, MTNL, HFCL & Tata(TN) have failed to meet the specified QoS benchmarks.
- (3) Percentage of faults repaired by next working day (should be >90%)
15 out of 26 circles of BSNL have met the TRAI's QoS benchmark on Fault Repair by next working day. MTNL (Delhi & Mumbai) has failed to meet the specified QoS benchmarks. Among the private service providers except Bharti (Karnataka), all others have met the parameter.
- (4) Mean Time to repair (MTTR) (should be <8hrs.)
Only 6 out of 26 circles of BSNL have met the benchmark. MTNL (Delhi & Mumbai) have failed to meet the benchmark. All private BSOs have meet the benchmark in their respective circles.
- (5) Grade of Service for junction between local exchanges (should be < 0.002)
Grade of Service not reported by BSNL. MTNL (Delhi & Mumbai) has not achieved the desired benchmark. Among the private operators, Tata (TN, KTK & GJ) have not met the stipulated benchmark
- (6) Call Completion Rate in local network (should be >65%)
BSNL and MTNL have not met the OoS benchmark in all circles. Among the private Operators HFCL (PB), Shyam Telelink (RJ), Bharti (TN), Tata (AP) & Reliance have achieved the desired QoS benchmark.
- (7) Metering and Billing credibility (Not more than 0.1% of bills should be disputed over a billing cycle)
Only 7 out of 26 circles of BSNL have not met the overall QOS benchmark on disputed bills. These circles are A&N, AP, GJ, MP, NE-I, OR & PB. MTNL (Delhi & Mumbai) has also not met the same. Among the Private Operators HFCL (PB),

Tata (MH, TN), Bharti (MP, Delhi, TN), Shyam Telelink (RJ) & Reliance (A&N, BR, HP, MP, OR, PB, RJ, TN) have met the QoS benchmark.

(8) Operator assisted Trunk Calls (Urgent calls should be answered within 1 hr and Ordinary calls within 2 Hrs.)

For urgent operator assisted calls BSNL and MTNL have failed to meet the benchmark in all the circles. Among the private operators TATA (Gujarat & Karnataka) & Shyam Telelink (RJ) have met the QoS benchmark.

For Operator assisted ordinary trunk calls BSNL & MTNL have failed to meet the QoS benchmark. Among the private operators only TATA has met the benchmark in MH, KTK & GJ circles. Reliance has not reported this parameter.

(9) Customer Care: Promptness in attending 95% of customers requests (Benchmarks for Shifts, Closures and providing additional facilities are <3 days, <24 hours and <24hours respectively)

(i) Shifts: -

BSNL have failed to meet the requirement on customer care (Shift). MTNL have also failed to meet the requirement on Customer care. Among the private operators only Shyam Telelink and Reliance have met the QoS benchmark on Customer Care (Shifts).

(ii) Closures: -

As regards 'Closures' these figures are not available for BSNL. MTNL (Delhi & Mumbai), Tata (GJ), Bharti (MP, TN) & Shyam (RJ) have met the benchmark.

(iii) Additional Facility: -

BSNL has not reported the figure for additional facility. MTNL (Delhi and Mumbai) have failed to meet the benchmark. Bharti (MP, TN), Tata (MH) & Shyam (RJ), have met the QoS benchmark.

M/s Reliance has reported 100% promptness in all circles for attending customer requests regarding shifts, closers and additional facilities.

(10) Percentage of repeat faults (should be <1%)

In case of Repeat faults, BSNL in all circles except Assam & MTNL (Delhi & Mumbai) have failed to meet the benchmark. Among the private Operators only Reliance & Shyam Telelink are within TRAI's benchmark limits.

5.2. Report on Quality of Service Report of Cellular Mobile Service Providers

In this quarter all Cellular Mobile Service Providers have submitted their QoS report to TRAI.

The summary of status of the service providers who have not meet the benchmarks in this quarter as compared to previous quarter is given in the following table:

Sr. No	Parameter	Benchmarks	No. of operators not meeting benchmarks	
			This Quarter	Previous Quarter
			Out of 71	Out of 68
1.	No. of faults (per 100 subscribers per	<1	8	8
2	Faults cleared within 24 hrs	100.00%	26	21
3	Accumulated down time of community isolation	<24 hrs	11	13
4	Call Success Rate (within licensee's own network)	>99%	27	28
5	Service Access Delay	Between 9 to 20	0	0
6	Call Drop Rate	<3.0%	6	3
7	% of connection with good voice quality	>95%	11	12
8	Complaints per 100 bills issued	<0.1%	20	19
9	% of complaints resolved with 4 weeks	100.00%	14	11
10	Period of all refunds/payment due to customers from the date of resolution of complaints as in (ii) above	<4 weeks	6	9

1. The analysis of PMR is as under: -

- i) From the table, it is observed that out of ten only two parameters namely Accumulated down time of community isolation and Period of all refunds are showing improvement in the performance as compared to previous quarter.**
- ii) For the parameter "Fault cleared within 24 hrs" the performance of BSNL (MH, AP, UP (W), MP, HP, J&K, KOLKATA), Haxacom (RAJ) and BPL (MH) is 56%, 92%, 43%, 82%, 85.77%, 8.31%, 74%, 86.23%, 58.59% & 87% respectively, which is way below the stipulated benchmark of 100%.**
- iii) The Call Success Rate for BSNL (MH, KR, PB, HP) is 77.30%, 89.09%, 79.00%, 87.25%, which is below the benchmark of 99%.**
- iv) % Of Connection with Good Voice Quality for Haxacom (Rajasthan) is 82.4% is which is way below the benchmark of 95%.**
- v) No. of Complaints per 100 bills issued for BSNL (KTK, KR, PB) & Hutchison Essar (Chennai) is 11.50%, 3.00%, 3.50% & 4.58% which is way below the benchmark of 0.1%.**
- vi) The parameter " %age of Billing Complaints Resolved within 4 Weeks" has shown deterioration in the performance.**

- 2. These parameters are currently being audited by IMRB on behalf of TRAI. They are likely to submit their report for the quarter Oct 2003 – Dec 2003 within next week.**

3. Details of Quality of service:

Detail of parameters related to fault incidence and repair, network performance and billing complaints are available at Annexure 5.2.

5.3. Monitoring of Quality of Service Parameters of ISPs:

5.3.1 TRAI notified Regulation on Quality of Service of Dial-up And Leased Line Internet Access Service in December 2001, fixing benchmarks for Internet Dial Access that were required to be achieved by ISPs within 6 months. Accordingly, ISPs are required to comply with the benchmarks from October onwards by reporting the QoS w.e.f. quarter ending Dec. 2003 in their Quarterly PMRs

5.3.2 The annexure 5.3 indicates the Quality of Service achieved by Top 20 ISPs during the quarter:

The parameters, which are below the benchmarks, are indicated in the bold. Information regarding QoS of ISP has been received from all top 20 ISPs. It is observed that most of the ISPs are able to meet the benchmarks, barring one or two cases.

5.3.3 The observations on QoS Benchmarks is as follows:

5.3.3.1 Service Activation Time:

All the ISPs except M/s BSNL have met the benchmark of 6 hrs. M/s BSNL has informed that a scratch card/CD online registration module is introduced to achieve the benchmark.

5.3.3.2 Time to Access:

ISPs are required to achieve the benchmark 30 sec. All ISPs except one ISP has met this target in this quarter.

5.3.3.3 Probability of Accessing the ISP Node:

ISPs are required to maintain the parameter of 80% for the first attempt, 90% for the second attempt and 99% for the third attempt. All the ISPs except one ISP (for third attempt) are able to meet this benchmark.

5.3.3.4 ISP Node unavailability:

ISP Nodes unavailability should not exceed 30 minutes in a month. All ISPs are able to achieve this benchmark.

Table 1.1

Subscriber Base of Fixed Services

S. No.	BSO	Area of Operation	March'03	June'03	Sept'03	Dec'03
1	BSNL	All India	35907691	35726495	35821681	35706683
2	MTNL	Delhi & Mumbai	4633665	4555040	4457523	4459955
3	Bharti Group	MP, Delhi, Haryana, TN, Karnataka	370973	422178	497094	569196
4	Tata Teleservices	Maharashtra	233397	248227	704218	867958
5	Tata Teleservices	AP, TN, Karnataka, Gujrat, Delhi	216527	289606		
6	HFCL Infotel	Punjab	79502	83613	93844	107990
7	Shyan Telelink	Rajasthan	49138	55383	67676	87334
8	Reliance Infocom	18 Circles	160	160	103514	290303
Grand Total			41491053	41379702	41745550	42089419

Table 1.2

Details of Public Call Offices (PCO)

S.No	Service Providers	Area of Operation	PCOs as on 31.12.03	PCOs Added during the quarter
1	BSNL	All India	1417007	102628
2	MTNL	Delhi & Mumbai	228349	7499
3	Bharti	MP, Delhi, Haryana, TN, Karnataka	65721	10617
4	HFCL	Punjab	20036	1554
5	TATA	Maharastra	26345	3050
6	RTPL	18 Circles	0	0
7	STL	Rajasthan	12200	4561
8	TTL	AP, TN, Karnataka, Gujrat, Delhi	20547	4316
	TOTAL		1790205	134225

* Source - Operators

Table 1.3

Details of Village Public Telephones (VPT)

S.No	Service Providers	Area of Operation	VPTs as on 31.12.03	Additions during the Quarter (Oct-Dec 2003)
1	BSNL	All India	506109	392
2	MTNL	Delhi & Mumbai	191	0
3	Bharti	MP, Delhi, Haryana, TN, Karnataka	607	0
4	HFCL	Punjab	880	3
5	TATA	Maharashtra	2656	31
6	RTPL	18 Circles	4114	0
7	STL	Rajasthan	3402	392
8	TTL	AP, TN, Karnataka, Gujrat, Delhi	1408	28
	TOTAL		519367	846

* Source - Operators

* For Bharti Figure for Sept'03 is taken as uncharged for Dec'03

Table 1.4

Equipped Switching Capacity

S.No	Service Providers	Area of Operation	Equipped Capacity as on 31.12.03	Capacity Added during the quarter
1	BSNL	All India	45603925	209086
2	MTNL	Delhi & Mumbai	6046373	-280272
3	Bharti	MP, Delhi, Haryana, TN, Karnataka	732986	45104
4	HFCL	Punjab	192660	0
5	TATA	Maharastra	564000	18000
6	RTPL	18 Circles	7928104	226552
7	STL	Rajasthan	140000	0
8	TTL	AP, TN, Karnataka, Gujrat, Delhi	1209352	125275
	TOTAL		62417400	343745

Table 2.1

Subscribers Base of Mobile Service (Cellular + WLL(M))

	Mar'03	Jun'03	Sept'03	Dec'03	%age share for Dec'03
Reliance	5.41	23.95	47.96	62.46	21.96
Bharti	30.17	37.51	46.17	55.00	19.34
BSNL	22.98	32.34	40.14	49.30	17.34
Hutchison	21.63	26.19	32.23	37.71	13.26
Idea	12.80	14.63	18.98	22.41	7.88
BPL	11.31	11.67	13.05	15.41	5.42
Spice	6.40	7.09	7.54	10.53	3.70
Escotel	5.87	5.99	6.90	8.26	2.90
Tata	1.47	2.01	3.80	5.64	1.98
MTNL	3.47	3.46	3.88	4.15	1.46
Hexacom	1.32	1.55	1.81	2.03	0.71
Shyam	0.33	0.33	0.31	0.30	0.11
HFCL	0.32	0.27	0.25	0.26	0.09
Others (Aircell, RPG etc.)	6.43	7.79	6.98	10.91	3.84
Total Sub. Base	129.91	174.78	230.00	284.37	

Subscribers Base for Cellular & WLL (M)

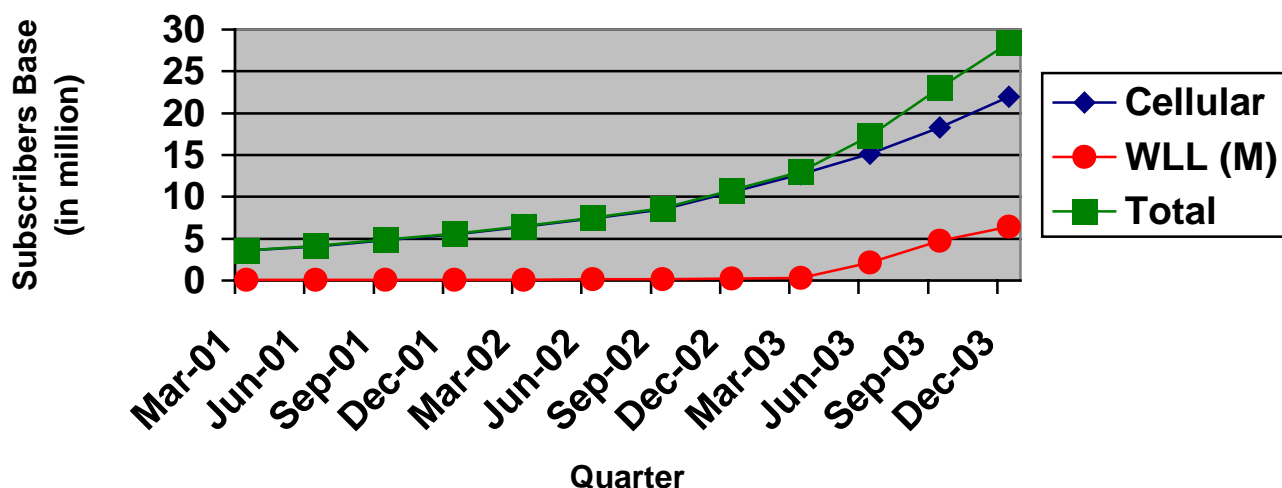


Table 2.2

Market Share of Cellular + WLL (M) Service Providers

i) Subscriber Base of Cellular Mobile Service

S.No.	Cellular Group	No. of Subscribers (in lakhs)	Market Share
1.	Bharti Grp	55.00	25 %
2.	BSNL	47.64	21.7 %
3.	Hutchison Grp	37.71	17.1 %
4.	IDEA Grp	22.41	10.2 %
5.	BPL Grp	15.41	7 %
6.	Others (ADIL, Hexacom, RPG & Aircel)	12.95	5.9%
7.	Spice Grp	10.53	4.8 %
8.	Escotel Grp	8.26	3.8%
9.	Reliance Grp	6.75	3.1 %
10.	MTNL	3.25	1.5 %
Total		219.92	

ii) Subscriber Base of WLL (M) Service

Operators	No. of subscribers (in lakhs)	Market Share
Reliance	55.71	86.41
Tata	5.64	8.75
BSNL	1.66	2.57
MTNL	0.90	1.40
HFCL	0.26	0.40
Shyam	0.30	0.47
Total	64.47	

Table 2.3

Growth Pattern of Cellular Subscriber Base

2.2.1 Cellular Subscriber base

(Subscribers in Lakhs)

Category	Mar'03	June'03	Sept'03	Dec'03	% share for Dec'03
Metros	44.4	51.92	61.07	69.94	31.80
A' Circle	43.65	52.95	65.76	80.48	36.53
B' Circle	33.75	41.08	48.6	60.53	27.52
C' Circle	5.08	6.34	7.57	8.97	4.15
All India	126.88	151.49	183.00	219.92	

Source: MN division

2.2.2 Quarterly Growth Rate of Cellular Subscriber

Category	Mar'03	June'03	Sept'03	Dec'03
Metros	9.53%	15.15%	19.47%	14.52%
A' Circle	23.70%	21.32%	24.19%	22.38%
B' Circle	30.38%	21.73%	18.30%	24.55%
C' Circle	40.41%	24.61%	19.54%	18.40%
All India	20.46%	19.40%	20.81%	20.17%

Table 3.1

Subscribers Base of Internet Services

S. No.	Name of the Service Provider	Category	Area of Operation	Total subscribers as on 30 th September 2003	Total subscribers as on 31st December 2003
1	Bharat Sanchar Nigam Ltd.	A	All India	817528	1004246
2	MTNL	B	Delhi & Mumbai	708360	691717
3	Sify Ltd.	A	All India	673567	686642
4	VSNL	A	All India	652284	629411
5	TATA Internet Services Ltd.	A	All India	178214	178875
6	Dishnet DSL Ltd.	A	All India	189813	175721
7	Data Infosys Ltd.	A	All India	150195	174606
8	Bharti Broadband Network Ltd.	A	All India	61701	73872
9	HCL Inffinet Ltd.	A	All India	65223	61744
10	Data Access India Ltd.	A	All India	48636	44685
11	Trak Online Net India Pvt.Ltd	A	All India	32680	41954
12	Icenet.net Limited	B	Gujarat	27866	28258
13	Sab Infotech Ltd.	B C	Punjab, Karnal, Dharmashalla	26490	28242
14	Shyam Internet Services Pvt. Ltd.	A	All India	21625	23748
15	BG Broadband India Pvt. Ltd.	B	Gujarat, Mumbai	15278	23185
16	Tata Teleservices (Maharashtra) Ltd.	A	All India	17818	18253
17	Fascel Ltd.	B	Gujarat	18001	18001
18	Hathway Cable & Datacom Pvt. Ltd.	A	All India	14309	16784
19	Rolta India Limited	B	Mumbai	17163	14805
20	Navin.com (I) Pvt. Ltd.			11743	11743
21	WWW Communications Ltd.	B	Delhi	11191	11522
22	Emmsons Infotech Ltd.	B	Punjab	9370	10200
23	Excel Infotech Ltd.	B	Punjab	10001	10000
24	Asianet Satellite Communications Ltd.	B	Kerala	5974	7242
25	HFCL Infotel Ltd.	B	Punjab	6259	6994
26	BSES Telecom Ltd.	B	Mumbai	3669	6752
27	S.S. Netcom Pvt. Ltd.	B	North East	6378	6585
28	City Online Services Ltd.	B	Andhra Pradesh & Karnataka	6525	6525
29	Primus Telecommunication India Ltd.	A	All India	3737	6299
30	Southern Online Services Ltd.	B	Andhra Pradesh	7559	6061
31	Wilnet Communications Pvt. Ltd.	B	Gujarat	6546	6052
32	Netlinx Ltd.	B	Andhra Pradesh	2856	5003
33	VasNet Communications P.Ltd.	C	Dakshina Kannada	4465	4768
34	RPG Infotech Ltd. (Sprint RPG India)	A	All India	4753	4713
35	In2Cable.Com(India) Ltd	A	All India	4325	4404
36	Express Communication Pvt. Ltd.	B	Kolkata	3349	4381
37	Space Online (P) Ltd.	B	Gujarat	3307	3711
38	Seven Star Dot Com	B	Mumbai	2937	3542
39	Jindal Online.com Ltd.	B	Gujrat	2777	3177
40	Narmada Cyberzone Pvt. Ltd.	B	Gujarat	2662	2948
41	Forum Infotech (P) Ltd.	C	Srinagar SSA	2120	2882
42	E-Comm Opportunities Pvt. Ltd.	B	Gujarat	2391	2802
43	Blazenet Ltd.	B	Gujarat	2774	2774
44	Data-Link Impex Pvt. Ltd.	B	Gujarat	3207	2709
45	Sixth Sense Informatics Pvt. Ltd.	B	Mumbai	2356	2550
46	iPath India Pvt. Ltd.	C	Ernakulam	2612	2453
47	Primenet Global Ltd.	A	All India	1985	2084
48	Spectra Net Ltd.	A	All India	2172	2034
49	Pacific Internet India	A	All India	1687	1732
50	Digital 2 Virtual SP Pvt. Ltd.	C	Vadodara, Kheda	1766	1724
51	Kelnet Communication Services (P) Ltd.	C	Trivendrum	1540	1715
52	Reliance Communications Infrastructure Limited	A	All India	2008	1708
53	Ankhnet Informations Pvt. Ltd.	B	Mumbai	1672	1691
54	Descon Ltd.	BC	Kolkata, WB	349	1682
55	Tawi e.com Pvt. Ltd.	C	Jammu SSA	1554	1611
56	Pioneer Online Pvt. Ltd.	B	Andhra Pradesh	1608	1608
57	Rida Communications Pvt. Ltd.	C	Aligarh SSA	1044	1291
58	Swiftmail Communications Ltd.	A	All India	1305	1260

59	Online Media Solutions Ltd.	A	All India	1081	1201
60	Weikfield Mnemonix Infonetworks Pvt. Ltd.	B	Pune	1205	1150
61	Mylai Karpagamba Information System Pvt. Ltd.	B	Chennai	1089	1137
62	Micky Online Pvt. Ltd.	C	Moradabad, Nainital	1130	1105
63	Siti Cable Network Ltd.	A	All India	1122	1080
64	Trikon electronics Pvt. Ltd.	B	Mumbai	675	1068
65	Bhasinsoft India Ltd.	B	Karnataka	1014	999
66	Patriot Automation	A	All India	1865	956
67	Comsat Max Ltd.	A	All India	842	912
68	Spectrum Softech Solutions Pvt. Ltd.	C	Ernakulam SSA	781	891
69	Bohra Pratisthan Pvt. Ltd.	C	Udaipur SSA	1419	866
70	Jain Infonet Ltd.	B	Rajasthan	1131	865
71	Ortel Communication Ltd	C	Bhubaneshwar, Cuttack	780	850
72	Hathway Bhawani Cable & Datacom	B	Mumbai	616	728
73	IOL Broadband Ltd	B	Mumbai	714	721
74	ERNET India	A	All India	640	668
75	Sujan Engineering Pvt. Ltd.	C	Vadodara SSA	162	667
76	Opto network Pvt. Ltd.	C	Ghaziabad	728	624
77	Growth Compusoft Exports Ltd.	B	Gujarat	631	603
78	Kappa Infotech Pvt Ltd.	C	Kota SSA	545	594
79	Antriksh Technologies Pvt. Ltd.	C	Jammu SSA	400	586
80	Jump India Pvt. Ltd.	A	All India	780	536
81	Chanchalaa Electronics Pvt. Ltd.	C	Ranchi SSA	531	531
82	Millennium Telecom Ltd.	A	All India	1872	512
83	Viraj Telecom Ltd.	B	Karnataka	459	502
84	GTL Ltd.	A	All India	585	487
85	HCL Comnet Systems & Services Ltd.	A	All India	455	486
86	Value Healthcare Ltd.	B	Mumbai	466	476
87	Broadlane Networks Pvt. Ltd.	C	Maharashtra	317	474
88	Websurf Pvt. Ltd.	C	Kalyan SSA	470	468
89	Bhaskar Multinet Pvt. Ltd.	C	Jaipur	400	465
90	CJ Online Private Ltd.	C	Ghaziabad	592	453
91	MyNet Services India Pvt. Ltd.	C	Salem (SSA) Tamil Nadu	628	450
92	Lee & Nee Softwares (Exports) Ltd.	C	Bhubaneshwar	490	448
93	deLaila Industry Pvt. Ltd.	C	Srinagar SSA	400	416
94	Quest Consultancy Pvt. Ltd.	C	Valsad SSA	400	415
95	Silicon Mountains (I) Ltd.	B	Maharashtra	325	409
96	Spacecom Broadlane Networks Ltd.	B	Delhi	422	391
97	Gateway Systems (I) Pvt. Ltd.	A	All India	336	353
98	Mac Info Pvt. Ltd.	B	Hydrabad	340	340
99	My Guru Online	B	Andhra Pradesh	411	329
100	Rajasthan Telematics Ltd.	B	Rajasthan	300	325
101	Guj Info Petro Ltd.	A	All India	311	311
102	Excel media Pvt Ltd.	B	Andhra Pradesh	10507	308
103	Vital Continuity Electronics Pvt. Ltd.	C	Ranchi SSA	300	300
104	Starnet Online Services Ltd.	C	Visakhapatnam	417	294
105	Bareilly Communications Pvt. Ltd.	C	Bareilly	211	290
106	Sanchar Telenetwork Pvt. Ltd.	C	Bhavnagar SSA	281	283
107	ISP Solutions India Pvt. Ltd.	C	Coimbatore SSA	237	267
108	Srishti Open systems (P) Ltd.	C	Trivandrum	239	243
109	Planet Internet Satellite (VVN) Pvt. Ltd.	C	Nadiad Telecom Dist	244	226
110	Dialnet Communications Ltd.	B	Delhi	265	224
111	n-Logue Communications (P) Ltd.	A	All India	182	210
112	Emtici Engineering Ltd.	C	Khera SSA	207	207
113	Diksha Cyber City (P) Ltd.	C	Sri Ganganagar	176	199
114	Czars Oleoresin Pvt. Ltd.	C	Gulbarga District	130	190
115	Digital Nagpur Online Pvt. Ltd.	C	Nagpur		189
116	Surevin Internet Services Ltd.	C	Ghaziabad U.P.	165	168
117	NetMagic Solutions(P) Ltd.	B	Mumbai	150	167
118	CJM Consultancy Services Pvt. Ltd.	B	Delhi	144	160
119	Swastik Netvision Telecom Pvt. Ltd	B	Gujrat	150	152
120	Trans Virtual Pvt. Ltd.	C	Guwahati	83	150
121	Assured Web Technologies Pvt.	C	Bhopal SSA	133	143
122	Aksh Broadband Ltd.	C	Jaipur	176	140
123	Chandra net Pvt. Ltd.	B	Gujrat		140
124	Bhupati Hotels Pvt. Ltd.	C	Visakhapatnam	117	138
125	Trident Netcom Solutions Pvt. Ltd.	A	All India	155	136
126	A-Team Information Technology Ltd.	C	Erode	24	125

127	Shreedhar Infosys Ltd.	C	Varanasi SSA	160	123
128	North east Online Services (P) Ltd.	C	Guwahati SSA	105	114
129	Manipal Ecommerce Ltd. '	B	Karnataka	127	111
130	Q Tel Comtech Ltd.	C	Gurgaon	78	109
131	DelDSL Internet Pvt. Ltd.	C	Delhi, Gurgaon, Banglore, Ghaziabad	106	108
132	Broad Range Application Integrated Networks Solutions Pvt. Ltd.	C	Bokaro SSA	50	88
133	Gujarat State Petroleum Corporation Ltd. (GSPC)	B	Gujarat	86	86
134	Centre for Development of Advanced Computing,	C	Ghaziabad SSA	76	76
135	Estel Communications Pvt. Ltd.	A	All India	72	72
136	Master Chip	C	Nizamabad	66	72
137	Amber online Sevices Ltd.	B	Andhra Pradesh, circle	188	68
138	L&T Netcom Ltd.	A	All India	62	63
139	Micromap Satcom Pvt. Ltd.	C	Lucknow	82	60
140	Tata Power Company Ltd.	A	All India	54	59
141	Hughes Escorts Communications Ltd.	A	All India	817	58
142	Direct Internet Ltd.	C	Delhi, Ghaziabad &Gurgaon	64	56
143	Reach Network India Pvt. Ltd. (Teleweb)	A	All India	36	50
144	Karuturi Networks Ltd.	B	Karnataka	45	49
145	Access Online Pvt. Ltd.	B	Mumbai	46	46
146	Apna Telelink Pvt. Ltd.	C	Jalandhar	64	46
147	Arun Girija Communications pvt. Ltd.	C	PATNA	60	45
148	Indian Quotation Systems Pvt. Ltd.	B	Mumbai	32	32
149	Karvy Consultant Ltd.	B	Andhra Pradesh	30	30
150	i2i Enterprise Ltd.	A	All India	19	28
151	Nomus Internet Systems Pvt. Ltd.	B	Andhra Pradesh	22	26
152	Gujrat Narmada Valley Fertilizer Co. Ltd.	A	All over India	23	21
153	Sree Sree Infotainment Pvt. Ltd.	C	Vishakapatnam		20
154	Paya Computers Services (P) Ltd.	C	Dhanbad		19
155	Essel Shyam Communication Ltd,	A	All India	18	18
156	MX Solutions Pvt. Ltd.	B	Kerala	109	17
157	Kushagra Telecom Pvt. Ltd	C	Ghaziabad	24	16
158	PBC Ventures Ltd.	B	Delhi	17	16
159	Ice Network (P) Ltd.	B	Bangalore		15
160	World Phone Internet Services Pvt. Ltd.	A	All India	20	15
161	Astro Network India Pvt. Ltd.	A	All India	11	13
162	Astra Infonets Pvt. Ltd.	B	Hyderabad	12	12
163	RailTel Corporation of India Ltd.	A	All India	1	12
164	Beacon Broadband Networks Pvt. Ltd.	C	Durg SSA	10	10
165	Software Technology park of India (STPI)	A	All India	10	10
166	Uttar Pradesh Network Pvt. Ltd.	B	Uttar Pradesh	10	10
167	West Bengal Network Pvt. Ltd.	B	West Bengal	10	10
168	World tel TamilNadu Pvt. Ltd.	B	Tamilnadu & Chennai	10	10
169	Applogic Broadband Systems LTd.	B	Hydrabad	8	8
170	Samkhya Networks (P) Ltd.	C	Gurgaon	9	8
171	Cyquator Technologies Ltd.	A	All India	6	7
172	Bihar Network Pvt. Ltd.	B	Bihar	5	5
173	Giga Solutions Pvt. Ltd.	B	Maharashtra	5	5
174	Haryana Cybernet Pvt. Ltd.	B	Haryana	5	5
175	Infomagic Services Pvt. Ltd.	B	Mumbai	5	5
176	Kerala communication Network Pvt. Ltd.	B	Kerala	5	5
177	MP Network Pvt. Ltd.	B	Madhya Pradesh	5	5
178	Orissa Network Pvt. Ltd.	B	Orissa	5	5
179	Punjab Cybernet pvt. Ltd.	B	Punjab		5
180	Tandem Infotech Pvt. Ltd.	C	Trivandrum	5	5
181	Compucom (I) Pvt. Ltd.	C	Jaipur	2	3
182	Reliance Engineering Associates Pvt. Ltd.	A	All India		3
183	Surana Telecom Ltd.	B	Andhra Pradesh	3	3
184	Worldwide com Pvt. Ltd.	C	Saharanpur	1200	3
185	Bharat Connect Ltd.	B	Delhi	2	2
186	Bharti Aquanet Ltd.	A	All India		2
187	CMC Ltd.	A	All India	2	2
188	E Connect Solutions Pvt. Ltd.	C	Udaipur (Rajasthan)	1	1
189	iServ India Solutions Pvt. Ltd.	A	Delhi ,Kerela and UP	2774	1
	Total			3983099	4138585

Table 4.1

Subscriber Base of Public Mobile Radio Trunking Service (PMRTS)

Total number of operators: 15

Number of operators who have submitted reports: 13

S.No.	Name of the Service Provider	Operative Area	Subscriber Base as on 30-09-2003	Subscriber Base as on 31-12-2003
1	Aryadoot Transport Pvt Limited	Vishakhapatnam	863	871
2	Jet-Aiu Skyline Transport Pvt Ltd.	Indore	373	382
3	Container Movement (Bombay) Transport Pvt Ltd.	Delhi	262	241
4	Arya Offshore Services Pvt Ltd.	Mumbai	1009	958
5		Chennai	611	684
	Total		1620	1642
6	Hapag Llyod (German Express Shipping Agency (India) Pvt Ltd.	Navi Mumbai (Belapur)	429	459
7		Delhi	365	350
	Total		794	809
8	United Liner Agencies of India (Pvt) Ltd	Delhi	879	896
9		Jamnagar	87	Nil
10		Calcutta	1005	1000
	Total		1971	1896
11	Procall Limited	Delhi	6228	6226
15		Jaipur	186	193
16		Gurgaon	563	521
17		Faridabad	286	287
	Total		7263	7227
18	The Arvind Mills Ltd.	Delhi	989	1006
19		Faridabad	1	1
20		Mumbai	1056	1101
21		Vashi	46	46

22		Ahmedabad	309	295
23		Baroda	606	627
24		Surat	900	870
25		Chennai	1134	1157
26		Bangalore	840	1053
	Total		5881	6156
27	Smartalk Pvt Limited	Pune	257	342
28		Vashi	487	495
29		Mumbai	286	287
	Total		1030	1124
30	QuickCall	Bangalore	1156	1331
31		Hyderabad	968	999
32		Chennai	854	796
	Total		2978	3126
33	Bhilwara Telenet Services Pvt Limited	Mumbai	811	734
34		Delhi	0	0
	Total		811	734
35	Mobilkom India Limited	New Delhi	65	65
36		Shimla	33	33
37		Dhanbad	Nil	Nil
	Total		98	98
38	India Satcom Ltd.	Bangalore	378	360
39	ITI LTD.	Madurai	Report Not Submitted	Report Not Submitted
40		Hyderabad		
41		Chennai		
42		Ahmedabad		
43		Vadodra		
44	Hofintel Ltd.	Hyderabad	Report Not Submitted	Report Not Submitted
45		Chennai		
	Grand Total		24322	24666

Table 4.2

Subscriber Base of VSAT Service Providers

S.No.	Service Provider	31.03.2003	30.6.2003	30.9.2003	31.12.2003	Percentage of Market Share (%) as on 31.12.2003
1	Hughes	4992	5456	5928	7263	31.13
2	HCL Comnet	3022	3987	4578	5833	25.00
3	Comsat Max	3493	3668	3700	3833	16.43
4	Bharti BT	3047	3252	3462	3824	16.39
5	Essel Shyam	1997	1579	1631	2005	8.60
6	Tata Services	58	58	90	176	0.75
7	Telstra Vishesh	134	158	156	159	0.68
8	RPG Satellite Communications Pvt. Ltd.	103	96	87	91	0.39
9	HFCL	67	67	67	67	0.29
10	ITI	53	53	53	53	0.23
11	GNFC	22	24	26	26	0.11
	Total	16988	18398	19778	23330	100.00

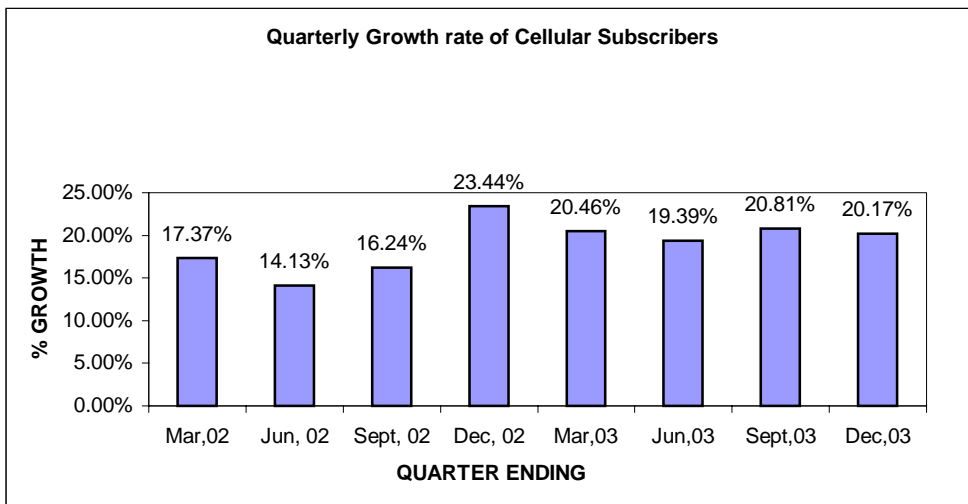
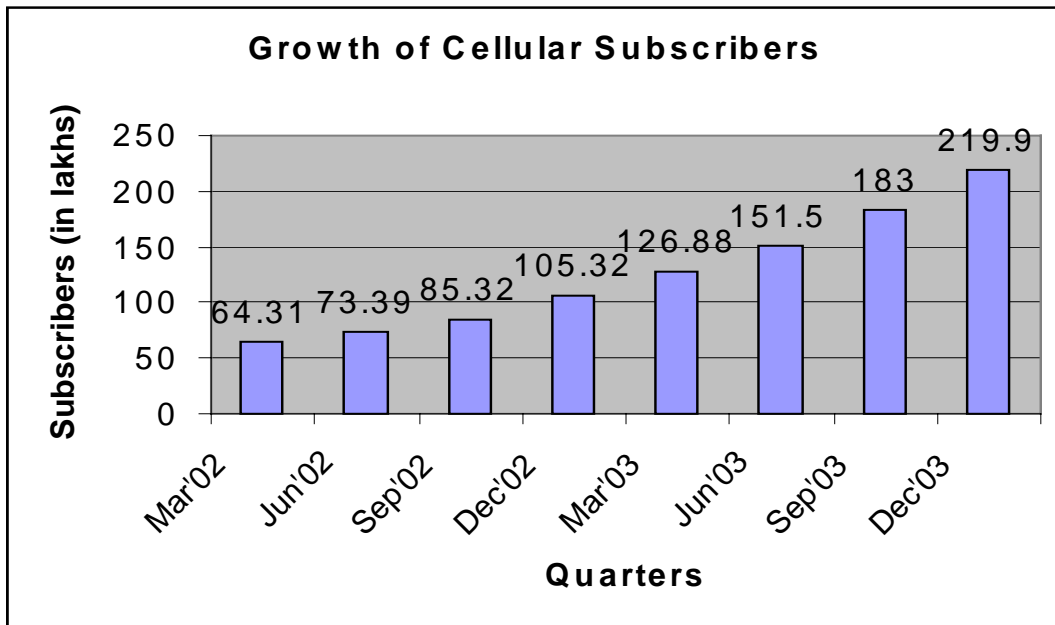
Circle-wise details of Operator's Migration to Unified Access Service Regime

Service Provider	Service Area	DoT. Letter. Reference No.	License No.	Date
Bharti	M P		17-12/95-BS-II	28.02.97
HFCL	Punjab	10-10-2003-BS-II / Vol-II	17-15/95-BSII/Punjab	07.11.97
TTL	Maharashtra including Mumbai	10-10-2003-BS-II	17-11/95-BS-II	30.09.97
STL	Rajasthan	10-10-2003-BS-II / Vol-II	17-16/95-BS-II/Rajasthan	04.03.98
TTL	A P	10-10-2003-BS-II	17-1/95-BS-II/Andra Pradesh	04.11.97
TTL	TN	10-10-2003-BS-II	18-61/2001-BS-II	31.08.2001
TTL	Karnataka	10-10-2003-BS-II	18-59/2001-BS-II	31.08.2001
TTL	Delhi	10-10-2003-BS-II	18-57/2001-BS-II/Delhi	31.08.2001
TTL	Gujarat	10-10-2003-BS-II	18-58/2001- BS-II	31.08.2001
RTPL	Bihar	10-10-2003-BS-II / Vol-II	18-113/2001-BS-II	20.07.2001
RTPL	Delhi	10-10-2003-BS-II / Vol-II	18-32/2001-BS-II	20.07.2001
RTPL	Gujarat	10-10-2003-BS-II / Vol-II	17-6/95-BS-II	18.03.97
RTPL	Haryana	10-10-2003-BS-II / Vol-II	18-30/2001-BS-II	20.07.2001
RTPL	HP	10-10-2003-BS-II / Vol-II	18-116/2001-BS-II	20.07.2001
RTPL	Karnataka	10-10-2003-BS-II / Vol-II	18-35/2001-BS-II	20.07.2001
RTPL	Kerala	10-10-2003-BS-II / Vol-II	18-38/2001-BS-II	20.07.2001
RTPL	MP	10-10-2003-BS-II / Vol-II	18-32/2001-BS-II	20.07.2001
RTPL	Maharashtra	10-10-2003-BS-II / Vol-II	18-36/2001-BS-II	20.07.2001
RTPL	Orissa	10-10-2003-BS-II / Vol-II	18-112/2001-BS-II	20.07.2001
RTPL	Punjab	10-10-2003-BS-II / Vol-II	18-31/2001-BS-II	20.07.2001
RTPL	Rajasthan	10-10-2003-BS-II / Vol-II	18-115/2001-BS-II	20.07.2001
RTPL	Tamilnadu	10-10-2003-BS-II / Vol-II	18-29/2001-BS-II	20.07.2001
RTPL	UP(East)	10-10-2003-BS-II / Vol-II	18-34/2001-BS-II	20.07.2001
RTPL	UP(West)	10-10-2003-BS-II / Vol-II	18-39/2001-BS-II	20.07.2001

Growth of Transmission Network Infrastructure (OFC & M/W in R kms)

S.No	Service Providers	Area of Operation	Media	Transmission Network Infrastructure (In R kms)	Achievement during the Quarter (Oct-Dec 2003)
1	BSNL	All India	OFC	448874	5963
			MW	152663	717
2	MTNL	Delhi & Mumbai	OFC	7922	104
			MW	1321	0
3	Bharti	MP, Delhi, Haryana, TN, Karnataka	OFC	5633.3	100.7
			MW	0	0
4	HFCL	Punjab	OFC	1629	0
			MW	0	0
5	TATA	Maharashtra	OFC	1600	0
			MW	600	0
6	RTPL	18 Circles	OFC	50551.2	1455.2
			MW	258.98	258.98
7	STL	Rajasthan	OFC	2842	290
			MW	23	0
8	TTL	AP, TN, Karnataka, Gujrat, Delhi	OFC	4951	295
			MW	1240	44
TOTAL			OFC	524003	8208
			MW	156106	1020

**Growth Rate of Cellular Mobile subscribers
(SUBSCRIBERS IN LAKHS)**



Annex 2.2

Growth of Cellular Infrastructure and Points of Interconnections (POIs)

SI NO	Operator	Area	No.of MSC	No.of BSC	No. of BTS	No. of POI's	No. & names of cities covered	No. of DHQ covered
CIRCLE A								
1	BPL Cellular	MH	1	9	180			23
2	IDEA	MH	4	5	351	29	216	33
3	BSNL	MH	3	21	346			
4	Bharti Cellular	MH	1	10	328	19		
5	Fascel	GJ	4	8	384	17	176	24
6	IDEA	GJ	3	3	307	23	151	24
7	BSNL	GJ	3				71	
8	Bharti Cellular	GJ	1	7	283	16		18
9	IDEA	AP	3	6	314	32		
10	Bharti Mobile	AP	2					
11	BSNL	AP	3	19	427			
12	Hutchison South	AP	1	3	152		12	
13	Bharti Mobile	KT	2					
14	Spice	KT	1	10	197	19	52	18
15	BSNL	KT	2	9	286		120	
16	Hutchison South	KT	1	4	200	44		
27	BPL Cellular	TN	2	7	139	18	58	18
18	Aircel	TN	5	7	297	17	168	28
19	BSNL	TN	3	8	299			
20	Bharti Cellular	TN		5	250			
CIRCLE B								
21	Escotel	KR	2	10	77	11		12
22	BPL Cellular	KR	1	5	111	10	81	13
23	BSNL	KR	2	7	241			
24	Bharti Cellular	KR		3	239			
25	Spice	PB	2	7	247	14	102	18
26	Bharti Mobile	PB	Chart					
27	BSNL	PB	1	5	195		51	
28	Escotel	HR	1	5	37	10		16
29	Aircel Digilink	HR	1	3	19			
30	BSNL	HR	1	5	195		51	
31	Bharti Cellular	HR	Chart					
32	Escotel	UP(W)	1	9	53	19		23
33	BSNL	UP(W)					51	
34	Bharti Cellular	UP(W)	1	4	176	47	20	

35	Aircel Digilink	UP(E)	1	4	62		
36	BSNL	UP(E)	2	2	174		
37	Aircel Digilink	RJ	1	4	39		
38	Hexacom	RJ	Not given				
39	BSNL	RJ	2	4	126		25
40	IDEA	MP	3	3	128	41	
41	Reliance	MP	2	9			
42	BSNL	MP	2	6	194		
43	Bharti Cellular	MP			148		
44	Reliance	WB	2	2	26		
45	BSNL	WB	1	4	136		32
	C' Circle						
46	Bharti Telenet	HP	Chart				
47	Reliance	HP	1	2	15		
48	BSNL	HP	Not given				
49	Reliance	BR	2	6	97		
50	BSNL	BR					38
51	Reliance	OR	1	3	36		
52	BSNL	OR	1	4	105		
53	Reliance	AS	1	1	15	1	1
54	Reliance	NE	1	1	2	1	1
	METRO'S						
55	Bharti Cellular	Delhi	5	7	389	7	5
56	Hutchison Essar	Delhi	4	12	425	432	
57	MTNL	Delhi	Not given				
58	IDEA	Delhi	1	5	342	102	28
59	BPL Mobile	Mumbai	3		207		
60	Hutchison Max	Mumbai	3	22	336		
61	MTNL	Mumbai	Not given				
62	Bharti Cellular	Mumbai	2	12	400	9	
63	RPG Cellular	Chennai	1	2	137		
64	Bharti Mobinet	Chennai		4	167		
65	Hutchison South	Chennai	1	1	129	56	
66	Bharti Mobitel	Kolkata	1	6	186		
67	Hutchison Essar	Kolkata	2	10	213	19	
68	BSNL	Kolkata	1	2	87		

Growth pattern of Cellular Traffic

2.4.1 Proportion of prepaid subscribers in total subscribers (month end)

	Sep-03	Oct-03	Nov-03	Dec-03
Circle A	74.04%	73.41%	72.58%	71.45%
Circle B	78.67%	77.94%	78.55%	78.19%
Circle C	85.17%	83.78%	82.94%	82.37%
Metro	79.85%	80.42%	80.48%	80.08%
All India	77.69%	77.37%	77.19%	76.52%

2.4.2 Number of subscribers on Prepaid platform (quarter ending)

Circle	Sep-03	Dec-03	% change
Circle A	4,802,478	5,689,858	18.48%
Circle B	3,819,765	4,732,818	23.90%
Circle C	645,332	738,628	14.46%
Metro	4,854,118	5,600,429	15.37%
All India	14,121,693	16,761,733	18.69%

2.4.3 Number of subscribers on Postpaid platform (Quarter ending)

Circle	Sep-03	Dec-03	% change
Circle A	1,683,440	2,273,041	35.02%
Circle B	1,035,917	1,319,874	27.41%
Circle C	112,329	158,050	40.70%
Metro	1,224,659	1,392,684	13.72%
All India	4,056,345	5,143,649	26.81%

2.4.3 Monthly rate of growth in prepaid and postpaid subscribers

	Oct-03	Nov-03	Dec-03
Postpaid	7.34%	8.08%	9.31%
Prepaid	5.39%	6.98%	5.27%

Trends in usage pattern (MOU), ARPU & Average Airtime charges

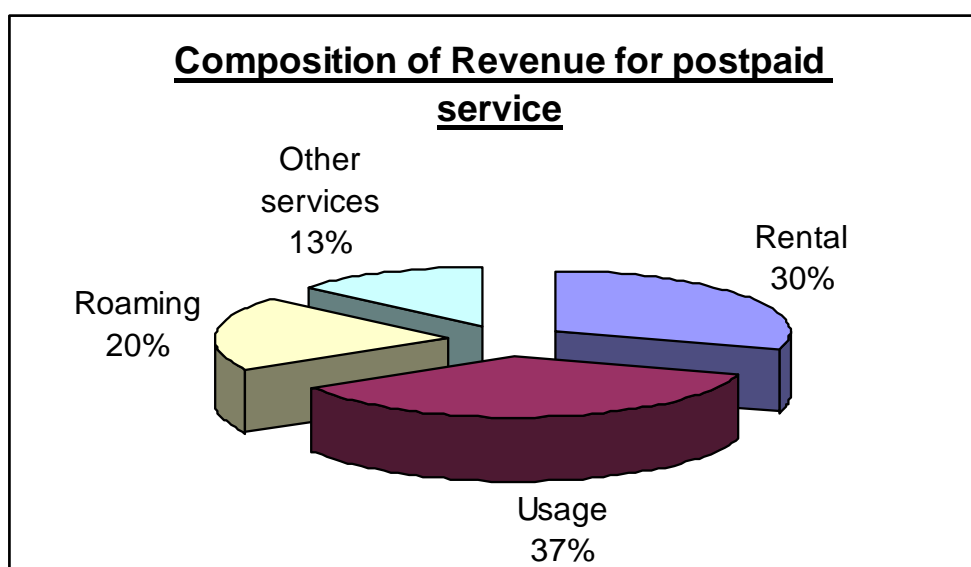
a) ARPU (per month during the quarter) - Cellular service (Rs.)

Circle	Postpaid	Prepaid	Blended ARPU
Circle A	917	286	457
Circle B	884	305	430
Circle C	965	394	480
Metro	1348	264	477
All India	1031	288	457
All private CMSPs	1160	284	461
BSNL/MTNL	760	305	443

b) Composition of Revenue for Cellular Service Providers (%) : Postpaid cellular Service

Item	Dec-03
Rental Revenue	29.72%
Revenue from Call charges (usage)	36.96%
Revenue from Roaming	19.87%
Other Revenues *	13.45%
Total	100%

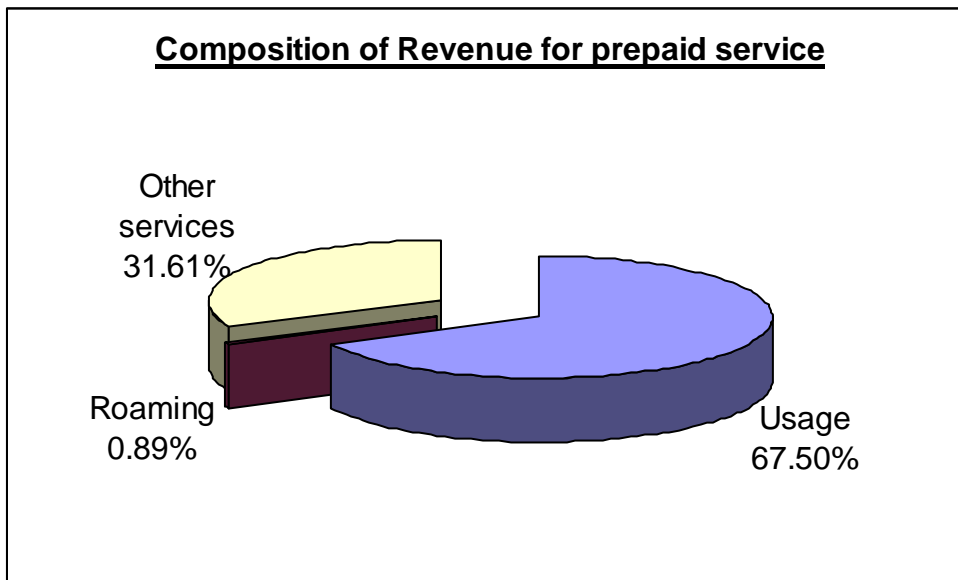
* Includes revenue from sources such as value added services, installation etc.



c) Composition of Revenue for Cellular Service Providers (%) : Prepaid cellular Service

Item	Dec-03
Revenue from Call charges (Usage)	67.50%
Revenue from Roaming	0.89%
Other Revenues*	31.61%
Total	100%

* Includes revenue from sources such as value added services, installation etc.



Revenue Pattern for Cellular Services

a) **Proportion of Revenue from Roaming Service in Total Revenue**

Circle	Dec-03
Circle A	10.78%
Circle B	7.82%
Circle C	7.25%
Metro	12.38%
All India	10.41%

b) **Proportion of Revenue from Value Added Services in Total Revenue**

Circle	Dec-03
Circle A	7.35%
Circle B	5.47%
Circle C	1.91%
Metro	7.30%
All India	6.62%

c) **MOU (per subscriber per month) in Cellular Service**

Circle	Postpaid	Prepaid	Blended MOU
Circle A	589	211	313
Circle B	573	216	294
Circle C	284	268	265
Metro	680	206	299
All India	602	213	301

Note: MOU includes incoming and outgoing calls

d) **Proportion of Incoming minutes in total traffic**

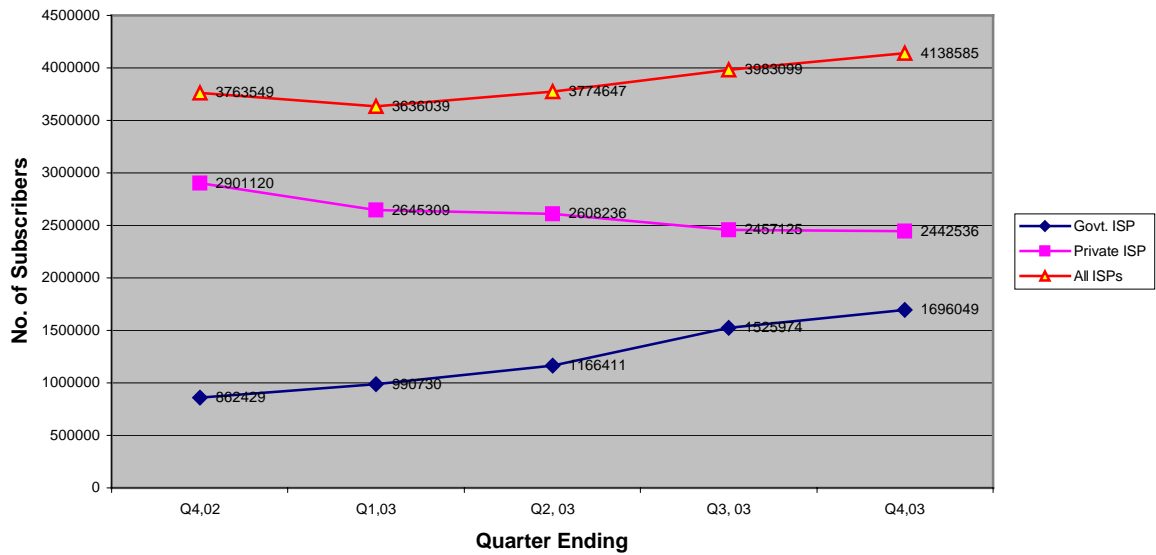
Circle	Postpaid	Prepaid	Blended
Circle A	47%	69%	58%
Circle B	53%	66%	60%
Circle C	56%	66%	65%
Metro	55%	80%	69%
All India	51%	72%	62%

e) **Revenue realization per minute [Gross revenue/total MOU] - Cellular Service (during the quarter ending Dec-03) (in Rs.)**

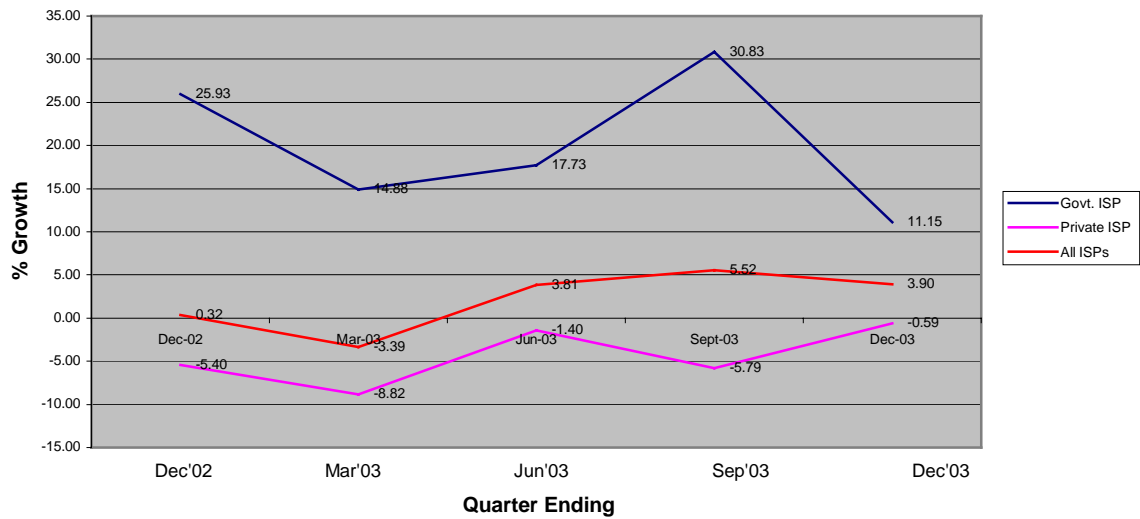
Circle	Revenue Realized Per minute in Postpaid	Revenue Realized Per minute in Prepaid	Blended Revenue realized per minute
Circle A	1.56	1.36	1.46
Circle B	1.54	1.41	1.47
Circle C	3.40	1.47	1.77
Metro	1.98	1.28	1.60
All India	1.71	1.35	1.52

Growth Pattern of Internet Subscribers

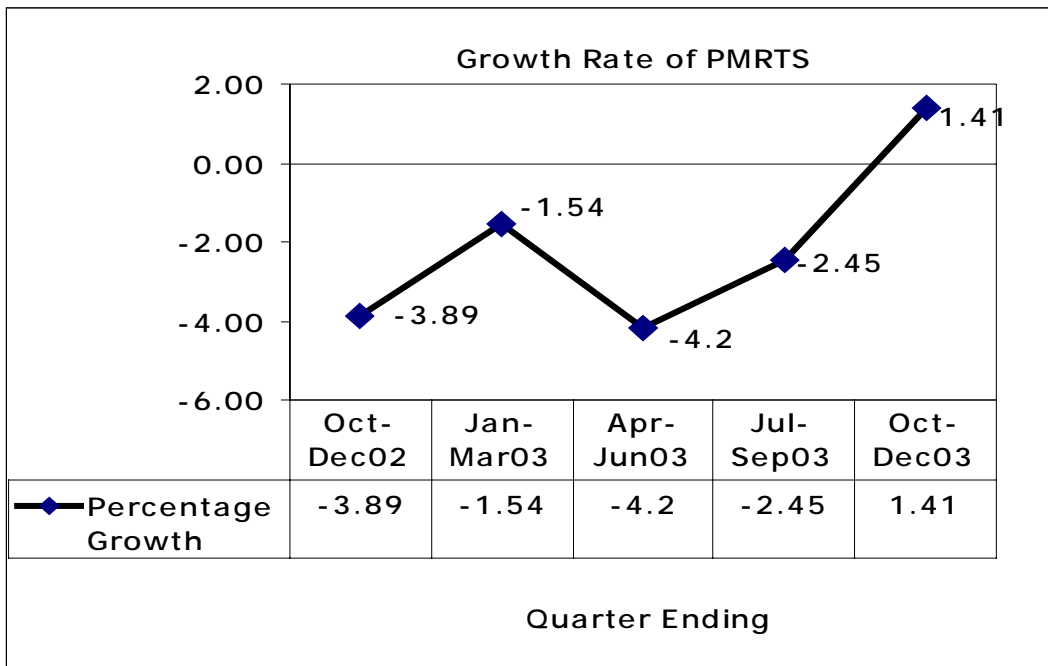
Growth Trends



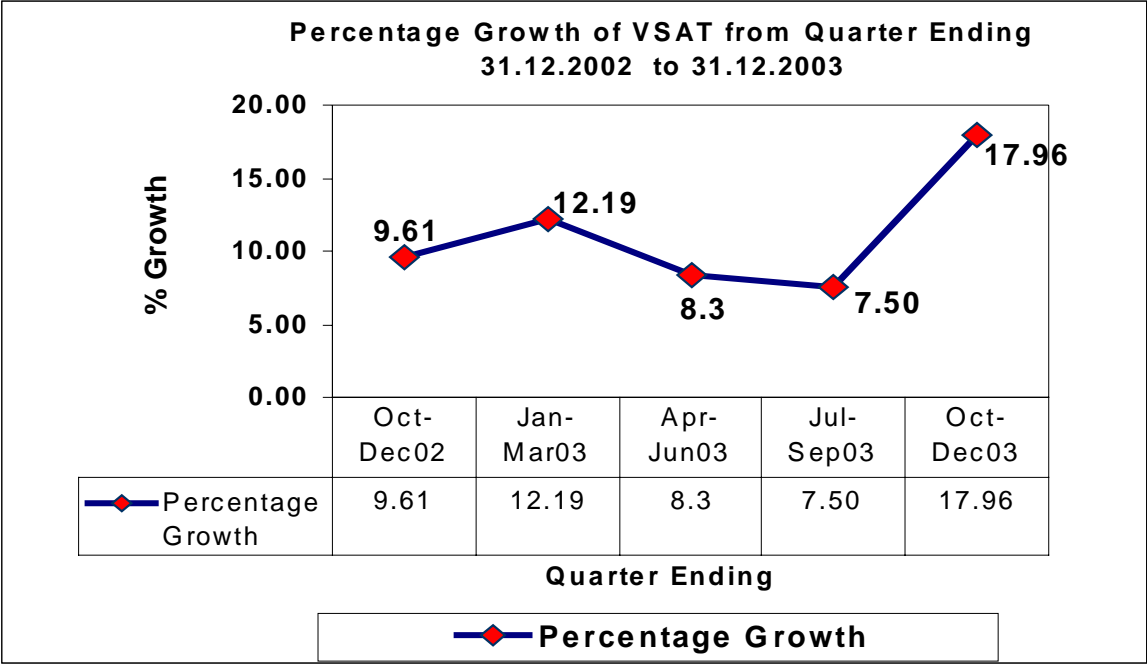
Growth Trends-II



Growth Rate of PMRTS subscribers



Growth of VSATs Subscribers



Quality of Service Parameters for Basic Services

(Page-1)

QoS Parameters			New connections after registration of demand*	Fault incidences per 100/sub/mth	Fault repair by next working day			Mean Time to Repair (MTTR)	Grade of service (calls per thousand)	Call completion rate in local network	Metering & billing credibility- % of bills disputed	Operator Assisted Trunk calls (% answered within time norm)	Shifts	Closures	Additional facility	Percentage of repeat faults			
S. No	Service Area	Service Providers	Applicable Long term Benchmark as per TRAI Regulation on QoS dated 5th July 2000																
			100% in < 7days	<3	>90% (Month-1)	>90% (Month-2)	>90% (Month-3)	<8 hrs	a) Junction between local exchange (2/1000)	>65%	<0.1%,	Urgent calls: <1 hr	Ordinary calls: <2 hr	< 3 days	< 24 hours	< 24hours	<1% (Month-1)	<1% (Month-2)	<1% (Month-3)
1	ANDRA PRADESH	BSNL	NA	7.88	86.70	94.77	94.86	5	NA	45.80%	0.78	86.35	91.06	NA	NA	NA	4.65	5.53	8.48
		RELIANCE	NA	0.00	100.00	100.00	100.00	3.3	0.002	70.75%	0.16	N/A	N/A	100.00	100	100	0	0	0
		TATA	79	1.70	96.61	97.76	97.12	6hrs	0.001	74.63%	0.03	90.46	90.44	39.46	0.00	47.20	87.97	8.20	6.50
2	BIHAR	BSNL	NA	0.00	90.35	88.51	89.34	12	NA	30.80%	0.08	81.60	84.20	2.16	NA	NA	2.98	3.70	1.27
		RELIANCE	NA	0.04	100.00	100.00	100.00	1.6	0.002	73.49%	0.11	N/A	N/A	100.00	100	100	0	0	0
3	DELHI	MTNL	58	20.72	73.76	77.69	79.83	13.66	0.005	43.00%	0.18	80.72	73.76	61.63	97.56	91.85	14.27	14.33	12.60
		RELIANCE	NA	0.00	100.00	100.00	100.00	2.3	0.002	71.72%	0.16	N/A	N/A	100.00	100	100	0	0	0
		BHARTI	49	2.14	98.65	98.36	98.43	3.64	0.002	53.60%	0.11	65	91.49	31.20	45.57	87.30	8.17	7.65	7.22
		TATA	73	0.16	99.49	91.74	98.78	4.98	0.002	55.00%	0.89	95.67	98.443	52.46	0	73	0	0	0
4	GUJARAT	BSNL	NA	7.80	92.23	93.04	93.88	12	NA	50.30%	0.15	87.62	82.50	0.65	NA	NA	8.49	8.29	5.53
		RELIANCE	NA	0.02	100.00	100.00	100.00	1.4	0.002	71.72%	0.17	N/A	N/A	100.00	100	100	0	0	0
		TATA	91	0.22	94.00	100.00	100.00	2.4	0.000	53.58%	0.76	100	100	0.00	100	78	0.00	0.00	0.00
5	MP &	BSNL(MP)	NA	8.54	83.45	85.28	85.66	13	NA	58.20%	0.19	87.49	83.95	1.30	NA	NA	3.07	2.69	2.51

	CHATTISGARH	BSNL(Chhatt)	NA	12.95	86.15	83.96	87.74	16	NA	47.10%	0.11	98.31	99.41	2.25	NA	NA	4.73	3.05	2.22
		RELIANCE	NA	0.02	100.00	100.00	100.00	1.5	0.002	72.82%	0.13	N/A	N/A	100.00	NA	NA	0	0	0
		BHARTI	95	2.34	97.00	97.26	98.62	4.8	0.002	63.90%	0.08	67	0	57.09	100.00	100.00	1.79	1.94	2.09
6	MAHARASHTRA	BSNL	NA	7.59	85.82	89.19	88.64	17	NA	51.00%	0.09	78.62	89.30	0.70	NA	NA	6.70	6.59	6.41
		RELIANCE	NA	0.01	100.00	100.00	100.00	1.3	0.002	67.88%	0.18	N/A	N/A	100.00	100	100	0	0	0
		TATA	NA	1.52	99.81	99.67	99.64	2.92	0.001	54.47%	0.05	NA	100	98.25	NA	100.00	7.67	7.12	6.73
7	PUNJAB	BSNL	NA	9.51	91.03	92.52	91.07	19	NA	53.90%	0.23	92.20	87.91	1.68	NA	NA	1.99	2.16	1.74
		RELIANCE	NA	0.00	100.00	100.00	100.00	1.9	0.002	68.87%	0.00	N/A	N/A	100.00	100	100	0	0	0
		HFCL	0	6.60	98.51	98.15	97.99	6.1	0.002	74.31%	0.03	NA	N/A	53.50	91.85	0.00	11.44	10.53	9.60
8	RAJASTHAN	BSNL	NA	10.26	87.86	86.28	87.49	11	NA	57.10%	0.08	89.95	91.23	0.50	NA	NA	2.51	2.67	2.66
		RELIANCE	NA	0.02	100.00	100.00	100.00	5.3	0.002	66.56%	0.13	N/A	N/A	100.00	100	100	0	0	0
		SHYAM	100	2.09	93.00	98.70	99.75	6.43	0.001	67.00%	0.03	0	83.77	95.15	100	98	0.88	0.84	0.19
9	TAMILNADU	BSNL	NA	6.04	96.55	96.38	96.36	8	NA	55.70%	0.06	98.47	98.93	0.26	NA	NA	1.18	1.39	1.36
		RELIANCE	NA	0.00	100	100	100	5.3	0.002	66.56%	0.13	N/A	N/A	100.00	100	100	0.00	0.00	0.00
		BHARTI	79	2.88	100	100	100	0.9	0.002	64.85%	0.18	N/A	N/A	100.00	100	100	0.00	0.00	0.00
		TATA	76	6.58	97.87	98.40	99.61	4.6hrs	0.005	51.94%	0.00	74	68.98	15.10	0	65	97.87	98.40	99.61
10	HARYANA	BSNL	NA	9.77	92.42	92.92	91.74	17	NA	50.70%	0.12	90.19	90.18	1.10	NA	NA	3.27	3.19	3.42
		RELIANCE	NA	0.03	100.00	100.00	100.00	0.8	0.002	65.58%	0.17	90.19	90.18	100.00	100	100	100	100	100
		BHARTI	74	3.23	98.85	98.51	96.56	3.97	0.001	50.90%	0.27	40	82	25.30	57.61	89.23	7.91	7.08	7.28
11	KARNATAKA	BSNL	NA	6.34	95.17	96.43	96.38	3	NA	49.50%	0.04	93.45	93.06	0.16	NA	NA	6.62	6.03	5.50
		RELIANCE	NA	0.01	100.00	100.00	100.00	0.694	0.002	69.40%	0.43	N/A	N/A	100.00	100	100	0	0	0
		BHARTI	NA	0.98	0.76	0.74	0.25	3.33	0.002	57.94%	0.17	NA	NA	1.09	23.83	89	15.62	17.30	12.94
		TATA	76	0.34	97.87	68.32	98.87	3.4	0.005	59.43%	0.41	0	100	8.57	0	65	3	1	3

Operator not meeting prescribed benchmark

NA

Not available

Contd. On next page

Information regarding "DELS added in the licensed service area covering exchanges declared on demand availability for telephones has not been furnished by BSNL

*

QoS Parameters			New connections after registration of demand*	Fault incidences per 100/sub/mth)	Fault repair by next working day			Mean Time to Repair (MTTR)	Grade of service (calls per thousand)	Call completion rate in local network	Metering & billing credibility- % of bills disputed	Operator Assisted Trunk calls (% answered within time norm)	Shifts	Closures	Additional facility	Percentage of repeat faults			
S. No	Service Area	Service Provider	Applicable Long term Benchmark as per TRAI Regulation on QoS dated 5th July 2000																
			100% in < 7days	<3	>90% (Month-1)	>90% (Month-2)	>90% (Month-3)	<8 hrs	a) Junction between local exchange (2/1000)	>65%	<0.1%,	Urgent calls: <1 hr	Ordinary calls: <2 hr	< 3 days	< 24 hours	< 24hours	<1% (Month-1)	<1% (Month-2)	<1% (Month-3)
12	A&N	BSNL	NA	10.29	83.18	82.20	93.30	19	NA	45.00%	0.15	55.88	68.64	45.05	NA	NA	19.33	17.62	19.04
		RELIANCE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	ASSAM	BSNL	NA	8.37	95.24	97.00	94.41	24	NA	52.70%	0.11	94.55	77.46	3.81	NA	NA	0.94	0.98	0.83
14	CHENNAI	BSNL	NA	9.27	90.40	90.90	93.87	18	NA	57.60%	0.13	80.21	83.25	0.49	NA	NA	37.23	35.66	99.93
15	HP	BSNL	NA	9.79	96.15	93.37	95.45	6	NA	42.20%	0.13	84.54	83.07	4.72	NA	NA	1.14	1.07	1.18
		RELIANCE	NA	0.00	100.00	100.00	100.00	0		NA	0.00	N/A	N/A	100.00	100	100	0	0	0
16	JHARKHAND	BSNL	NA	8.39	91.63	91.49	91.47	17	NA	31.10%	0.06	93.45	93.06	0.24	NA	NA	1.81	1.46	1.29
17	J&K	BSNL	NA	12.68	77.04	81.91	63.07	12	NA	36.70%	0.08	57.45	83.83	5.86	NA	NA	6.93	3.56	5.52
18	KERALA	BSNL	NA	8.23	91.38	91.28	91.31	14	NA	58.50%	0.04	96.63	96.91	0.39	NA	NA	5.14	5.39	6.10
		RELIANCE	NA	0.00	100.00	100.00	100.00	2.7	0.002	67.96%	0.16	N/A	N/A	100.00	100	100	0	0	0
19	KOLKATA	BSNL	NA	8.12	85.00	89.22	90.00	31	NA	45.20%	0.08	68.24	82.06	0.81	NA	NA	4.47	4.19	4.47
20	MUMBAI	MTNL	58	9.20	73.76	77.69	79.83	13.7	0.003	49.45%	0.17	0.48	77.93	18.10	97.56	57.56	14.27	14.33	12.60

21	NE-I	BSNL	NA	5.87	70.83	69.81	72.00	48	NA	54.00%	0.23	88.42	79.60	1.93	NA	NA	6.26	10.13	8.98
22	NE-II	BSNL	NA	9.32	79.16	81.33	77.77	40	NA	38.40%	0.10	81.81	71.89	14.93	NA	NA	3.27	3.24	6.75
23	ORRISA	BSNL	NA	8.09	93.76	94.67	94.18	21	NA	53.20%	0.34	68.95	94.70	1.81	NA	NA	1.23	1.28	1.24
		RELIANCE	NA	0.00	100.00	100.00	100.00	1.3	0.002	71.01%	0.13	N/A	N/A	100.00	100	100	0	0	0
24	UP-E	BSNL	NA	8.37	93.00	93.60	86.13	9	NA	42.00%	0.06	82.84	97.40	4.48	NA	NA	1.20	1.30	1.20
		RELIANCE	NA	0.02	100.00	100.00	100.00	0.9	0.002	64.85%	0.16	N/A	N/A	100.00	100	100	0	0	0
25	UP-W	BSNL	NA	8.90	97.90	95.40	95.38	5	NA	50.80%	0.01	89.87	90.72	0.85	NA	NA	4.11	3.96	3.90
		RELIANCE	NA	0.01	100.00	100.00	100.00	1.3	0.002	65.18%	0.24	N/A	N/A	100.00	100	100	0	0	0
26	UTTARANCHAL	BSNL	NA	10.98	92.05	92.17	93.56	7	NA	42.00%	0.06	82.84	97.40	4.48	NA	NA	2.87	1.20	1.30
27	WEST BENGAL	BSNL	NA	8.05	88.77	87.90	91.96	19	NA	45.20%	0.06	83.36	61.87	10.83	NA	NA	0.75	0.74	1.45
		RELIANCE	NA	0.01	100.00	100.00	100.00	2.3	0.002	73.25%	0.24	N/A	N/A	100.00	100	100	0	0	0

Operator not meeting prescribed benchmark

NA

Not available

* Information regarding "DELS added in the licensed service area covering exchanges declared on demand availability for telephones has not been furnished by BSNL

Quality of Service Parameters for Cellular Services

Details of observed values of QoS Parameters for Cellular Services as reported by CMSPs for quarter ending 31st Dec 2003.

Parameter	Fault Incidence & Repair		
	(I)	(ii)	(iii)
	No. of faults (per 100 subscribers p.m.)	Faults cleared with 24 hrs	Accumulated down time of community isolation
Long term w.e.f.5.7.02 (before end of 36 mths)	<1	100.00%	<24 hrs
'A' Circle			
BPL, MH	0.29%	87.00%	32:49hrs
Bharti UP (W)	0.71%	100.00%	17.3 hrs
IDEA Cellular, MH	0.06%	100.00%	9.45 hrs
BSNL, MH	1.90%	56.00%	55 hrs
Bharti Cellular, MH & Goa	0.18%	100.00%	23.08hrs
Fascel - Hutch GJ	0.05%	100.00%	22.32hrs
IDEA Cellular, GJ	0.02%	100.00%	2.47 hrs
BSNL, GJ	1.40%	99.80%	Nil
Bharti Cellular, GJ	0.19%	100.00%	18.58 hrs
IDEA Cellular, AP	0.00%	100.00%	11.3 hrs
Bharti Mobile, AP	0.05%	100.00%	15.46 hrs
BSNL, AP	0.27	92.43%	Nil
Hutchison Essar, AP	1.00%	95.00%	< 24 hrs
Bharti Mobile, KTK	0.09%	100.00%	19.22 hrs
Spice Comm., KTK	0.28%	100.00%	3.02hrs
BSNL, KTK	13%	100.00%	5.45hrs
Hutchison Essar, KTK	0.7	99.00%	Hutch - 1416 min, other - 8283 min
BPL Cellular, TN	0.14%	100.00%	21.31hrs
Aircel, TN	0.00%	100.00%	23.2hrs
BSNL, TN	2.30%	98.84%	23 hrs
Bharti Cellular, TN	0.15%	97.30%	23 hrs
'B' Circle			
Escotel Mobile, KR	0.39%	100.00%	4:52:23hrs
BPL Cellular, KR	0.00%	100.00%	11.32hrs

BSNL, KR	1.90%	98.91%	63.1hrs
Bharti Cellular, KR	0.12%	97.30%	20 hrs
Spice Comm., PB	0.20%	98.50%	Nil
Bharti Mobile, PB	0.03%	100.00%	7.8 hrs
BSNL, PB	0.00%	100.00%	158 hrs
Escotel Mobile, HR	0.07%	100.00%	20:10hrs
Aircel Digilink, HR	0.02%	100.00%	42:13:00
BSNL, HR	0.60%	100.00%	22hrs
Bharti Cellular, HR	0.07%	100.00%	15.09 hrs
Escotel Mobile, UP(W)	0.71%	100.00%	17.3HRS
BSNL,UP(W)	1%	82.00%	NA
Bharti Cellular, UP(W)	0.71%	100.00%	17.3 Hrs
Aircel Digilink, UP(E)	1.00%	100.00%	112 Sec
BSNL, UP(E)	1.10%	99.23%	14hrs
Aircel Digilink, RJ	0.07%	100.00%	42:13:00
Hexacom, RJ	0.71%	58.59%	28 hrs 11 Minuts
BSNL, RJ	0.82%	95.54%	38.25 Hrs
IDEA Cellular, MP	0.20%	99.00%	62.36 hrs
Reliance, MP	0.00%	100.00%	13.24hrs
BSNL, MP	0.86%	85.77%	Nil
Bharti Cellular, MP	0.00%	100.00%	.5hrs
Reliance, WB	0.11%	100.00%	15:21:31 hrs
BSNL, WB	0.01%	100.00%	Nil
C' Circle			
Bharti Telenet, HP	0.09%	100.00%	18.45 hrs
Reliance, HP	0.12%	100.00%	13.30hrs
BSNL, HP	1.40%	84.31%	Nil
Reliance, BR	0.02%	100.00%	74.56hrs
BSNL, BR	0.30%	98.50%	9hrs
Reliance, ORISA	0.11%	100.00%	15.41hrs
BSNL, OR	0.89%	90.95%	72.3hrs
Reliance, AS	Nil	Nil	Nil
BSNL J&K	0.50%	74.00%	17hrs
Reliance, NE	Nil	Nil	Nil
METRO			

Bharti Cellular, Delhi	0.31%	100.00%	Nil
Hutchison Essar, Delhi	1.00	100.00%	Nil
MTNL, Delhi	0.21%	98.10%	Nil
IDEA Cellular, Delhi	0.36%	100.00%	Nil
BPL Mobile, Mumbai	0.29%	98.01%	5:19:48hrs
Hutchison Max, Mumbai	0.60%	100.00%	24 hrs
MTNL, Mumbai	1.35%	100.00%	Nil
Bharti Cellular, Mumbai	0.50%	99.00%	Nil
RPG Cellular, Chennai	0.41%	100.00%	6.38 hrs
Bharti Mbinet, Chennai	0.80%	98.60%	Nil
Hutchison Essar, Chennai	1%	100.00%	Nil
Bharti Mobinet, Kolkata	0.48%	100.00%	Nil
Hutchison Telecom, Kolkata	0.02%	100.00%	8.13 hrs
BSNL, Kolkata	1.90%	86.23%	.10hrs
BSNL, Chennai	0.36%	99.00%	Nil

Note:			
NA= Data not available	0	0	1
Meeting the benchmarks	63	45	59
Not meeting the benchmarks	8	26	11
Total Circles	71	71	71

Note:- NA = Data not available,

Bench marks not meeting by Service Providers

Details of observed values of QoS Parameters for Cellular Services as reported by CMSPs for quarter ending 31st, Dec 2003

Parameter	Network Performance			
	(i)	(ii)	(iii)	(iv)
	Call Success Rate (within Licences own network)	Service Access Delay	Call Drop Rate	% of connection with good voice quality
Long term w.e.f.5.7.02 (before end of 36 mths)	>99%	Between 9 to 20 Seconds	<3.0%	>95%
CIRCLE 'A'				
BPL, MH	99.90%	5 sec	1.46%	99.01%
IDEA, MH	95.20%	13.2sec	1.39%	98.50%
BSNL, MH	77.30%	2.596sec	1.46%	92.00%
Bharti Cellular,MH & Goa	99.20%	9.43 Sec	1.32%	94.87%
Fascel - Hutch GJ	99.98%	12.58sec	1.50%	96.80%
Bharti Cellular,UP - W	99.34%	12.3 Sec	1.99%	96.80%
IDEA, GJ	99.04%	13.54 sec	1.14%	97.67%
BSNL, GJ	99.98%	12.58 sec	1.50%	96.80%
Bharti Cellular,GJ	99.21%	13.4sec	1.15%	97.80%
IDEA, AP	99.97%	9.5 sec	1.74%	97.17%
Bharti, AP	99.05%	11.43 sec	1.45%	97.38%
BSNL, AP	98.00%	6 Sec	1.83%	98.00%
Hutchison AP	95.22%	5 Sec	1.21%	94.00%
Bharti KTK	99.01%	<7 sec	1.41%	95.60%
Spice,KTK	99.54%	9sec	1.41%	98.13%
BSNL, KTK	98.10%	8.83sec	1.34%	97.00%
Hutchison Essar,KTK	97.05%	3.06sec	0.65%	97.19%
BPL.TN	99.20%	9.43sec	1.17%	99.35%
Aircel, TN	98.30%	14.52sec	1.69%	93.10%
BSNL, TN	94.50%	11.85sec	1.61%	95.89%
Bharti Cellular,TN	99.52%	17.22sec	1.24%	97.71%
CIRCLE 'B'				
Escotel Mobile, KR	99.94%	0.14	1.05%	97.85%
BPL, KR	99.23%	11.91sec	1.17%	100.00%
BSNL, KR	89.09%	3.73sec	1.63%	95.00%
Bharti,KR	99.30%	16.83 sec	1.25%	99.30%
Spice,PB	98.34%	7sec	1.31%	96.50%
Bharti, PB	99.30%	11.7 sec	1.60%	99.31%
BSNL, PB	79.00%	4.8 Sec	2.60%	91.00%

Escotel Mobile, HR	99.76%	15.7sec	1.00%	99.95%
Aircel Digilink, HR	99.90%	8.6 Sec	1.81%	97.50%
BSNL, HR	91.70%	5.56sec	3.16%	97.31%
Bharti,HR	99.38%	10 sec	1.70%	99.69%
Escotel Mobile, UP(W)	99.10%	14.44 sec	1.40%	96.79%
BSNL, UP(W)	95.90%	5.12 sec	NA	93.90%
Bharti,UP(W)	99.34%	12 sec	1.99%	96.80%
Aircel Digilink, UP(E)	99.90%	6 Sec	Nil	Nil
BSNL, UP(E)	93.00%	9.8sec	3.20%	93.00%
Aircel Digilink, RJ	99.80%	8.6 Sec	1.81%	97.46%
Hexacom, RJ	96.40%	6 sec	1.53%	82.40%
BSNL, RJ	92.04%	5.38sec	1.99%	93.57%
IDEA, MP	99.09%	12.12 sec	1.19%	97.75%
Reliance,MP	100.00%	0.09	2.42%	97.60%
BSNL, MP	95.59%	2.975sec	1.39%	NA
Bharti,MP	99.91%	13.45 sec	0.83%	99.03%
Reliance,WB	99.00%	9.41sec	2.66%	99.65%
BSNL, WB	98.88%	6.44sec	2.84%	99.70%
CIRCLE 'C'				
Bharti,HP	99.01%	11.5 sec	1.80%	99.80%
Reliance,HP	100.00%	7.58sec	2.29%	98.77%
BSNL, HP	87.25%	5.9sec	3.55%	90.78%
Reliance,BR	99.00%	8.37sec	2.20%	98.52%
BSNL, BR & Jharkhand	96.30%	6.4sec	3.90%	93.00%
Reliance,ORISA	99.26%	8.37sec	2.21%	98.18%
BSNL, OR	94.08%	8sec	3.99%	96.00%
Reliance,AS	99.00%	10.11sec	2.97%	95.83%
Reliance,NE	99.00%	9.45sec	1.19%	98.79%
BSNL J&K	94.00%	11sec	3.40%	Nil
Metros				
Bharti(AirTel), Delhi	99.21%	12.5sec	1.95%	96.30%
MTNL. Delhi	98.12%	7.2sec	1.65%	98.00%
IDEA, Delhi	99.98%	7 sec	1.37%	97.09%
BPL Mobile, Mumbai	94.44%	12.79sec	1.83%	99.10%
Hutchison Max, Mumbai	100.00%	11.88sec	1.62%	95.20%
MTNL,Mumbai	98.40%	11sec	1.64%	96.00%
Bharti Cellular,Mumbai	99.20%	9sec	1.56%	96.00%
Hutchison Max, Delhi	99.97%	<10 Sec	1.47%	95.40%
RPG Cellular, Chennai	100.00%	11.2 sec	1.08%	95.20%
Bharti Mobinet, Chennai	99.55%	14.51sec	0.83%	96.45%
Hutchison Essar,Chennai	100.00%	9.9sec	0.00%	98.16%
Bharti Mobitel,Kolkata	99.66%	15.8 sec	1.31%	97.13%
Hutchison Telecom Kolkata	99.06%	16 sec	1.15%	95.34%

BSNL, Kolkata	98.00%	7 sec	1.64%	96.47%
BSNL, Chennai	98.45%	12.2sec	1.12%	90.00%

Note:				
NA= Data not available	0	0	1	1
Meeting the benchmarks	44	71	64	59
Not meeting the benchmarks	27	0	6	11
Total Circles	71	71	71	71

Details of observed values of QoS Parameters for Cellular Services as reported by CMSPs for quarter ending 31st, Dec 2003

Parameter	Billing Complaints		
	(I)	(ii)	(iii)
	Complaints per 100 bills issued	Resolved % of complaints with 4 weeks	Period of all refunds/ payment due to customers from the date of resolution of complaints as in (ii) above
long term w.e.f. 5.7.02 (before end of 36 mths)	<0.1%	100.00%	<4 weeks
CIRCLE 'A'			
BPL,MH	0.10%	100.00%	4 Weeks
IDEA,MH	0.10%	100.00%	4 Weeks
BSNL, MH	1.18%	95.00%	4 Weeks
Bharti Cellular,MH & Goa	0.10%	100.00%	<4 Weeks
Bharti Cellular,UP (W)	0.09%	100.00%	4 Weeks
Fascel - Hutch GJ	0.07%	100.00%	4 Weeks
IDEA, GJ	0.13%	100.00%	4 Weeks
BSNL, GJ	0.07%	100.00%	4 Weeks
Bharti Cellular,GJ	0.07%	100.00%	2 weeks
IDEA, AP	0.05%	100.00%	2 days
Bharti, AP	0.10%	100.00%	4 weeks
BSNL, AP	0.38%	82.00%	2 Month
Hutchison AP	0.02%	99.00%	3 Weeks
Bharti KTK	0.03%	100.00%	4 Weeks
Spice,KTK	0.10%	100.00%	2 Weeks
BSNL, KTK	11.50%	100.00%	6 Weeks
Hutchison Essar,KTK	2.00%	100.00%	6 Days
BPL.TN	0.02%	100.00%	4 Weeks
Aircel, TN	0.09%	100.00%	45days
BSNL, TN	0.10%	99.00%	4 Weeks
Bharti Cellular,TN	0.10%	100.00%	4 Weeks
CIRCLE 'B'			
Escotel Mobile, KR	0.09%	100.00%	4Weeks
BPL, KR	0.03%	100.00%	4 Weeks
BSNL, KR	3.00%	90.00%	30 Days
Bharti,KR	0.09%	100.00%	4 Weeks
Spice,PB	0.02%	100.00%	24hrs
Bharti, PB	0.09%	100.00%	24 hrs
BSNL, PB	3.50%	94.00%	90%
Escotel Mobile, HR	0.06%	100.00%	4Weeks
Aircel Digilink, HR	0.03%	67.00%	4 Weeks

BSNL, HR	0.14%	100.00%	4 Weeks
Bharti,HR	0.08%	100.00%	24 hrs
Escotel Mobile, UP(W)	0.09%	100.00%	4 Weeks
BSNL, UP(W)	0.10%	86.00%	4 Weeks
Bharti,UP(W)	0.09%	100.00%	4 Weeks
Aircel Digilink, UP(E)	0.13%	100.00%	4 Weeks
BSNL, UP(E)	0.24%	99.20%	7 Weeks
Aircel Digilink, RJ	0.03%	100.00%	4 Weeks
Hexacom, RJ	0.03%	100.00%	Same day
BSNL, RJ	0.54%	98.46%	6 Weeks
IDEA, MP	1.04%	100.00%	4.5 weeks
Reliance,MP	0.05%	100.00%	24hrs
BSNL, MP	0.01%	100.00%	Nil
Bharti,MP	0.10%	100.00%	2 weeks
Reliance,WB	0.05%	100.00%	Nil
BSNL, WB	0	100%	Nil
CIRCLE 'C'			
Bharti,HP	0.07%	100.00%	24 hrs
Reliance,HP	0.00%	100.00%	10 days
BSNL, HP	0.20%	100.00%	Nil
Reliance,BR	0.00%	100.00%	7 days
BSNL, BR & Jharkhand	0.17%	99.20%	5
Reliance,OR	0.02%	100.00%	NA
BSNL, OR	0.83%	100.00%	Nil
Reliance,AS	Nil	Nil	Nil
Reliance,NE	Nil	Nil	Nil
BSNL J&K	Nil	Nil	Nil
METRO CIRCLE			
Bharti(AirTel), Delhi	0.10%	100.00%	4 Weeks
MTNL,Delhi	0.08%	100.00%	4Weeks
IDEA, Delhi	0.19%	100.00%	4 Weeks
BPL Mobile, Mumbai	0.10%	100.00%	40 days
Hutchison Max, Delhi	0.03%	100.00%	4 Weeks
Hutchison Max, Mumbai	0.03%	100.00%	4 Weeks
MTNL,Mumbai	0.01%	99.00%	6 Weeks
Bharti Cellular,Mumbai	0.08%	100.00%	2 weeks
RPG Cellular, Chennai	0.67%	100.00%	4 Weeks
Bharti Mobinet, Chennai	0.10%	100.00%	4 Weeks
Hutchison Essar,Chennai	4.58%	92.00%	30days
Bharti Mobitel,Kolkata	0.10%	100.00%	4 Weeks
Hutchison Telecom Kolkata	0.09%	100.00%	<5 Weeks
BSNL, Kolkata	0.18%	100.00%	Nil
BSNL, Chennai	0.84%	98.00%	Immediately after adjustment

Note:			
NA= Data not available	0	0	1
Meeting the benchmarks	51	57	64
Not meeting the benchmarks	20	14	6
Total Circles	71	71	71

Annex 5.3

Quality of Service Parameters for ISPs

S. No.	Name of the Service Provider	Service Activation time	Time to Access	Access Portability in 1 st attempt	Access Portability in 2 nd attempt	Access Portability in 3 rd attempt	ISP Node unavailability	Grade of Service (QoS)	Mean time to Restore of faults resulting as per subscriber complaints
	TRAI Benchmarks	6 hrs	30 sec	80	90	99	30 min	0.01	3 days
1	Bharat Sanchar Nigam Ltd.	0-24 hrs*	15-55 sec	90	98	100	Nil	1:100	5 min-1 hr
2	MTNL	Instant	30 sec	99.67	99.99	Nil		0.01	5 min
3	Sify Ltd.	3 min	30 sec	90	95	99	20 min	0.005	4 hrs
4	VSNL	2-4 hrs	30 sec	80	90	99	Nil	Not provided by BSO	10-15 min
5	TATA Internet Services Ltd.	< 5 min	30 sec	90	95	99	0.01%	100 users for 1 PSTN port	40 min
6	Dishnet DSL Ltd.	Online	24 sec	95	100	-	Nil	0.01	5.33 hrs
7	Data Infosys Ltd.	3-5 min	25-30 sec	90	95	99	30 min	1 in 100	15 min
8	Bharti Broadband Network Ltd.	Online (5 min)	20-25 sec	97	98	99	20 min	1 in 100	2 hrs
9	HCL Infinet Ltd.	3 min	30 sec	98.5	99.2	99.8	18 min	1 in 200	7 hrs
10	Data Access India Ltd.	Immediate	30 sec	98	99	99.5	0 min	No blocked calls	2-3 hrs
11	Trak Online Net India Pvt. Ltd.	5.5 hrs	31 sec	83	97	100	Nil	0.03	1-2 hrs
12	Icenet.net Limited	2 hrs	20 sec	85	95	100	Never	1 in 100	-
13	Sab Infotech Ltd.	< 6 hrs	< 30 sec	90	95	100	< 30 min	0 in 100	>1 hr
14	Shyam Internet Services Pvt. Ltd.	50 min	30 sec	98	99	100	30 min	1%	2.5 hrs
15	BG Broadband India Pvt. Ltd.	2 min	20 sec (approx)	95	97	99	Nil	Not provided by BSNL	24-48 hrs
16	Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom)	0 sec	25 sec	98.24	100	NA	0 min	1 in 100	1 hr
17	Fascel Ltd. **	-	-	-	-	-	-	-	-
18	Hathway Cable & Datacom Pvt. Ltd. **	-	-	-	-	-	-	-	-
19	Rolta India Ltd.	15 min	28 sec	83	90	98.5	0 min	0 in 100	4.01 min
20	Navin.com (I) Pvt. Ltd.	1 hr	2 sec	99.9	100	-	20 min	0.20%	10 min

*a scratch card/CD online registration is introduced to achieve this benchmark.

**are not providing Internet Access on Dial Up. Internet Access on Mobile is provided via WAP Setup but they have been included in Top 20 on the basis of Total Number of Subscribers.