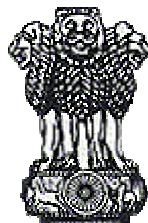


# Telecom Regulatory Authority of India



The Indian Telecom Services  
Performance Indicators Oct-Dec'04

**March 2005**

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**(i) INTRODUCTION**

- 1.1 This report provides an update on the growth trends for the telecom services for the period **Oct-Dec 2004**. It 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 reports, which pertained to financial year 2002-2003, four quarters of financial year 2003-2004 and two quarters of current financial year. Due to the Unified Access Service Regime, the details under mobile services combine both GSM & CDMA. The Fixed Service details also include WLL (F) and Village Public Telephones (VPT). 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 available on the TRAI website ([www.traigov.in](http://www.traigov.in)) and is updated on quarterly basis. Any suggestions pertaining to this may please be addressed to S. N. Gupta, Advisor (CN), TRAI; Tel. 26167914, Fax. 26103294 and e-mail: [traigov@bol.net.in](mailto:traigov@bol.net.in).

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## (ii) Quarterly Results at a Glance

## Performance Indicators of Telecom Services for QE Dec 2004

## A. Growth of Fixed &amp; Mobile Services:-

	FE 2003	QE Dec 2003	FE 2004	QE Jun 2004	QE Sept 2004	QE Dec 2004	%age growth over Sept 2004 (3 months)	%age growth over FE 2004 (9 months)	%age growth over Dec 2003 (12 months)
<b>1) Subscriber's Base (in millions)</b>									
i) Fixed Line including WLL(F)	41.48	42.09	42.84	43.51	43.87	44.87	2.28	4.74	6.60
ii) Mobile (GSM + CDMA)	13	28.44	33.69	37.80	42.99	48.01	11.68	42.51	68.81
<b>Gross Total</b>	<b>54.48</b>	<b>70.53</b>	<b>76.53</b>	<b>81.31</b>	<b>86.86</b>	<b>92.88</b>	6.93	21.36	31.69
<b>2) Traffic (MOU) (minutes of use/ sub/month)</b>									
i) Mobile (GSM)	222	301	322	*	*	*	--	--	--
<b>3) ARPU (Rs./sub/ month)</b>									
i) Mobile (GSM)	537	457	436	*	*	*	--	--	--
ii) Mobile (CDMA)		460	382	*	*	*	--	--	--
<b>4) Teledensity</b>									
Population in million (Estimated)	1047	1061	1067	1070	1073	1077			
i) Fixed including WLL (F)	3.96	3.97	4.01	4.07	4.09	4.17	1.90	3.77	5.02
ii) Mobile (GSM + CDMA)	1.24	2.68	3.16	3.53	4.01	4.46	11.26	41.18	66.30
<b>Gross Total</b>	<b>5.20</b>	<b>6.65</b>	<b>7.17</b>	<b>7.60</b>	<b>8.10</b>	<b>8.62</b>	<b>6.53</b>	<b>20.24</b>	<b>29.73</b>

\* Information not made available by service providers

**B. Growth of Internet Services: -**

	FE 2003	QE Dec 2003	FE 2004	QE Jun 2004	QE Sept 2004	QE Dec 2004	%age growth over Sept 2004 (3 months)	%age growth over FE 2004 (9 months)	%age growth over Dec 2003 (12 months)
<b>1) Subscriber's Base (in million)</b>									
i) Internet	3.64	4.14	4.55	4.93	5.14	5.45	6.03	19.78	31.64
ii) High Speed Internet Connection (<256 Kbps)	0.08	0.15	0.19	0.23	0.31	0.65	109.68	242.11	333.33
ii) <b>Broadband</b> Connections (>=256 Kbps)						0.047			
<b>2) Minutes of Use (MOU)/ subs/month)</b>		399	400	400	320	275	-14.06	-31.25	-31.08
<b>3) ARPU (Rs/subs/month)</b>		270	406	250	280	167	-40.36	-58.87	-38.15

**C. Performance of service providers during the quarter: -**

**(I) Fixed Line including WLL(F) Subscribers Base(in Million)**

1) Basic Service Providers	FE 2003	QE Dec 2003	FE 2004	QE Jun 2004	QE Sept 2004	QE Dec 2004	%age growth over Sept 2004 (3 months)	%age growth over FE 2004 (9 months)	%age growth over Dec 2003 (12 months)
BSNL	35.90	35.71	36.11	36.03	36.15	36.49	0.95	1.06	2.20
MTNL	4.63	4.46	4.38	4.54	4.12	4.08	-1.09	-6.96	-8.63
Tata/ Hughes	0.45	0.87	1.00	1.32	1.64	2.00	22.20	100.40	130.34
Bharti	0.37	0.57	0.64	0.70	0.77	0.80	4.42	25.63	41.05
Reliance	0.00	0.29	0.50	0.68	0.92	1.18	28.48	136.40	307.59
HFCL	0.08	0.10	0.12	0.14	0.16	0.18	13.75	51.67	82.00
Shyam	0.05	0.09	0.09	0.099	0.108	0.13	20.37	44.44	44.44
<b>Total</b>	<b>41.48</b>	<b>42.09</b>	<b>42.84</b>	<b>43.51</b>	<b>43.87</b>	<b>44.87</b>	<b>2.29</b>	<b>4.74</b>	<b>6.61</b>

**(II) Mobile Services Subscriber Base (in Million)**

Service Providers	FE 2003	QE Dec 2003	FE 2004	QE Jun 2004	QE Sept 2004	QE Dec 2004	%age growth over Sept 2004 (3 months)	%age growth over FE 2004 (9 months)	%age growth over Dec 2003 (12 months)
Reliance	0.54	6.24	7.26	8.18	9.04	10.15	12.23	39.75	62.60
Bharti	3.07	5.50	6.50	7.67	8.70	9.83	12.94	51.17	78.65
BSNL	2.29	4.94	5.53	6.17	7.96	8.90	11.75	60.85	80.06
Hutch	2.16	3.77	5.15	5.77	6.37	7.18	12.70	39.40	90.42
Idea	1.28	2.24	2.73	2.95	4.36	4.70	7.71	72.01	109.64
BPL Group	1.13	1.54	1.88	2.15	2.34	2.47	5.47	31.28	60.26
Others	0.73	1.29	1.29	1.17	1.47	1.65	12.04	27.67	27.67
Spice	0.64	1.05	1.21	1.30	1.42	1.50	5.42	23.72	42.57
Escotel	0.59	0.83	0.99	1.09				-100.00	-100.00
Tata/ Hughes	0.16	0.56	0.63	0.71	0.69	0.81	16.81	27.94	43.93
MTNL	0.35	0.42	0.46	0.54	0.57	0.78	36.14	68.70	84.76
HFCL	0.03	0.03	0.03	0.034	0.043	0.05	13.95	63.33	63.33
Shyam	0.03	0.03	0.03	0.027	0.027	0.03	-3.70	-13.33	-13.33
<b>Total</b>	<b>13.00</b>	<b>28.44</b>	<b>33.69</b>	<b>37.76</b>	<b>42.99</b>	<b>48.01</b>	<b>11.68</b>	<b>42.51</b>	<b>68.82</b>

## Chapter One

### PERFORMANCE OF FIXED SERVICES

Subscribers Base crosses 44 million

#### 1.1 SUBSCRIBERS BASE: -

1.1.1 As on 31st December 2004, the fixed lines were provided by 5 licensed private operators in addition to incumbents BSNL and MTNL. During the quarter M/s Tata Teleservices has started their services in Bihar, Orissa and Rajasthan circles. List of Fixed Service provider's along with their area of operation is given in Table 1:

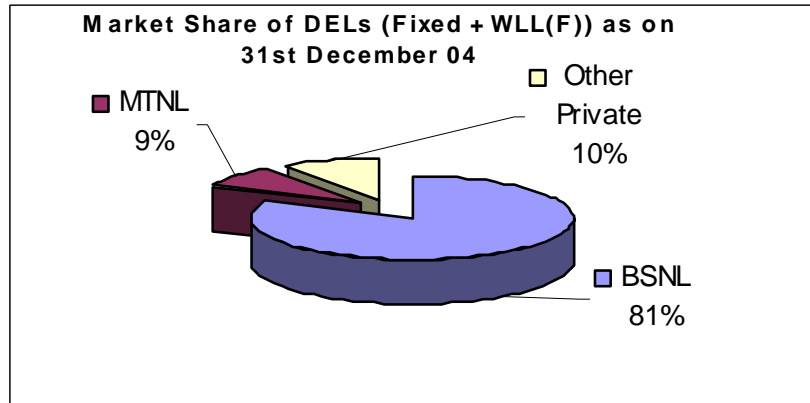
**Table 1**

S. No.	Name of the Service Provider	Area of Operation
1	BSNL	All India except Delhi & Mumbai
2	MTNL	Delhi & Mumbai
3	Bharti Telenet Ltd	MP, Delhi, Haryana, Tamil Nadu, Chennai, Karnataka
4	Tata Teleservices Ltd	Maharashtra, Mumbai, AP, Tamil Nadu, Chennai, Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan
5	HFCL Infotel Ltd	Punjab
6	Shyam Telelink Ltd	Rajasthan
7	Reliance Infocomm.Ltd.	AP, Bihar, Delhi, Gujarat, Haryana, HP, Karnataka, Kerala, MP, Maharashtra, Mumbai Orissa, Punjab, Rajasthan, Tamil Nadu, Chennai, UP(E), UP(W), West Bengal, Kolkata

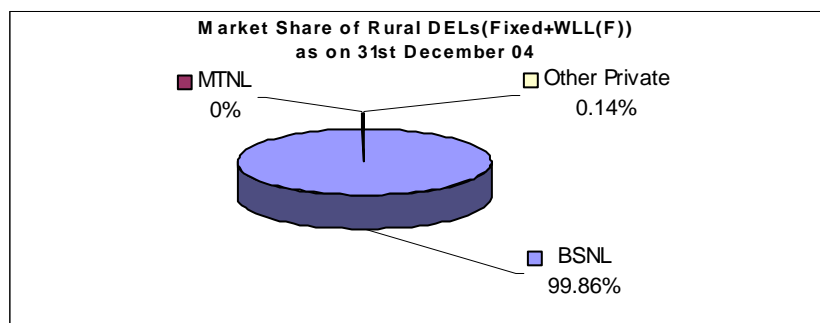
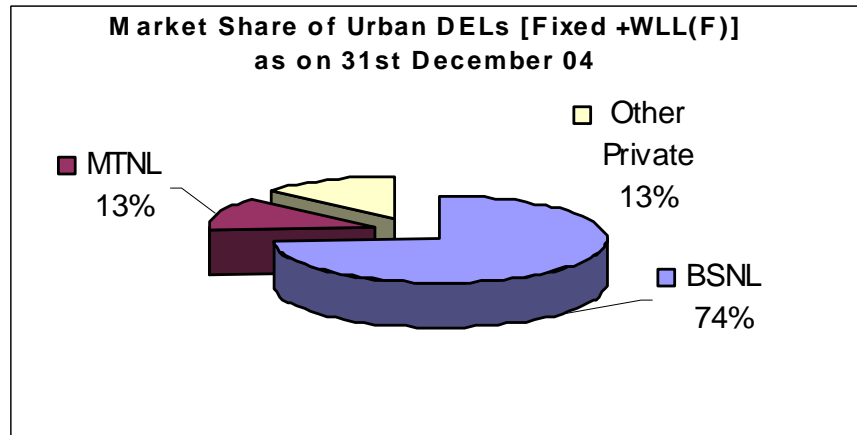
The information in this report is based on the data provided by the Fixed Service Providers. The operator-wise subscriber base is given in Table 1.1.

### 1.1.2 Market Share of DELs

As on 31st December 2004, the total subscriber base of Fixed lines including WLL (F) stood at 44.9 million. The incumbents BSNL and MTNL have 81% and 9% market share respectively in the subscriber base, while all the five private operators have 10% share. In the current quarter the share of private operators has increased by 2% and the share of BSNL has declined by 2% respectively, whereas the share of MTNL remains the same.



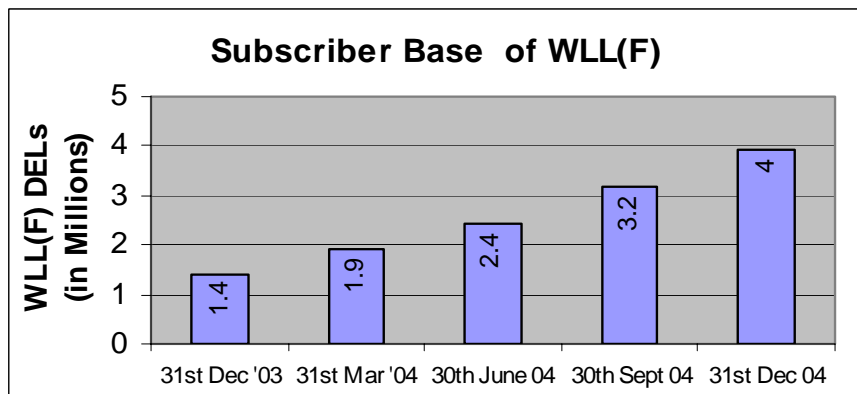
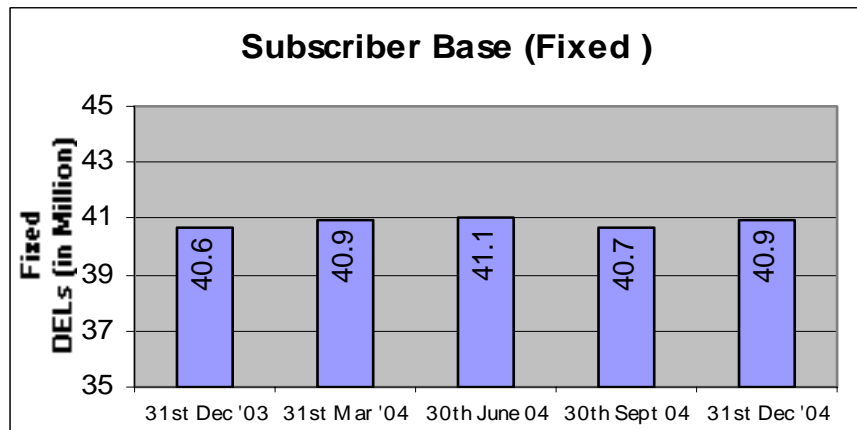
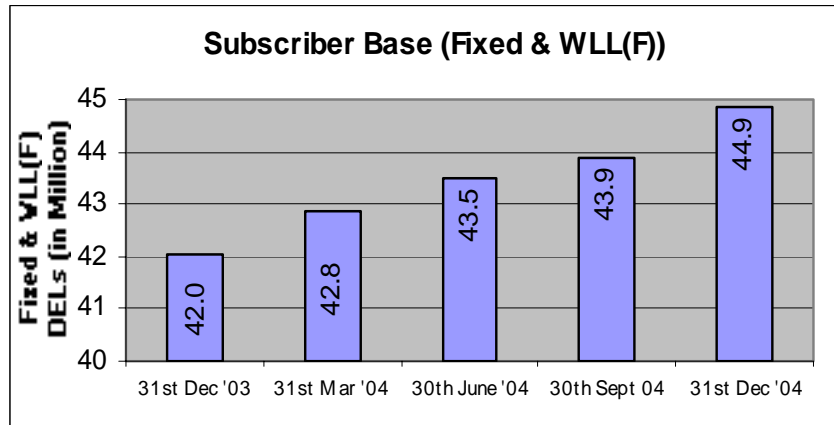
As on 31st December 2004 total urban DELs are 31.93 million and rural DELs are 12.94 million. The market share of Fixed Service Providers in Urban DELs and Rural DELs is depicted in the chart below:





### 1.1.3 Subscriber Base of Fixed & WLL(F) for last five quarters

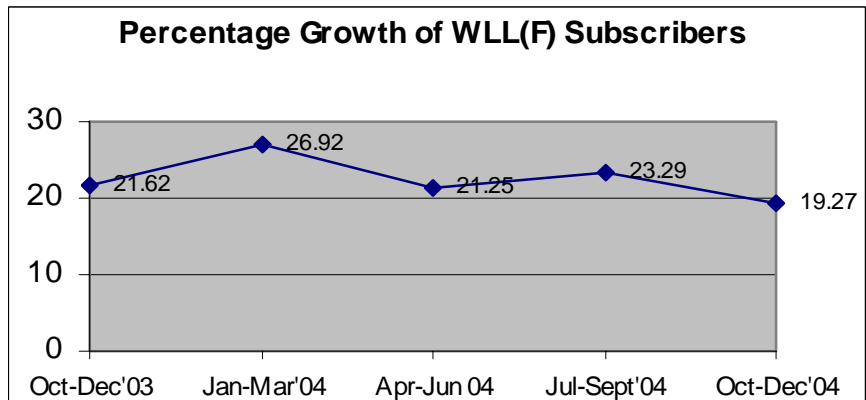
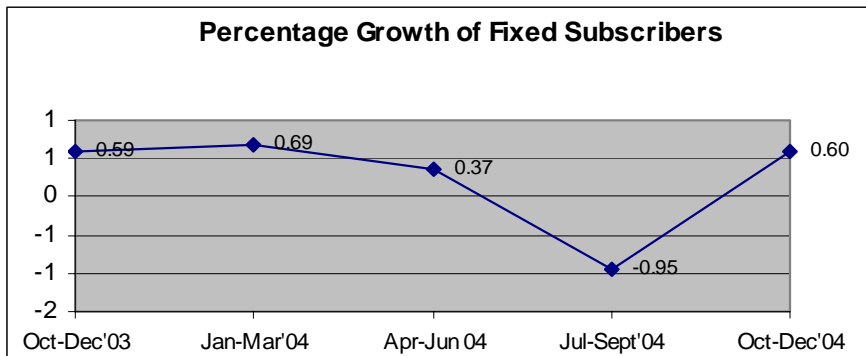
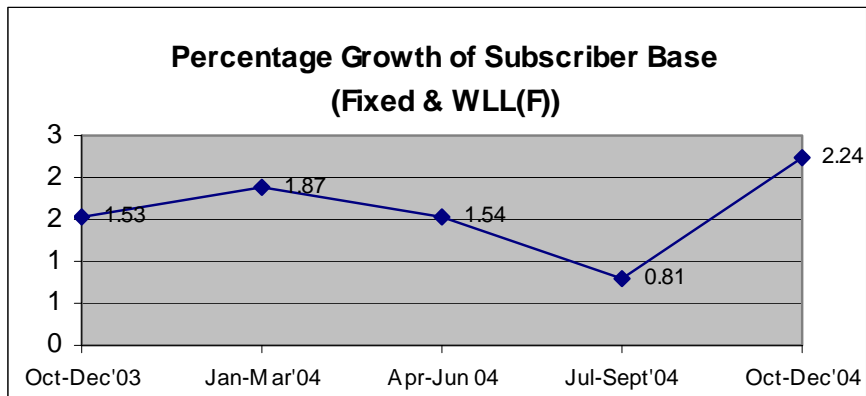
The subscriber base of the Fixed service sector for last five quarters is depicted in the bar chart below:



### 1.1.4 Growth of DELs

The Fixed Service sector has registered a growth of 10,03,761 lines during the Quarter from 1<sup>st</sup> October 2004 to 31<sup>st</sup> December 2004. The actual number of DELs has increased from 4,38,68,346 as on 30<sup>th</sup> Sept 2004 to 4,48,72,107 as on 31<sup>st</sup> December 2004. The overall percentage of growth in subscriber base during the Quarter is 2.24%.

#### ***Average percentage growth rate of Fixed Wireline and WLL(F) Subscribers***

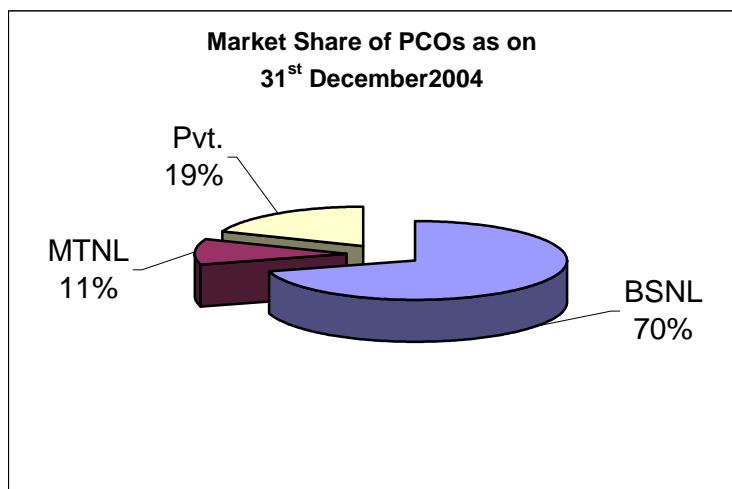


## 1.2 Other Performance Indicators: -

### 1.2.1 Public Call Offices:

During the current quarter 2,65,234 new PCOs have been added. Total number of PCOs in the country as on 31st December 2004 is 25,31,312. The share of BSNL is 17,84,643 (70%) of the total PCOs. The share of MTNL and other private operators is 2,71,709 (11 %) and 4,74,960(19%) respectively.

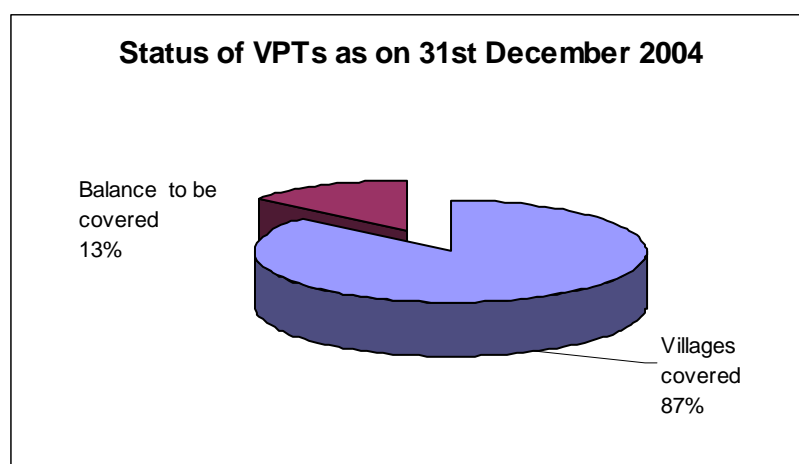
Operator-wise (BSNL/MTNL/Private Operators) market share of PCO is depicted in the chart below.. Operator-wise details of PCOs is available at **Table 1.2.**



### 1.2.2 Village Public Telephones:

There are 6,07,491 villages in India. During the quarter ending 30<sup>th</sup> Sept 2004 there were 5,24,086 VPTs in the country whereas by the end of this quarter, the total number of VPTs has increased to 5,37,238. Thus 13,152 VPTs have been added during the current quarter. The total number of villages left uncovered, as on 31st December 2004 are 70,253. BSNL has added 13,182 VPTs during the quarter whereas there was a decrease of 28 VPTs of HFCL and 2 VPTs of TTL (AP) respectively during this quarter.

Operator-wise details of village public telephones as on 31<sup>st</sup> December 2004 and achievement during the quarter is available at Table 1.3.



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## Chapter Two

### Performance of Mobile Services

Subscriber Base crosses 48 million

#### PART A

**2.0 Details of service providers:** - Following operators were providing mobile service including GSM & CDMA in the respective service areas: -

Sl. No.	Service Provider	Services started	No. of Circles
1	BSNL	Chennai, Kolkata, Maharashtra, Gujarat, AP, KTK, TN, KR, Punjab, HR, UP-W, UP-E, Raj, MP, WB, HP, Bihar, Orissa, Assam, NE, J&K	21
2	Bharti	Delhi, Mumbai, Chennai, Kolkata, MH, Gujarat, AP, KTK, TN, KR, Punjab, HR, UP-W, UP-E, Rajasthan, MP, WB, HP, Orissa, J&K	20
3	Reliance	Delhi, Mumbai, Chennai, Kolkata, MH, Guj, AP, KTK, TN, KR, Punjab, HR, UP-W, UP-E, Raj, MP, WB, HP, Bihar, Orissa, Assam, NE	22
4	Tata Teleservices	Delhi, Mumbai, Chennai, MH, Guj, AP, KTK, TN, Raj, Bihar, Orissa	11
5	Hutch	Delhi, Mumbai, Chennai, Kolkata, Guj, AP, KTK, Punjab, HR, UP-W, UP-E, Raj & WB	13
6	IDEA	Delhi, MH, Guj, AP, KR, HR, UP-W, MP	8
7	BPL	Mumbai, MH, TN, KR	4
8	Aircel Cellular	Chennai, TN	2
9	MTNL	Delhi, Mumbai	2
10	Spice Communications	KTK, Punjab	2
11	HFCL	Punjab	1
12	Shyam Telelink	Rajasthan	1

Circle-wise details of Cellular, Fixed & Unified Access Service providers at the end of the quarter are given at Annex 2.1. All the service areas of the country have mobile operators ranging from 3 to 7.

## 2.1 Growth of Subscribers Base: -

### 2.1.1 Subscribers Base

The Mobile (GSM and CDMA) Industry has crossed the 48 million subscribers mark (GSM 37.4 million & CDMA 10.6 million) at the close of quarter ending 31<sup>st</sup> December 2004.

### 2.1.2 Addition in Subscribers Base

The mobile subscriber's base stood at 48 million for the quarter ending December 2004 as against 43 million for the quarter ending September 2004. It added around 5 million subscribers in this quarter.

### 2.1.3 Growth Rate

The growth for this quarter is 11.67% as against 13.87% for the quarter ending September 2004. M/s Reliance remains the largest mobile operator followed by M/s Bharti and M/s BSNL.

### 2.1.4 Company wise Market Share:

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

(In Lakhs)

Mobile Group	Subscribers on Dec, 04	Market Share	Technology Used
Reliance Grp	10,146,496	21.1	GSM & CDMA
Bharti Grp	9,826,156	20.5	GSM
BSNL	8,895,269	18.5	GSM & CDMA
Hutchison Grp	7,179,592	15.0	GSM
IDEA Grp	4,696,472	9.8	GSM

The details of operator-wise subscribers of GSM and CDMA are given in Table 2.2.

- b) Distribution of Subscriber Base and market share of Mobile (GSM) service as on December 2004 among Metros, Circles A to C is given in Table 2.3.

### 2.1.5 Change in Market Structure

M/s Reliance and M/s Bharti have acquired licence in all 23-service areas for offering mobile services. M/s BSNL is offering services in all 21-service areas. M/s Tata Teleservices and M/s Hutch are licensed in 20 and 13 service areas respectively.

M/s Reliance is offering services in all its service areas except J&K. M/s Bharti Cellular Ltd has started its services in UP (W), West Bengal and Orissa now they are providing services in 20 circles. M/s Bharti is yet to start its services in Bihar, Assam and North-East circles. M/s Hutchison Telecom has started its services in West Bengal and now they providing services in 13 circles. M/s Tata Teleservices started its services in Rajasthan, Bihar and Orissa circles and now they are providing services in 11 circles. The name of M/s Hexacom India Limited is changed to M/s Bharti Hexacom Limited with effect from Dec. 2, 2004.

In this quarter, the subscriber's base of mobile services has crossed the subscriber's base of Fixed Network on All India basis.

## **PART B**

### **2.2 Mobile [Cellular and WLL (M)] Services Trends: -**

#### **2.2.1 Highlights:**

- Share of prepaid subscribers in total mobile (GSM) subscriber base is 74% at the end of September 2004.
- Postpaid subscriber base has maintained the trend of faster rate of growth than prepaid subscriber base in Mobile service (GSM). Since March-04 postpaid subscriber base has grown by 32% whereas prepaid subscriber base has grown by 26%.
- All India ARPU for Mobile service (GSM) for the quarter is Rs. 404 showing a decline of 7% from the figure of Rs.436 for the quarter ending Mar-04.
- The ARPU of BSNL/MTNL that has been higher than the ARPU of private operators in the past has become almost equal to that of private CMSPs in Sept-04.
- Difference of ARPU between postpaid and prepaid is narrowing down as a result of availability of low rental postpaid tariff plans in the market. In Sept-04 postpaid ARPU (Rs. 707) has been 2.37 times the prepaid ARPU (Rs. 299) as against 3.36 times of the prepaid ARPU in the quarter ending Mar-04.
- MOU per subscriber per month for Mobile service (GSM) for September 2004 is 302 as compared with the figure of 322 in March 2004, recording a decline of about 7%.
- As per the data provided by the mobile service providers (GSM), on an all India average, a subscriber sends about 30 SMS per month.
- The ratio of incoming – outgoing calls in Mobile (GSM) traffic is 64:36 during this period.
- Overall proportion of roaming revenue to the total revenue for GSM operators is 12.08%.

#### **2.2.2 ARPU – Cellular Service**

The all India blended ARPU per month for Mobile Service (GSM) for the quarter has declined by 7% from Rs. 436 in the quarter ending Mar-04 to 404 in the quarter ending Sept-04. The lowest blended ARPU is in Circle B (Rs. 355) and the highest is in Metro (Rs. 476). Difference of ARPU between postpaid and prepaid is narrowing down as a result of availability of low rental postpaid tariff plans in the market. In



Sept-04 postpaid ARPU (707) has been 2.37 times the prepaid ARPU (299) as against 3.36 times difference in the quarter ending Mar-04. Such difference between postpaid ARPU and prepaid ARPU is maximum in Metro.

The details are at Annex 2.2.

### 2.2.3 Composition of Revenue of Cellular Service Providers

Details for Composition of Revenue of Cellular Service Providers are given at Annex. 2.2.

### 2.2.4 Usage Pattern in Cellular Service

Minutes of Use (MOU) per subscriber per month for Mobile service (GSM) during the quarter ending September 2004 was 302 as against 322 during the quarter ending March 2004, thereby showing a decline of 6%. The incoming-outgoing call ratio is 64:36. The highest MOU per subscriber is observed in Circle A at 326 and the lowest in Circle B at 249. In the postpaid platform, highest MOUs per subscriber is in Metros at 656. The highest MOU per subscriber in prepaid segment is in Circle C at 257. (Annex 2.2).

### 2.2.5 Revenue per Minute (RPM) – Cellular Service

There has not been any major change in the RPM since March 2004. RPM for the quarter ending March 2004 was 1.35.

Revenue realization per minute [Gross revenue/total MOU(I/C + O/G)] - GSM Service (during the quarter ending Sep-04)

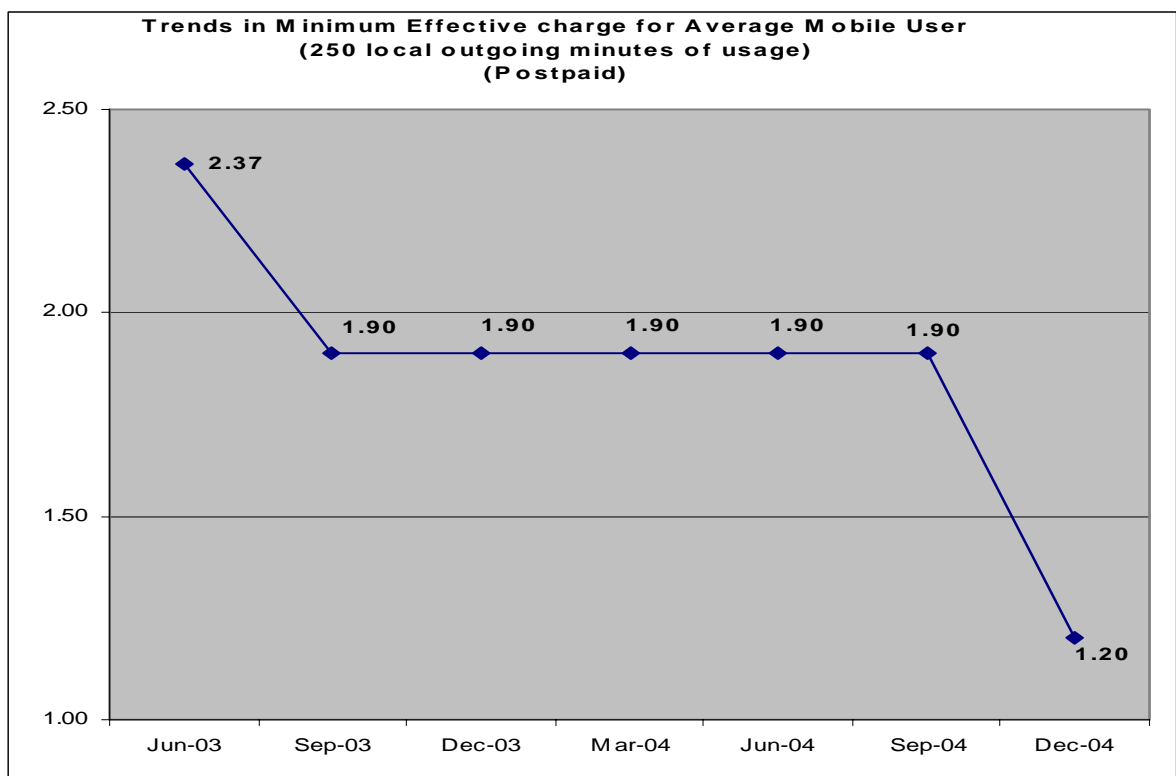
[in Rs.]

<b>Circle</b>	Revenue Realized Per minute in Postpaid	Revenue Realized Per minute in Prepaid	Blended Revenue realized per minute
Circle A	1.06	1.30	1.18
Circle B	1.23	1.58	1.43
Circle C	1.44	1.20	1.30
<b>Metro</b>	1.43	1.51	1.47
<b>All India</b>	<b>1.24</b>	<b>1.43</b>	<b>1.34</b>

### 2.2.6 Minimum Effective Charge:

From this issue of “Telecom Performance Indicators”, the series in respect of Trends in mobile tariffs has undergone change to reflect the actual payout by an average user with a total outgoing MOU [local] of 250 per month. This series is different from the earlier one, in more than one ways. Post- CPP period has been considered for analysis in the new series. The assumptions made are as below:

1. Total outgoing traffic has been distributed between fixed and mobile based on the market share of the networks prevailed at the end of the respective quarter upto Sep-04. From Dec-04 onwards, the traffic information furnished by the Mobile (GSM) operators as a part of quarterly revenue report have been used.
2. Charges payable by the subscriber on account of rental, local call charges, and CLIP are included. Free call allowance has also been considered.
3. Service tax and other levies are excluded.
4. Average holding time is taken as 1 minute
5. 30% of the usage has been attributed to on-net calls, wherever concessional rates for such calls are provided
6. Charges have been calculated for outgoing usage only since incoming calls are free due to CPP w.e.f. 1.5.03



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## Chapter Three

### Performance of Internet Services

Subscribers base inches towards 5.5 million mark. Broadband appears
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#### 3.1 Service Providers & Subscribers Base: -

For the quarter ending December 2004, 180 Internet Service Providers were operational. Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of 16.79 Lakhs against 14.94 Lakhs during the last quarter. Mahanagar Telephone Nigam Limited (MTNL) moved up from third position to second position with a subscriber's base of 9.49 Lakhs against 9.15 Lakhs subscribers during the last quarter. Videsh Sanchar Nigam Limited has slipped to third position with a subscriber base of 9.35 Lakhs against 9.85 Lakhs. M/s Sify Ltd. has retained its fourth position during the quarter with a subscriber base of 7.72 Lakhs. Data Infosys reported a subscriber base of 2.48 Lakhs and remained at fifth place during the quarter ending 31<sup>st</sup> December 2004. (ref Table 3.1).

The reported subscriber base has touched 54.50 lakhs as on quarter ending 31<sup>st</sup> December, 2004 as compared to 51.46 lakhs during the preceding quarter registering an increase of 6 % during the quarter.

#### 3.2 Internet Telephony: -

The Internet Telephony was thrown open for Internet service provider's w.e.f. 1<sup>st</sup> April'02. DOT has given permission to 121 ISPs to offer Internet Telephony services as on December 2004, and as per the report submitted to TRAI, 51 ISPs have started Internet Telephony services, the list of which is enclosed at Annex 3.2. Total minutes of the usage for Internet Telephony during the quarter were 43 million, as compared to 36 million for the last quarter

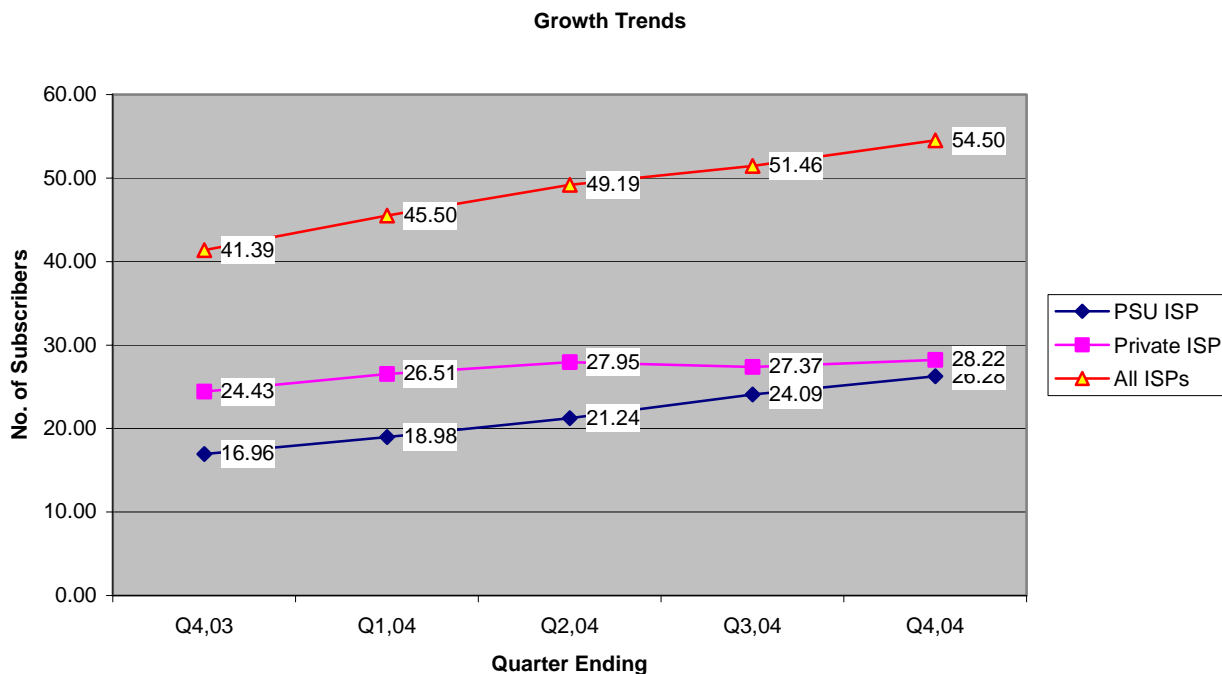
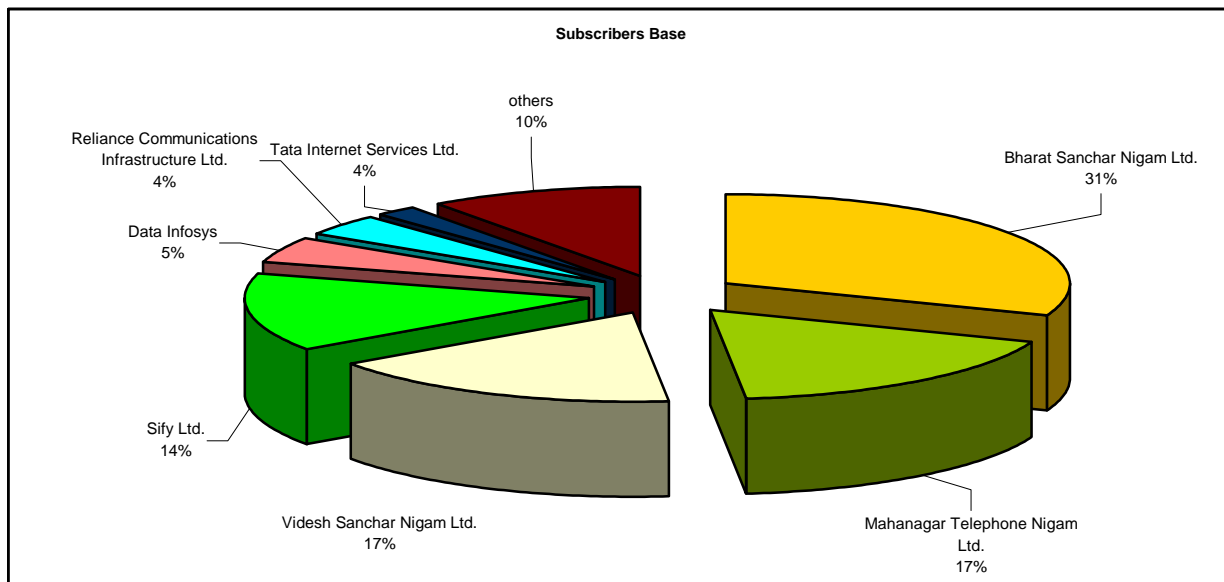
#### 3.3 Market Share: -

The reported subscriber base has touched 54.50 lakhs as on quarter ending 31<sup>st</sup> December, 2004 as compared to 51.46 lakhs during the preceding quarter registering an increase of 6 % during the quarter.

The market share of top 5 ISPs is as under:

ISPs	Market Share
Bharat Sanchar Nigam Ltd.	30.80 %
Mahanagar Telephone Nigam Ltd.	17.42 %
Videsh Sanchar Nigam Ltd.	17.16 %
Sify Ltd.	14.16 %
Data Infosys	4.56 %

Among PSU owned ISPs; M/s BSNL has reported a subscriber's base of 16.79 Lakhs during the quarter ending 31st December, 2004 as against 14.94 Lakhs during the previous quarter registering an increase of 12.35 %. M/s MTNL have reported a subscriber base of 9.49 Lakhs against the subscriber base of 9.15 Lakhs reported during the previous quarter, registering an increase of 3.73 %.



### **3.4 Leased Lines Connectivity: -**

The numbers of Leased Lines connections reached 12,195 during the quarter as compared to 10,744 during last quarter.

### **3.5 Cyber Cafes/Community Internet Centres (CIC): -**

There existed 9216 Cyber Cafes during the quarter ending December 2004, out of which 8304 have been franchised by the ISPs and 912 are non-franchised.

### **3.6 High Speed Internet Connectivity: -**

The number of subscribers accessing Internet through "Always On high speed" connection (less than 256 kbps) has reached 6.54 Lakhs, thus showing a growth of 108 % over previous quarter.

### **3.7 Broadband Connectivity (>=256 Kbps)**

The number of Broadband subscribers with a download speed of 256 kbps or more, as reported by ISPs, is 46,638 at the end of 31<sup>st</sup> December 2004.

### **3.8 Minutes of use per subscriber: -**

As reported by 39 ISPs the average minutes of use per subscriber/ month is approximately 275 minutes.

### **3.9 Average Revenue Per User (ARPU) for ISPs: -**

A total of approx. Rs 255 crores revenue has been reported during the quarter. The average revenue per user (ARPU) per month for Internet usage was of the order of Rs 167.

### **3.10 International connectivity: -**

The bandwidth owned by various IGSP for their ISP operations and Leased lines is reported to be 6.3 GB for downlinking and 6 GB for uplinking.

\*\*\*\*\*

## Chapter Four

### Performance of Other Value Added Services

Growth trend continues

#### 4.1 Public Mobile Radio Trunked Service (PMRTS): -

Public Mobile Radio Trunked Service (PMRTS) is being provided by 13 operators.

##### 4.1.1 Performance during the Quarter Ending 31<sup>st</sup> December 2004:

- The subscriber base of PMRTS increased from 25694 in Sept 2004 to 26153 in Dec 2004 registering a marginal growth rate of 1.79%.
- 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 8926 subscribers followed by Bangalore and Mumbai with the market share of 6685 and 3618 subscribers respectively.
- Procall Limited leads the tally of subscribers with a subscriber base of 7916 followed by Arvind Mills and QuickCalls India Pvt. Ltd. with a subscriber base of 6581 and 3663 respectively. Arya Offshore Service Pvt. Ltd., Hapag Lyod and The Arvind Mills Ltd. have registered a negative growth rate of 4.72%, 11.08% and 1.70% respectively. India Satcom Ltd. has increased their subscribers base with the highest growth rate of 17.21%.
- Mobilcom India Ltd. has not submitted their report in this quarter.

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 Performance during the quarter ending 31<sup>st</sup> December 2004:

- VSAT services are being provided by 11 VSAT service providers.
- M/s RPG Satellite Communications Pvt. Ltd. and M/s Essel Shyam have not submitted their reports.
- In the present quarter, there was an addition of 3950 new subscribers. The total number of subscribers increased from 32271 in Sept 2004 to 36221 in Dec 2004 registering a growth of 12.24% as against the growth rate of 5.37% in quarter ending Sept 2004. HCL Comnet remained the market leader with 12083 VSAT subscribers followed by Hughes Escorts Communications Ltd. (HECL) with 11458,

Bharti BT with 5179 and Comsat Max with 4221 VSAT subscribers respectively.

- M/s HCL Comnet added the maximum number of new connections 1800 with a percentage growth rate of 17.50%.
- M/s ITI Limited has not shown any growth in this quarter while, M/s Telstra Vishesh Communication limited and M/s GNFC and M/s HFCL are having the negative growth of 5.93%, 3.85% and 9.86% respectively in this quarter.

The number of subscribers of each service providers from quarter ending December 2003 to September 2004 along with the Market Share in terms of Percentage of Subscribers as on 31<sup>st</sup> December 2004 is given in Table 4.2.

### **4.3 Radio Paging: -**

As on date there are 10 service providers with paging service licensees for 61 service areas.

#### **4.3.1 Performance during the Quarter Ending 31<sup>st</sup> December 2004:**

- ❖ The total subscriber base decreased from 43320 in Sept, 2004 to 28028 in December 2004 registering a negative growth of 35.30%.
- ❖ The subscriber base of all the service providers except M/s RPG Paging Services Limited decreased in this quarter. M/s RPG Paging Service has retained the same subscribers base in this quarter as was in previous quarter.
- ❖ In the present quarter Netherlands India Communications Ltd. has not submitted their report.
- ❖ M/s Page Point Services India Limited remained the market leader with 17387 subscribers in this quarter.
- ❖ M/s DSS Mobile Communications has decreased from 7580 to 2963, the highest fall in subscribers base in this quarter with a negative growth rate of 60.91%.

The number of subscribers of each service providers from quarter ending June 2004 to December 2004 along with the growth rate in terms of Percentage of Subscribers as on 31.12.2004 is given in Table 4.3.

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## Chapter Five

### Quality of Service (QoS) Performance

#### 5.1 Quality of Service performance of Basic Service Operators for the Quarter Ending December 2004: -

Based on Quality of Service Parameters reported by Basic Service Operators for the quarter ending December 2004, the information on QoS parameters is attached to this report as Annex 5.1.

From perusal of the report (Annex 5.1) following points emerge: -

**(1) Provision of telephone within 7 days for exchange areas declared “ On Demand”.**

40 out of 63 service providers have not met the QoS benchmark for this parameter. The performance of MTNL (Mumbai) and BSNL (all circles) is way below the benchmark of 100%.

M/s Reliance Infocom Limited (all circles) and Tata teleservices (Delhi) have reported 100% promptness for this parameter.

**(2) Fault incidences per month per 100 telephones (should be less than 3 Faults per 100 phones per month)**

BSNL and MTNL have not met the stipulated QoS benchmark for this parameter in all their circles.

Among the private operators M/s Reliance Infocom, Bharti, HFCL and Tata Teleservices (AP, GJ, TN, KTK, Chennai) have met the TRAI stipulated benchmark of <3 faults per month per 100 telephone connections.

M/s Shyam Telelink Limited and M/s Tata Teleservices (Delhi, MH, Mumbai) have not met the QoS benchmark of this parameter.

**(3) Percentage of faults repaired by next working day ( should be >90%)**

16 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.

All the private operators except Tata Teleservices (AP) have met the QoS stipulated benchmark of >90% for this parameter.

**(4) Mean Time to repair (MTTR) ( should be <8hrs.)**

Only 7 out of 26 circles of BSNL have met the benchmark. MTNL (Delhi & Mumbai) have failed to meet the benchmark.

Among the private service operators only Tata (AP) have not met the QoS benchmark.



(5) **Grade of Service for junction between local exchanges (should be < 0.002)**

The Figure of **Grade of Service** not reported by BSNL. M/s MTNL and all the private operators have met the TRAI stipulated benchmark.

(6) **Call Completion Rate in local network (should be >65%)**

16 out of 26 service areas of BSNL and MTNL (Delhi and Mumbai) have not met the OoS benchmark.

Among the private Operators HFCL (PB), Shyam Telelink (RJ), Bharti (TN) & Reliance (except BR, Raj, HR, OR, UP-E, UP –W, WB) 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 4 out of 26 service areas of BSNL namely A & N, NE-I, NE-II and Orissa have not met the overall QOS benchmark on disputed bills. MTNL (Mumbai) has also not met the same.

Among the Private Operators, only TATA (AP, Delhi, MH, KTK and Mumbai), and Bharti (Delhi, KTK, TN & HR) have not met the QoS benchmark of <0.1%.

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

BSNL, MTNL and all Private Operators have failed to meet the benchmark in all the circles.

(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 (Except in PB and Orissa) have failed to meet the requirement on customer care (shift) in all circles. MTNL (Delhi, Mumbai) have also failed to meet the requirement on Customer care.

Among the private operators Shyam Telelink, Rajasthan, Tata (Delhi, MH) and Reliance (all circles) have met the QOS benchmark on Customer Care (Shifts).

**(ii) Closures:-**

As regards 'Closures' these figures are not available for BSNL for all circles. MTNL (Mumbai) has not met the benchmark.

Among the private operators Tata (DL, KTK, Chennai, Mumbai), Bharti (DL, TN,HR) and HFCL have not met the stipulated benchmark.

**(iii) Additional Facility:-**

BSNL has not reported the figure for additional facility. MTNL (Delhi) have failed to meet the QOS benchmark. Tata (AP, MH, Mumbai, KTK), HFCL (PB) and Bharti (Delhi, TN, HR, KTK) have not met the QoS benchmark.

M/s Reliance Infocomm has reported 100% and M/s Shyam Telelink Limited, Rajasthan above 95% promptness in their all circles for attending customer requests regarding **shifts, closures and additional facilities**.

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

In case of Repeat faults, BSNL in all circles (except in TN, HP, Uttranchal) & MTNL (Delhi & Mumbai) have failed to meet the QOS benchmark.

Among the private Operators M/s Reliance Infocom Limited, Shyam (RAJ) and Tata (Delhi, TN, Chennai) are within TRAI's benchmark limits.

**5.2 Quality of Service performance of Cellular Mobile Service Providers for quarter ending 31<sup>st</sup> December 2004: -**

- a) This report covers all Cellular Mobile Operators, except CDMA service by Reliance. Reliance are yet to submit their report in respect of circles where they have migrated to 10 digit number.
- b) This report covers (i) 8 companies/group of companies having 25 licenses providing service in 5 "A" category circles (ii) 7 companies/group of companies having 29 licenses for providing service in 8 "B" category circles. (iii) Three companies/group of companies having 13 licensees for providing service in 7 "C" category circles and (iv) 8 companies/group of companies having 18 licenses for service in 4 metros. Thus there are 85 licenses covered in this report for 24 service areas.
- c) Hutch UP-W and Bharti (WB, J&K) have submitted their first performance report in this quarter. Thus, the number of service providers who have reported their QoS performance has increased from 82 to 85 in this quarter.

The summary of status of the service providers who have met the benchmarks in this quarter as compared to previous quarter is given in the following table:

Sr. No.	Parameter	Benchmark Marks	No. of operators meeting benchmarks	
			Quarter ending Dec, 2004	Quarter ending Sept, 2004
			Out of 85	Out of 82
1.	No. of faults (per 100 subscribers per	<1	74	66
2	Faults cleared within 24 hrs	100.00%	59	52
3	Accumulated down time of community isolation	<24 hrs	74	71
4	Call Success Rate (within licensee's own network)	>99%	62	51
5	Service Access Delay	Between 9 to 20	85	82
6	Call Drop Rate	<3.0%	85	78
7	% of connection with good voice quality	>95%	80	68
8	Complaints per 100 bills issued	<0.1%	64	49
9	% of complaints resolved with 4 weeks	100.00%	81	72
10	Period of all refunds/payment due to customers from the date of resolution of complaints as in (9) above	<4 weeks	78	79

**5.2.1 The analysis of PMR of 85 Cellular licensees in 24 service areas is as under:**

- i) **From the table, it is observed that there has been an improvement in the performance as compared to the previous quarter.**
- ii) **No. of faults (per 100 subscribers)** for BSNL- Kolkata, BSNL- Assam, BSNL – Bihar, TATA – Karnataka and Bharti – J & K are 2.40%, 2.00%, 2.90%, 3.06 and 2.50% respectively, which is way beyond the stipulated benchmark of TRAI <1%.
- iii) For the parameter **“Fault cleared within 24 hrs”** the performance of BSNL (KOLKATA) and TATA (AP) are 72.00% and 79.00% respectively, which is way beyond the stipulated benchmark of 100%.
- iv) 23 Operators are not meeting the benchmark of >99.00% for the parameter of **“Call Success Rate (CCR)”**. CCR for BSNL (Karnataka, Tamil Nadu, Kerala, Orissa) is 88.00%, 89.00%, 88.00%, 89.00% respectively, which is much below the benchmark of 99.00%.
- v) All the Service Providers have met the benchmark of the Parameters for **“Service Access Delay”** and **“Call Drop Rate”**.
- vi) **No. of Complaints per 100 bills issued** for BSNL (Kolkata & MH), Tata - Mumbai and Idea – MH are (2.40%, 1.70%), 1.22% and 1.09% respectively, which is way beyond the benchmark of 0.1%.

**5.2.2. Details of Quality of service:**

**Detail of performance related to fault incidence and repair, network performance and billing complaints are available at Annex 5.2**

### **5.3 Quality of Service Performance of Internet Service Providers: -**

5.3.1 The annex 5.3 indicates the Quality of Service achieved by Top 20 ISPs during the quarter: It is observed that most of the ISPs are able to meet the benchmarks, barring one or two cases.

5.3.2 The observations on QOS Benchmarks is as follows:

#### **5.3.2.1 Service Activation Time:**

All the ISPs have met the benchmark of 6 hrs. ISPs (Tata Teleservices Maharashtra Ltd., Broadband Pacenet (I) Pvt. Ltd., Hughes) have not provided the data.

#### **5.3.2.2 Time to Access:**

ISPs are required to achieve the benchmark 30 sec. All ISPs have met this target in this quarter. Two ISPs Broadband Pacenet (I) Pvt. Ltd and Hughes have not provided the data. MTNL has not provided the data for 3<sup>rd</sup> attempt for Delhi circle, 2<sup>nd</sup> and 3<sup>rd</sup> attempts for Mumbai circle.

#### **5.3.2.3 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 are able to meet this benchmark. MTNL (for both Delhi and Mumbai), Broadband Pacenet (I) Pvt. Ltd. and Hughes have not provided us the data.

#### **5.3.2.4 ISP Node unavailability:**

ISP Nodes unavailability should not exceed 30 minutes in a month. All ISPs are able to achieve this benchmark but MTNL, Broadband Pacenet (I) Pvt. Ltd. and Hughes have not provided us the data.

#### **5.3.2.5 Grade of Service:**

ISPs are required to maintain the Grade of Service on the link connecting PSTN node to the ISP node as 1 in 100. Two ISPs (VSNL and BG Broadband India Pvt. Ltd.) has informed that the information regarding the above

mentioned benchmark can not be provided as the BSO has not given the information to them, WWW Communications has not provided the data as per the prescribed format. Broadband Pacenet (I) Pvt. Ltd. and Hughes have not provided the data.

**5.3.2.6 Mean Time to Restore (MTTR):**

As per clause 1.9 schedule 'C' of ISP license, ISPs are required to rectify 90% of faults resulting due to subscriber complaints within 24 hours and 99% within three days.

All the ISPs have been rectifying the fault within stipulated period of three days.



Table 1.1

## Subscriber Base of Fixed Services

Sr. No.	FSO	Area of Operation	31st December 2004		
			Urban	Rural	Total
1	BSNL	All India	23573321	12921071	36494392
2	MTNL	Delhi & Mumbai	4074932	191	4075123
3	Bharti Telenet Ltd	MP, Delhi, Haryana, Tamil Nadu (including Chennai) Karnataka	803052	607	803659
4	Tata Teleservices Ltd	Maharashtra, AP, Tamil Nadu, Chennai Karnataka, Gujarat, Delhi, Bihar, Orissa, Rajasthan	2000415	3996	2004411
5	HFCL Infotel Ltd	Punjab	181012	725	181737
6	Shyam Telelink Ltd	Rajasthan	125345	5051	130396
7	Reliance Infocomm Ltd	AP, Bihar, Delhi, Gujarat, Haryana, HP, Karnataka, Kerala, MP, Maharashtra, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu, Chennai UP(E), UP(W), WB, Kolkata	1174942	7447	1182389
<b>Grand Total</b>			<b>31933019</b>	<b>12939088</b>	<b>44872107</b>

Table 1.2

## Details of Public Call Offices (PCO)

S. No	Service Providers	Area of Operation	PCOs as on 31.12.2004	PCOs added during the quarter ending 31.12.2004
1	BSNL	All India	1784643	113625
2	MTNL	Delhi & Mumbai	271709	8259
3	Bharti Telenet Ltd	MP, Delhi, Haryana, Tamil Nadu including Chennai, Karnataka	102892	12373
4	HFCL Infotel Ltd	Punjab	29891	3122
5	Tata Teleservices Ltd	Maharashtra, Mumbai, AP, Tamil Nadu, Chennai, Gujarat, KN, Delhi	94989	24815
6	Reliance Infocomm. Ltd	AP, Bihar, Delhi, Gujarat, Haryana, HP, Karnataka, Kerala, MP, MH, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu, Chennai, UP(E),UP(W),WB, Kolkata	230542	103040
7	Shyam Telelink Ltd	Rajasthan	16646	0
	<b>TOTAL</b>		<b>2531312</b>	<b>265234</b>

\* Source - Operators

Table 1.3

## Details of Village Public Telephones (VPT)

S.No	Service Providers	Area of Operation	VPTs as on 31.12.2004	Achievement during the Qtr. ending 31.12.2004
1	BSNL	All India	524595	13182
2	MTNL	Delhi & Mumbai	191	0
3	Bharti	MP, Delhi, Haryana, Tamil Nadu including Chennai, Karnataka	607	0
4	HFCL Infotel Ltd	Punjab	725	-28
5	Tata Teleservices Ltd	Maharashtra, AP, Tamil Nadu, Chennai, Karnataka, Gujarat, Delhi	3996	-2
6	Reliance Infocomm Ltd	AP, Bihar, Delhi, Gujarat, Haryana, HP, KN, Kerala, MP, Maharashtra, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu, Chennai, UP(E),UP(W), WB, Kolkata	4114	0
7	Shyam Telelink Ltd	Rajasthan	3010	0
		<b>TOTAL</b>	<b>537238</b>	<b>13152</b>

\* Source - Operators

\* VPTs figures shown above are also included in Rural DELs shown in Table 1.1



Table 2.1

Subscriber Base of Mobile operators

<b>Mobile Groups and their market share</b>			
<b>Cellular Group</b>	<b>Subscribers on Dec, 04</b>	<b>Market Share</b>	<b>Technology Used</b>
Reliance Grp	10,146,496	21.1	GSM & CDMA
Bharti Grp	9,826,156	20.5	GSM
BSNL	8,895,269	18.5	GSM & CDMA
Hutchison Grp	7,179,592	15.0	GSM
IDEA Grp	4,696,472	9.8	GSM
BPL Grp	2,468,350	5.1	GSM
Spice Grp	1,497,718	3.1	GSM
Aircel Grp	1,647,268	3.4	GSM
Tata Teleservices	805,943	1.7	CDMA
MTNL	776,446	1.6	GSM & CDMA
HFCL	48,596	0.1	CDMA
Shyam Telelink	25,665	0.1	CDMA
<b>Total Subscribers</b>	<b>48,013,971</b>	<b>100</b>	<b>GSM &amp; CDMA</b>

\* Source - Operators

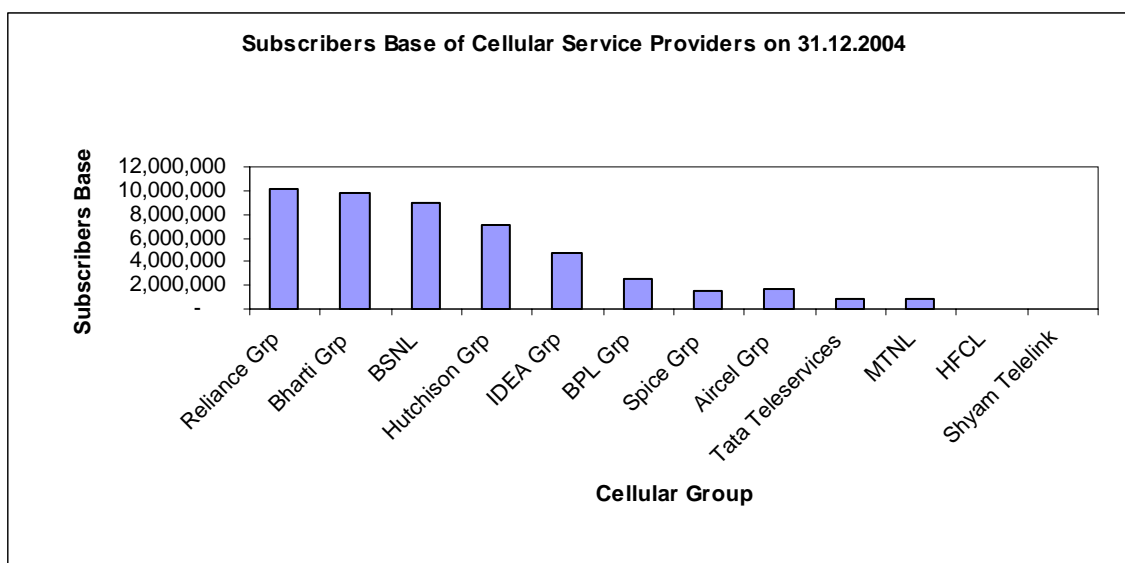


Table 2.2

### Market Share of Mobile (GSM + CDMA) Service Providers

a) The market share of different GSM operators is given below:

<b>Cellular Group</b>	<b>No of Subscribers</b>	<b>Market Share</b>
Bharti Group	9,826,156	26.3
BSNL	8,461,481	22.6
Hutchison Group	7,179,592	19.2
Idea Group	4,696,472	12.6
BPL	2,468,350	6.6
Spice Group	1,497,718	4.0
Reliance	1,030,701	2.8
MTNL	594,742	1.6
Others - Aircel Group	1,647,268	4.4
<b>Total</b>	<b>37,402,480</b>	

b) The market share of different CDMA operators is given below:

<b>CDMA Group</b>	<b>No of Subscribers</b>	<b>Market Share</b>
Reliance Infocomm	9,115,795	85.90
Tata Teleservices	805,943	7.60
BSNL	433,788	4.09
MTNL	181,704	1.71
HFCL	48,596	0.46
Shyam Telelink	25,665	0.24
<b>Total</b>	<b>10,611,491</b>	

### Growth Pattern in Mobile (GSM) Subscriber Base

#### Mobile (GSM) Subscribers Base

The market share distribution among Metros & Circles A to C is given below:

<u>Circle</u>	<u>No. of Subscribers</u>	<u>Market Share</u>
Metros	13.83 million	28.80%
Circles 'A'	17.33 million	36.08%
Circles 'B'	14.51 million	30.22%
Circles 'C'	2.35 million	4.90%

The market share distribution among Metros, Circle A, Circle B & Circle C for the three quarters is as under:

<b>Category</b>	<b>March'04</b>	<b>June'04</b>	<b>Sept'04</b>	<b>Dec'04</b>
Metros	10.55	11.53	12.65	13.83
A' Circle	12.55	13.86	15.8	17.33
B' Circle	9.29	10.84	12.6	14.51
C' Circle	1.31	1.53	1.94	2.35

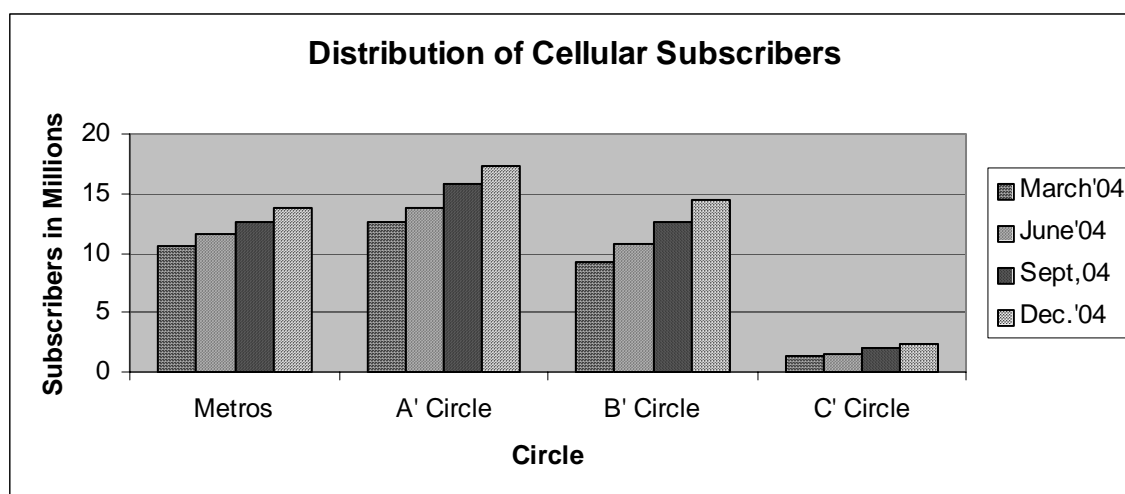


Table 3.1

## Subscribers Base of Internet Services

S. NO	Name of ISP	Category	Area of Operation	Sep-04	Dec-04	% Growth
1	Bharat Sanchar Nigam Ltd.	A	All India	1494037	1678617	12.35
2	Mahanagar Telephone Nigam Ltd.	B	Mumbai & Delhi	915269	949405	3.73
3	Videsh Sanchar Nigam Ltd.	A	All India	985242	935426	-5.06
4	Sify Ltd.	A	All India	725038	771787	6.45
5	Data Infosys	A	All India	225621	248397	10.09
6	Reliance Communications Infrastructure Ltd.	A	All India	209060	219212	4.86
7	Bharti Infotel Ltd.	A	All India	80937	104166	28.70
8	BG Broadband India Pvt. Ltd.	B	Surat SSA, Mumbai	39600	75275	90.09
9	HCL Infinet Ltd.	A	All India	46862	45577	-2.74
10	Shyam Internet Service Pvt. Ltd.	A	All India	41164	45247	9.92
11	Hathway Cable & Data Pvt Ltd.	A	All India	29548	35240	19.26
12	Sab Infotech	B	Punjab, Karnal & Dharamshala	32896	33937	3.16
13	ICENET.NET Ltd.	B	Gujrat	33187	29597	-10.82
14	Tata Teleservices (Maharashtra) Ltd.	A	All India	20765	21563	3.84
15	Data Access Pvt. Ltd.	A	All India	19655	19655	0.00
16	Fascel Ltd.	B	Gujarat	18001	18001	0.00
17	Trak Online Net India	A	All India	16506	16506	0.00
18	WWW Communications Ltd.	B	Delhi	13032	15140	16.18
19	Asianet Sattelite Communications Ltd.	B	Kerala	11851	14410	21.59
20	HFCL Infotel Ltd.	B	Punjab	11397	12888	13.08
21	Broadband Pacenet (I) Pvt. Ltd.	B	Mumbai	11600	10933	-5.75
22	Rolta India Ltd.	B	Mumbai	11101	10410	-6.22
23	Hughes Escorts Communications Ltd.	A	All India	2027	9175	352.64
24	Primus Telecommunications India Ltd.	A	All India	7988	7826	-2.03
25	S. S. net Com Pvt Ltd.	B	North East	7169	7169	0.00
26	Seven Star Dot Com Pvt. Ltd.	B	Khar(w), Jogeshwari (w)	6125	7018	14.58
27	In 2 Cable.com(India) pvt. Ltd.	A	All India	5712	5802	1.58
28	RPG Infotech Ltd. (Sprint RPG India)	A	All India	5299	5248	-0.96
29	Space Online (P) Ltd.	B	Gujarat	4332	4788	10.53
30	Express Communication Pvt. Ltd.	B	Kolkata	4381	4381	0.00
31	Southern Online Bio Technologies Ltd.	B	Andhra Pradesh	4263	3592	-15.74
32	Spectra Net Ltd	A	All India	3290	3587	9.03
33	Blazenet Pvt. Ltd.	B	Gujrat	2809	3244	15.49
34	West Bengal Electronics Industry Development Corporation Ltd.	B	Calcutta	2989	3215	7.56
35	E-Comm Opportunities Pvt. Ltd.	B	Gujrat	3124	3124	0.00
36	Narmada Cyberzone Pvt. Ltd.	B	Gujrat	3036	3036	0.00
37	Tata Internet Services Ltd.	A	All India	5059	2967	-41.35
38	Forum Infotech (P) Ltd.	C	Srinagar SSA	2882	2882	0.00

39	Data Link Impex Pvt. Ltd.	B	Gujrat	2709	2709	0.00
40	HCL Comnet	A	All India	1765	2588	46.63
41	Digital 2 Virtual ISP Private Ltd.	C	Vadodara	2199	2457	11.73
42	Navin.com (I) Pvt. Ltd.	A	All India	2257	2257	0.00
43	Trikon Electronics	B	Mumbai	2147	2244	4.52
44	City Online Services Pvt. Ltd.	B	Andhra Pradesh & Karnataka	3033	2203	-27.37
45	Jain Info net Pvt Ltd.	B	Rajasthan	986	1947	97.46
46	Ankhnet Information Pvt. Ltd.	B	Mumbai	2010	1946	-3.18
47	Tawi e.com	C	Jammu Tawi	1761	1881	6.81
48	Descon Ltd.	B&C	Kolkata, West Bengal	1717	1717	0.00
49	Kelnet Communication Services (P) Ltd.	C	Trivendrum	1715	1715	0.00
50	Vasnet Communications Pvt. Ltd.	C	Mangalore SSA	1320	1675	26.89
51	iPath India Pvt. Ltd.	C	Ernakulam	1687	1515	-10.20
52	Pioneer Online Service Pvt. Ltd.	B	Andhra Pradesh	1630	1480	-9.20
53	Primenet Global Ltd.	A	All India	1832	1477	-19.38
54	Swiftmail Communications Ltd.	A	All India	1186	1376	16.02
55	Mylai Karpagamba Information System Pvt. Ltd.	B	Chennai	1289	1306	1.32
56	Hathway Bhawani Cable & Datacom	B	Mumbai	1082	1247	15.25
57	Siti Cable Network	A	All India	1137	1210	6.42
58	Weikfield Mnemonix Infonetworks Pvt. Ltd.	B	Pune	1150	1150	0.00
59	Pacific Internet India	A	All India	1263	1140	-9.74
60	Spectrum softech Solutions	C	Ernakulam SSA	955	1060	10.99
61	GTL Ltd.	A	All India	1028	1028	0.00
62	Comsat Max Ltd.	A	All India	1044	948	-9.20
63	ERNET India Ltd.	A	All India	860	921	7.09
64	Broadlane Network Pvt. Ltd.	C	Kalyan SSA	878	878	0.00
65	Speed Online.net Pvt. Ltd.	C	Rajkot	629	797	26.71
66	IOL Broadband Ltd. (India Online Network Ltd.)	B	Mumbai	721	721	0.00
67	Bhasinsoft India Ltd.	B	Karnataka	749	719	-4.01
68	Bohra Prastithan Pvt. Ltd.	C	Udaipur SSA	686	691	0.73
69	Micky Online Pvt. Ltd.	C	Moradabad, Nainital	850	673	-20.82
70	Sujan Engineering Pvt. Ltd.	C	Vadodara SSA	667	667	0.00
71	Value Heathcare Ltd.	B	Mumbai	630	654	3.81
72	Ortel Communications Ltd.	C	Bhubaneshwar	625	625	0.00
73	Kappa Infotech Pvt Ltd.	C	Kota SSA	594	594	0.00
74	Viraj Telecom Ltd.	B	Karnataka	502	502	0.00
75	Online Media Solutions Ltd.	B	Andhra Pradesh	1000	500	-50.00
76	Growth Compusoft Exports Ltd.	B	Gujrat	548	488	-10.95
77	Atria Convergence Technologies Pvt. Ltd.	B	Karnataka		479	
78	Antriksh Technologies Pvt. Ltd.	C	Jammu SSA	483	473	-2.07
79	Bhaskar Multinet Pvt. Ltd.	C	Jaipur SSA	465	465	0.00
80	Silicon Mountains (I) Ltd.	B	Maharashtra	409	409	0.00
81	CJ Online Pvt. Ltd.	C	Ghaziabad SSA	403	380	-5.71
82	Gateway Systems Pvt. Ltd.	A	All India	381	376	-1.31
83	Lee & Nee Softwares (Exports) Ltd.	C	Bhubaneshwar	366	366	0.00
84	ISP Solutions India pvt. Ltd.	C	Coimbatore SSA	344	365	6.10
85	Quest Consultancy Pvt. Ltd.	C	Valsad	454	362	-20.26
86	My Guru Online	B	Andhra Pradesh	329	329	0.00
87	Rajasthan Telematics Ltd.	B	Rajasthan	325	325	0.00
88	Excel Infotech Ltd.	B	Punjab	308	308	0.00

89	Digital Nagpur Online Pvt. Ltd.	C	Nagpur	304	304	0.00
90	Vital Continuity Electronics Pvt. Ltd.	C	Ranchi SSA	300	300	0.00
91	SpaceCom Broadband Network Ltd.	B	Delhi	292	292	0.00
92	GUJ Info Petro Ltd.(GIPL)	A	All India	305	291	-4.59
93	Bareilly Communications Pvt Ltd.	C	Bareilly SSA	290	290	0.00
94	Sanchar Telenetwork Pvt. Ltd.	C	Bhavnagar SSA	283	283	0.00
95	Opto Networks Pvt.Ltd.	C	Ghaziabad, Meerut SSA	624	280	-55.13
96	Mac Info Pvt. Ltd.	B	Hydrabad	340	270	-20.59
97	n-Logue Communications(P) Ltd	A	All India	266	266	0.00
98	CJM Consultancy Services Pvt. Ltd.	B	Delhi	200	249	24.50
99	Nachiket (I) Management Services (P) Ltd. (Diksha Cyber City)	C	Sri Ganganagar	237	237	0.00
100	NetMagic Solutions (P) Ltd.	B	Mumbai	211	220	4.27
101	Bhupati Hotels Pvt. Ltd.	C	Visakhapatnam	203	219	7.88
102	Emtici Engineering Ltd.	C	Khera SSA	207	207	0.00
103	Planet Internet Satellite Pvt. Ltd.	C	Nadiad SSA	193	187	-3.11
104	del DSL Internet Pvt. Ltd.	B	Delhi, Ghaziabad, Gurgaon	159	177	11.32
105	Swastik netvision telecom pvt. Ltd.	B	Gujrat	194	164	-15.46
106	Starnet Online Services Ltd.	C	Visakha patnam SSA	154	154	0.00
107	Rida Communications Pvt. Ltd.	C	Aligarh	703	153	-78.24
108	Trans Virtual Pvt. Ltd.	C	Guwahati	150	150	0.00
109	Assured Web Technologies Pvt.	C	Bhopal SSA	143	143	0.00
110	Mynet Services India Pvt. Ltd.	C	Salem	346	143	-58.67
111	North East Online Services Pvt. Ltd.	C	Guwahati	141	142	0.71
112	Chandra net Pvt. Ltd.	B	Gujrat	140	140	0.00
113	Trident Netcom Solutions Pvt. Ltd.	A	All India	136	136	0.00
114	A-Team Information Technology Ltd.	C	Erode	125	125	0.00
115	Manipal Ecommerce Ltd.	B	Karnataka	132	124	-6.06
116	i2i Enterprise Ltd.	A	All India	107	121	13.08
117	Estel Communications Pvt. Ltd.	A	All India	120	120	0.00
118	Srishti Open systems Pvt Ltd.	C	Trivendrum	126	112	-11.11
119	Reach Network India Pvt. Ltd.	A	All India	105	105	0.00
120	Surevin Internet Services Ltd	C	Ghaziabad SSA	120	102	-15.00
121	Aksh Broadband Ltd.	C	Jaipur SSA	90	90	0.00
122	Broad Range Application Integrated Networks Solutions Pvt. Ltd.	C	Bokaro SSA	88	88	0.00
123	Amber Online Services Ltd.	B	Hydrabad	86	86	0.00
124	Centre for Development of Advanced Computing, C-DAC	C	Ghaziabad	76	76	0.00
125	Master Chip	C	Nizamabad	72	72	0.00
126	Dialnet Communications Ltd.	B	Delhi	107	63	-41.12
127	Micromap Satcom Pvt. Ltd.	C	Lucknow	60	60	0.00
128	L&T Finance Ltd.	A	All India	59	58	-1.69
129	Direct Internet Pvt. Ltd.	B	Delhi	56	46	-17.86
130	Cellnet Communication Pvt. Ltd.	C	Bhadohi SSA, UP		38	
131	Access Online Pvt. Ltd.	B	Mumbai	43	37	-13.95
132	Websurf Pvt. Ltd.	C	Kalyan SSA	398	35	-91.21
133	Czars Oleoresin Pvt. Ltd.	C	Gulbarga	102	33	-67.65
134	Tata Power Broadband Company Ltd.	B	Mumbai	1	33	3200.00
135	Indian Quotations Systems Pvt. Ltd.	B	Mumbai	32	32	0.00
136	Arun Girija Communications Pvt Ltd.	C	Patna SSA	32	31	-3.13
137	Dishnet Wireless Ltd.	A	All India	0	27	
138	Nettlinx Ltd.	B	Andhra Pradesh	1379	23	-98.33

139	PBC Venture Ltd.	B	Delhi	22	22	0.00
140	Gujrat Narmada Valley Fertilizer Co. Ltd. (GNFC)	A	All India	21	21	0.00
141	Jumpp India Pvt. Ltd.	A	All India	250	20	-92.00
142	Karuturi Networks Limited	B	Karnataka		20	
143	Essel Shyam Communication Ltd,	A	All India	18	18	0.00
144	Ice Network (P) Ltd.	B	Bangalore	15	15	0.00
145	World Phone Internet services (P) Ltd.	A	All India	15	15	0.00
146	Astro Network India Pvt. Ltd.	A	All India	13	13	0.00
147	Astra Infonets Pvt. Ltd.	B	Hydrabad	12	11	-8.33
148	Shreedhar Infosys Ltd.	C	Varanasi SSA	23	11	-52.17
149	Uttar Pradesh Network Pvt. Ltd.	B	Uttar Pradesh (E&W)	10	10	0.00
150	West Bengal Network Pvt. Ltd.	B	West Bengal and Calcutta	10	10	0.00
151	World tel TamilNadu Pvt. Ltd.	B	Tamilnade circle excluding Chennai & Chennai	10	10	0.00
152	Samkhya Networks (P) Ltd.	C	Gurgaon	8	9	12.50
153	Cyquator Technologies Ltd.	A	All India	9	8	-11.11
154	Software Technology Park of India	A	All India	8	8	0.00
155	Bihar Network Pvt. Ltd.	B	Bihar	5	5	0.00
156	Giga Solutions Pvt. Ltd.	B	Maharashtra	5	5	0.00
157	Haryana Cybernet Pvt. Ltd.	B	Haryana	5	5	0.00
158	Indus ind Cable Television Pvt. Ltd.	B	Mumbai	5	5	0.00
159	Infomagic Services Pvt. Ltd.	B	mumbai	5	5	0.00
160	Kerala communication Network Pvt. Ltd.	B	Kerala	5	5	0.00
161	MP Network Pvt. Ltd.	B	Madhya Pradesh	5	5	0.00
162	Orissa Network Pvt. Ltd.	B	Orissa	5	5	0.00
163	Punjab Communications Ltd	B	Punjab	5	5	0.00
164	Punjab Cybernet pvt. Ltd.	B	Punjab	5	5	0.00
165	Compucom (I) Ltd.	C	Jaipur SSA	3	3	0.00
166	Surana Telecom Ltd.	B	Andhra Pradesh	3	3	0.00
167	Tandem Infotech Pvt. Ltd.,	C	Trivandrum	5	3	-40.00
168	Worldwide com Pvt. Ltd.	C	Saharanpur	3	3	0.00
169	Bharti Aquanet Ltd.	A	All India	2	2	0.00
170	CMC Ltd.	A	All India	2	2	0.00
171	Godrej Infotech Ltd.	B	Mumbai	4	2	-50.00
172	E connect solutions Pvt. Ltd.	C	Udaipur SSA	1	1	0.00
173	Gujrat State Petroleum Corp Ltd.	B	Gujrat	86	1	-98.84
174	iServe India Pvt Ltd.	A	All India	1	1	0.00
175	Reliance Engineering Associates Pvt. Ltd. (Broadband Solutions)	A	All India	1	1	0.00
176	Apna Telelink Pvt LTD	C	Jalandhar SSA	46	0	-100.00
177	Bharat Connect Ltd.	B	Delhi	0	0	
178	Nelco Ltd.	A	All India		0	
179	Tata Power Company Ltd.	A	All India	38	0	-100.00
180	Vehtel Obconic Internet Protocol Pvt. Ltd.	B	Andhra Pradesh	1	0	-100.00
	<b>Total</b>			<b>5146463</b>	<b>5450213</b>	<b>5.90</b>

Table 4.1

**Subscriber Base of Public Mobile Radio Trunking Service (PMRTS)**

Total number of operators: 13

Number of operators who have submitted reports: 12

Sr. No.	Name of the Service Provider	Operative Area	Subscriber Base as on 30-09-2004	Subscriber Base as on 31-12-2004
1	Aryadoot Transport Pvt Limited	Vishakhapatnam	953	1033
	<b>Total</b>		<b>953</b>	<b>1033</b>
2	Jet-Aiu Skyline Transport Pvt Ltd.	Indore	353	362
	<b>Total</b>		<b>353</b>	<b>362</b>
3	Container Movement (Bombay) Transport Pvt Ltd.	Delhi	5	5
	<b>Total</b>		<b>5</b>	<b>5</b>
4	Arya Offshore Services Pvt Ltd.	Mumbai	882	815
		Chennai	771	759
	<b>Total</b>		<b>1652</b>	<b>1574</b>
5	Hapag Llyod (German Express Shipping Agency (India) Pvt Ltd.	Navi Mumbai (Belapur)	397	376
		Delhi	587	499
	<b>Total</b>		<b>984</b>	<b>875</b>
6	United Liner Agencies of India (Pvt) Ltd	Delhi	606	765
		Jamnagar	0	0
		Calcutta	920	910
	<b>Total</b>		<b>1526</b>	<b>1675</b>
7	Procall Limited	Delhi	6611	6788
		Jaipur	237	275
		Gurgaon	246	220
		Faridabad	626	633
	<b>Total</b>		<b>7720</b>	<b>7916</b>
8	The Arvind Mills Ltd.	Delhi	946	803
		Faridabad	1	1
		Mumbai	1279	1402



		Vashi	46	46
		Ahmedabad	311	306
		Baroda	637	485
		Surat	905	918
		Chennai	1082	1059
		Bangalore	1488	4561
	<b>Total</b>		<b>6695</b>	<b>6581</b>
9	Smartalk Pvt Limited	Pune	625	699
		Vashi	476	410
		Mumbai	282	438
	<b>Total</b>		<b>1383</b>	<b>1547</b>
10	QuickCalls India Pvt. Limited	Bangalore	1760	1872
		Hyderabad	1004	1123
		Chennai	792	668
	<b>Total</b>		<b>3556</b>	<b>3663</b>
11	Bhilwara Telenet Services Pvt Limited	Mumbai	569	587
		Delhi	0	0
	<b>Total</b>		<b>569</b>	<b>587</b>
12	Mobilkom India Limited*	New Delhi	66	66
		Shimla	17	17
		Dhanbad	0	0
	<b>Total</b>		<b>83</b>	<b>83</b>
13	India Satcom Ltd.	Bangalore	215	252
	<b>Total</b>		<b>215</b>	<b>252</b>
	<b>Grand Total</b>		<b>25,694</b>	<b>26153</b>

Table 4.2

## Subscriber Base of VSAT Service Providers

S.No.	Service Provider	31.03.2004	30.6.2004	30.9.2004	31.12.2004	Percentage of Market Share (%)
1	Hughes	8395	9955	10137	11458	31.63
2	HCL Comnet	8376	9581	10283	12083	33.36
3	Comsat Max	4210	4085	4175	4221	11.65
4	Bharti BT	3829	4053	4472	5179	14.30
5	Essel Shyam *	2040	2066	2144	2144	5.92
6	Tata Services	367	503	700	792	2.19
7	Telstra Vishesh	159	159	135	127	0.35
8	RPG Satellite Communications Pvt. Ltd. *	79	79	75	75	0.21
9	HFCL	67	67	71	64	0.18
10	ITI	53	53	53	53	0.15
11	GNFC	26	26	26	25	0.07
	<b>Total</b>	<b>23330</b>	<b>30627</b>	<b>32271</b>	<b>36221</b>	<b>100.00</b>

\* Service Providers not reported their data; the figure of last quarter has been retained.

Table 4.3

## Subscriber Base of Radio Paging Service Providers

S.No	Name of the Service Provider	Operative Area	June 2004	Sept, 2004	Dec, 2004	Growth Rate in %age
1	DSS Mobile Comm Ltd	Ahmedabad	11609	7580	2963	-60.91029
2		Bangalore				
3		Calcutta				
4		Delhi				
5		Hyderabad				
6		Kanpur				
7		Lucknow				
8		Madras				
9		Mumbai				
10		Pune				
11	Page Point Services (India) Limited	Mumbai	26109	23979	17387	-27.490721
12		Bangalore				
13		Hyderabad				
14		Pune				
15	Microwave Communications Ltd (Pagelink)	Bombay	8958	5246	3363	-35.894014
16		Calcutta				
17		Vadodara				
18		Ahmedabad				
19		Surat				
20		Rajkot				
21		Delhi				
22	RPG Paging Services Limited	Ahmedabad	6497	5281	5281	0
23		Delhi				
24		Chennai				
25	Modi Korea Telecommunications Ltd.	Chennai	3171	2619	1215	-53.608247
26		Chandigarh				
27		Calcutta				
28		Indore				
29		Lucknow				

30		Kanpur				
31		Jaipur				
32		Varanasi				
33	Matrix Paging	Mumbai	522	389	365	-6.1696658
34		Surat				
35		Rajkot				
36		Pune				
37		Vadodara				
38	ABC Communications	Delhi	1127	955	869	-9.0052356
39		Amritsar				
40		Chandigarh				
41		Jaipur				
42		Kanpur				
43		Ludhiana				
44		Varanasi				
45	Telesistem(l)	Bangalore	2663	858	248	-71.095571
46		Chennai				
47		Coimbatore				
48		Ernakulam				
49		Madurai				
50		Trivandrum				
51	Easy Call	Bhopal	650	478	402	-15.899582
52		Calcutta				
53		Indore				
54		Nagpur				
55		Vishakapatnam				
56		Patna				
57		Hyderabad				
58	NICE	Srinagar	Not Reported	Not Reported	Not Reported	
59		Jammu				
60		Assam				
61		Nagpur				
	<b>Total Subscriber Base</b>		<b>61306</b>	<b>47385</b>	<b>32093</b>	<b>-32.27</b>

## Details of Fixed Service Licenses issued to private operators

Service Provider	Service Area	DoT. Letter. Reference No.	License No.	Date
<b>Bharti</b>	M P		17-12/95-BS-II	28.02.1997
<b>HFCL</b>	Punjab	10-10-2003-BS-II / Vol-II	17-15/95-BSII/Punjab	07.11.1997
<b>Tata</b>	Maharashtra including Mumbai	10-10-2003-BS-II	17-11/95-BS-II	30.09.1997
<b>Shyam</b>	Rajasthan	10-10-2003-BS-II / Vol-II	17-16/95-BS-II/Rajasthan	04.03.1998
<b>Tata</b>	A P	10-10-2003-BS-II	17-1/95-BS-II/Andra Pradesh	04.11.1997
<b>Tata</b>	TN	10-10-2003-BS-II	18-61/2001-BS-II	31.08.2001
<b>Tata</b>	Karnataka	10-10-2003-BS-II	18-59/2001-BS-II	31.08.2001
<b>Tata</b>	Delhi	10-10-2003-BS-II	18-57/2001-BS-II/Delhi	31.08.2001
<b>Tata</b>	Gujarat	10-10-2003-BS-II	18-58/2001- BS-II	31.08.2001
<b>Reliance</b>	Bihar	10-10-2003-BS-II / Vol-II	18-113/2001-BS-II	20.07.2001
<b>Reliance</b>	Delhi	10-10-2003-BS-II / Vol-II	18-32/2001-BS-II	20.07.2001
<b>Reliance</b>	Gujarat	10-10-2003-BS-II / Vol-II	17-6/95-BS-II	18.03.1997
<b>Reliance</b>	Haryana	10-10-2003-BS-II / Vol-II	18-30/2001-BS-II	20.07.2001
<b>Reliance</b>	HP	10-10-2003-BS-II / Vol-II	18-116/2001-BS-II	20.07.2001
<b>Reliance</b>	Karnataka	10-10-2003-BS-II / Vol-II	18-35/2001-BS-II	20.07.2001
<b>Reliance</b>	Kerala	10-10-2003-BS-II / Vol-II	18-38/2001-BS-II	20.07.2001
<b>Reliance</b>	MP	10-10-2003-BS-II / Vol-II	18-32/2001-BS-II	20.07.2001
<b>Reliance</b>	Maharashtra	10-10-2003-BS-II / Vol-II	18-36/2001-BS-II	20.07.2001
<b>Reliance</b>	Orissa	10-10-2003-BS-II / Vol-II	18-112/2001-BS-II	20.07.2001
<b>Reliance</b>	Punjab	10-10-2003-BS-II / Vol-II	18-31/2001-BS-II	20.07.2001
<b>Reliance</b>	Rajasthan	10-10-2003-BS-II / Vol-II	18-115/2001-BS-II	20.07.2001
<b>Reliance</b>	Tamil Nadu	10-10-2003-BS-II / Vol-II	18-29/2001-BS-II	20.07.2001
<b>Reliance</b>	UP(East)	10-10-2003-BS-II / Vol-II	18-34/2001-BS-II	20.07.2001
<b>Reliance</b>	UP(West)	10-10-2003-BS-II / Vol-II	18-39/2001-BS-II	20.07.2001

## List of Cellular, Fixed &amp; Unified Access Service Providers

Circle	Operators		
	Mobile		Fixed
	Cellular	Unified	
Delhi	Hutch	Reliance Infocomm	MTNL
	MTNL	Tata Teleservices	Bharti Telenet
	Idea	Bharti Cellular Ltd	
Mumbai	BPL	Reliance Infocomm	MTNL
	Hutch	Tata Teleservices	
	MTNL	Bharti Cellular Ltd	
Chennai	Aircel Cellular	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	Bharti Telenet
	Hutchison	Bharti Cellular Ltd	
Kolkata	Hutchison East	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
		Bharti Cellular Ltd	
Maharashtra	BPL	Reliance Infocomm	BSNL
	Idea	Tata Teleservices	
	BSNL	Bharti Cellular Ltd	
Gujarat	Fascel	Reliance Infocomm	BSNL
	Idea	Tata Teleservices	
	BSNL	Bharti Cellular Ltd	
Andhra Pradesh	Idea	Reliance Infocomm	BSNL
	Hutchison	Tata Teleservices	
	BSNL	Bharti Mobile Ltd.	
Karnataka	Spice	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	Bharti Telenet
	Hutch	Bharti Mobile Ltd.	
Tamilnadu	BPL	Reliance Infocomm	BSNL
	Aircel	Tata Teleservices	Bharti Telenet
	BSNL	Bharti Cellular Ltd	
Kerala	Escotel	Reliance Infocomm	BSNL
	BPL	Tata Teleservices	
	BSNL	Bharti Cellular Ltd	
Punjab	Spice	Reliance Infocomm	BSNL
	BSNL	HFCL Infocom	
	Hutchinson	Tata Teleservices	
		Bharti Mobile Ltd.	
	Spice Communications		
Haryana	Escotel	Reliance Infocomm	BSNL
	Aircel Diglink	Tata Teleservices	Bharti Telenet

	BSNL	Bharti Cellular Ltd.	
Utter Pradesh(W)	Escotel	Reliance Infocomm	BSNL
	BSNL	Huchinson Essar South Ltd.	
		Tata Teleservices	
		Bharti Cellular Ltd.	
Utter Pradesh(E)	Aircel Diglink	Reliance Infocomm	BSNL
	BSNL	Tata Teleservices	
		Bharti Cellular Ltd.	
Rajasthan	Aircel Diglink	Reliance Infocomm	BSNL
	Hexacom	Tata Teleservices	
	BSNL	Shyam Telelink	
Madhya Pradesh	Idea	Reliance Infocomm	BSNL
	BSNL	Bharti Infotel Ltd.	Bharti Telenet
		Tata Teleservices	
		Bharti Cellular Ltd.	
WB&A&N	BSNL	Reliance Infocomm	BSNL
		Tata Teleservices	
		Bharti Cellular Ltd.	
		Huchinson Essar South Ltd.	
		Dishnet DSL Ltd.	
Himachal Pradesh	BSNL	Reliance Infocomm	BSNL
		Tata Teleservices	
		Dishnet DSL Ltd.	
Bihar	BSNL	Reliance Infocomm	BSNL
		Tata Teleservices	
		Bharti Cellular Ltd.	
		Dishnet DSL Ltd.	
Orissa	BSNL	Reliance Infocomm	BSNL
		Tata Teleservices	
		Bharti Cellular Ltd.	
		Dishnet DSL Ltd.	
Assam	BSNL	Dishnet DSL Ltd.	BSNL
North East	Reliance	Dishnet DSL Ltd.	BSNL
	BSNL		
Jammu & Kashmir	BSNL	Dishnet DSL Ltd.	BSNL
	Bharti		

## Trends in ARPU, Composition of Revenue &amp; usage pattern (MOU)

a) **ARPU (per month during Sept'04) - Cellular service (Rs.)**

Circle	Postpaid	Prepaid	Blended ARPU
Circle A	602	296	384
Circle B	620	281	355
Circle C	674	309	413
<b>Metro</b>	939	320	476
<b>All India</b>	707	299	404
<b>All private CMSPs</b>	729	297	403
<b>BSNL/MTNL</b>	642	306	405

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

Item	Sep-04
Rental Revenue	28.50%
Revenue from Call charges (usage)	45.55%
Revenue from SMS service	5.43%
Revenue from Roaming	12.20%
Other Revenues *	8.32%
<b>Total</b>	<b>100%</b>

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

c) **Usage Pattern in Cellular Services**

## i) MOU (per subscriber per month) in Mobile Service (GSM)

Circle	Postpaid	Prepaid	Blended MOU
Circle A	568	228	326
Circle B	504	177	249
Circle C	468	257	317
<b>Metro</b>	656	212	324
<b>All India</b>	572	209	302

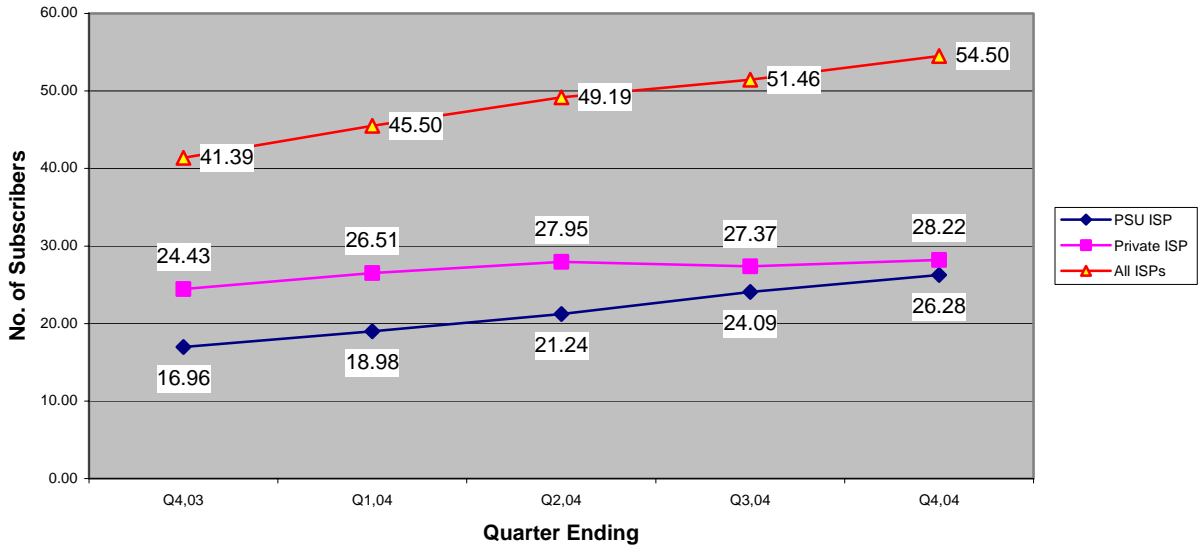
## ii) Proportion of Incoming minutes in total traffic

Circle	Postpaid	Prepaid	Blended
Circle A	58%	71%	65%
Circle B	54%	68%	61%
Circle C	58%	64%	61%
<b>Metro</b>	58%	76%	67%
<b>All India</b>	57%	71%	64%

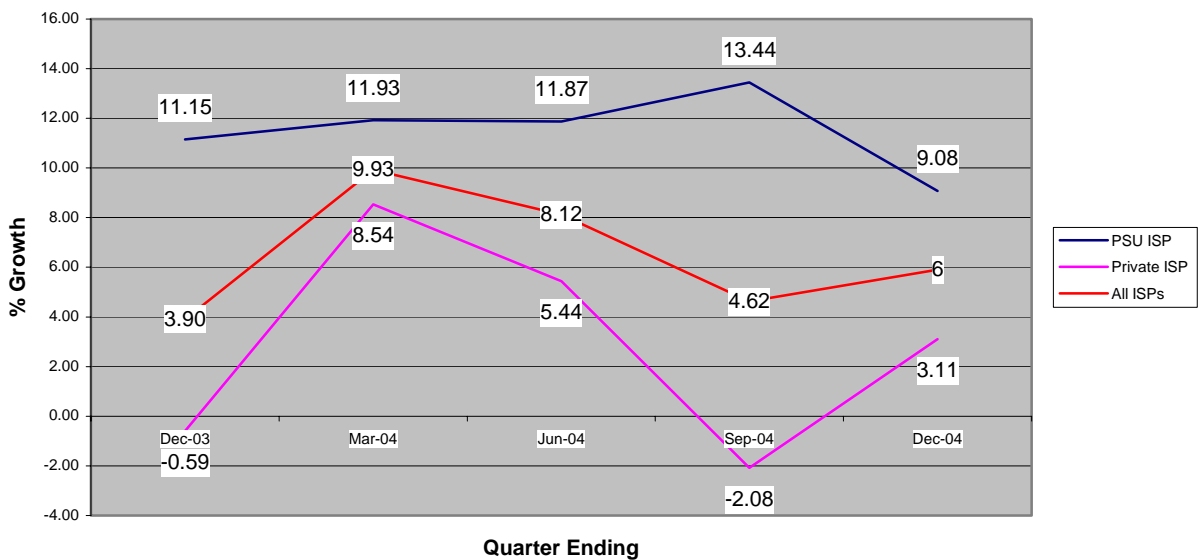


### Growth Pattern of Internet Subscribers

Growth Trends- Subscriber Base



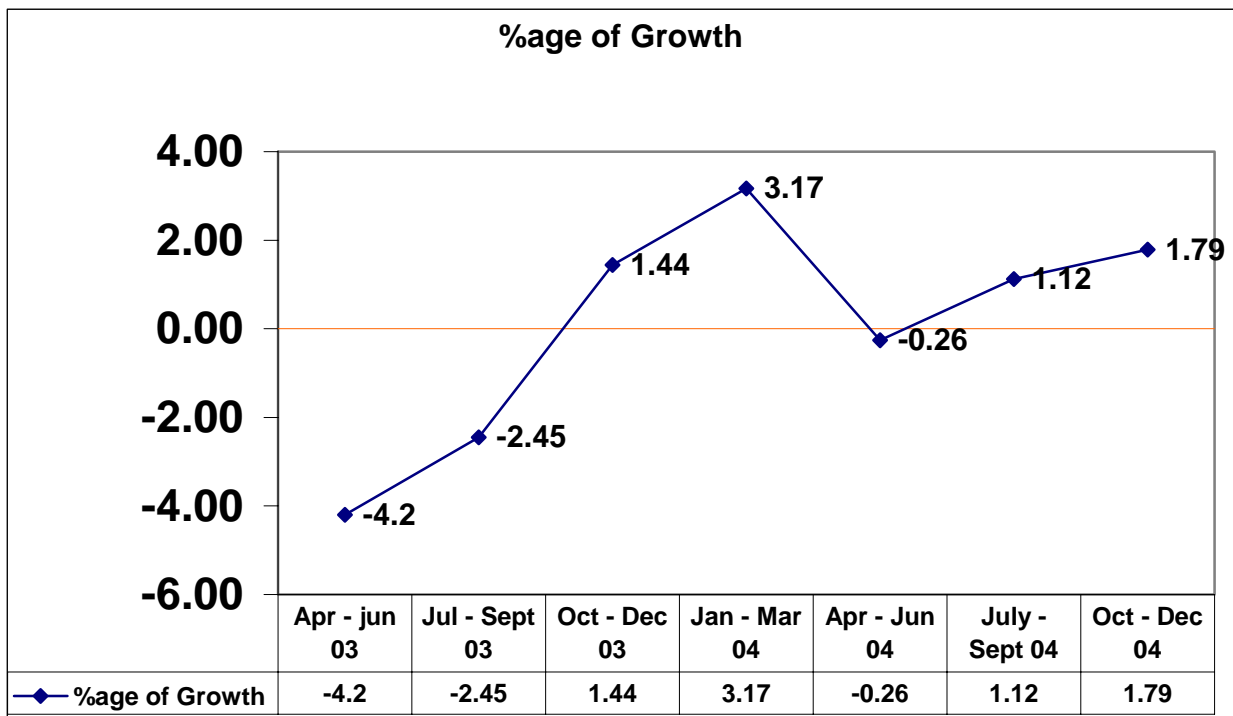
Growth Rate Trends



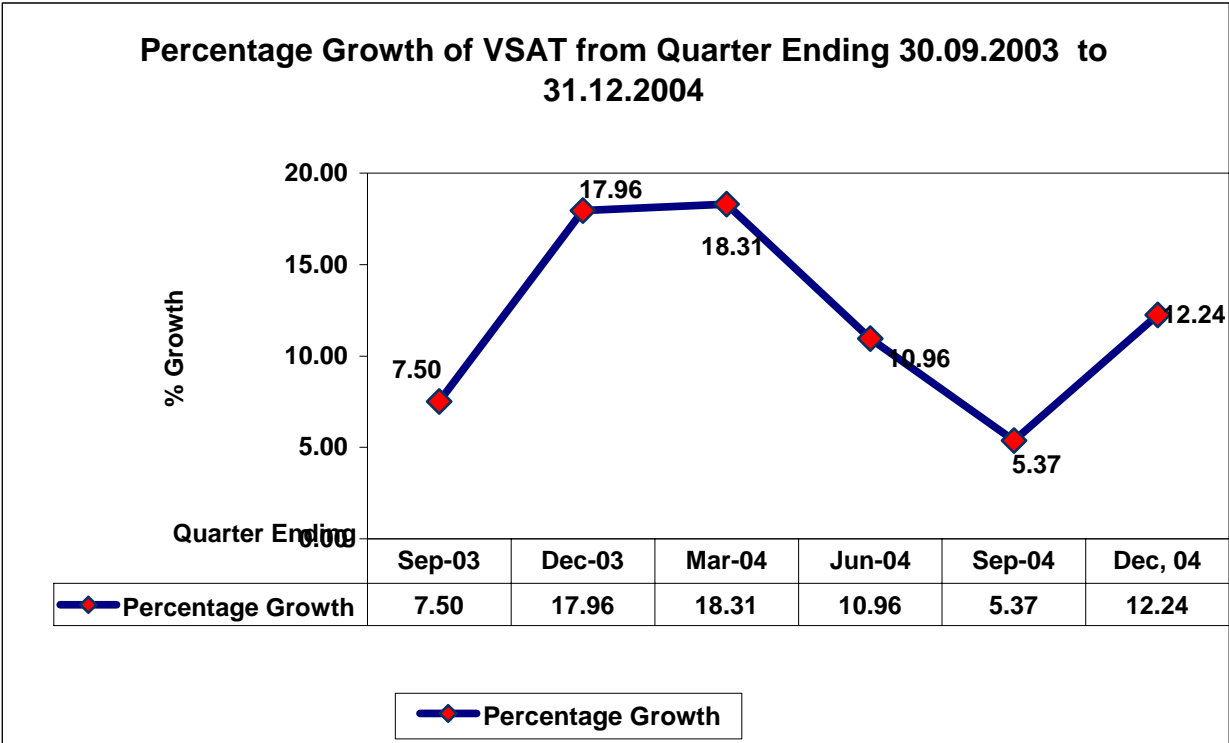
### List of Internet Telephony Service Providers

S. No.	Name of ISPs
1	Apna Telelink Pvt. Ltd.
2	Asianet Satellite Communications Ltd.
3	BG Broadband India Pvt. Ltd.
4	Bharti Broadband Network Ltd.
5	BSNL
6	City Online Services Pvt. Ltd.
7	Data Infosys Ltd.
8	Data Link Impex Pvt. Ltd.
9	Digital2Virtual SP Pvt. Ltd.
10	Estel Communications Pvt. Ltd.
11	Gateway Systems (I) Pvt. Ltd.
12	Growth Compusoft Exports Ltd.
13	GTL Limited
14	Hathway Cable & Datacom Pvt. Ltd.
15	HCL Infinet Ltd.
16	Icenet.net Limited
17	In2Cable.Com (India) Ltd
18	iServe India Solutions Pvt. Ltd.
19	Jain Infonet Pvt. Ltd.
20	Karuturi Networks Ltd.
21	Mahanagar Telephone Nigam Limited
22	Narmada Cyberzone Pvt. Ltd.
23	NetMagic Solutions (P) Ltd.
24	Nettlinx Ltd.
25	Online Media Solution Ltd.
26	Opto network Pvt. Ltd.
27	Ortel Communications Ltd.
28	PBC Venutres Ltd.
29	Primus Telecommunication India Ltd.
30	Rolta India Limited
31	SAB Infotech Pvt. Ltd.
32	Seven Star Dot Com
33	Sify Ltd.
34	Southern Online Services Ltd.
35	Surana Telecom Ltd.
36	Swiftmail Communications Ltd.
37	Trak Online Net India Pvt. Ltd
38	Trikon electronics Pvt. Ltd.
39	Value Healthcare Ltd.
40	VSNL
41	Wilnet Communications Pvt. Ltd.
42	World Phone Internet Services (P) Ltd.
43	Swastik Netvision Telecom Pvt. Ltd.
44	Pioneer Online Pvt. Ltd.
45	Speed Online.net Pvt. Ltd.
46	Bharti Infotel Ltd.
47	Mylai Karpagambal Information Systems Pvt. Ltd.
48	DeIDSL Internet Pvt. Ltd.
49	Veibel Obconic Internet Protocol Pvt. Ltd.
50	Growth Compusoft Exports Ltd.
51	Tata Teleservices (Maharashtra) Ltd.

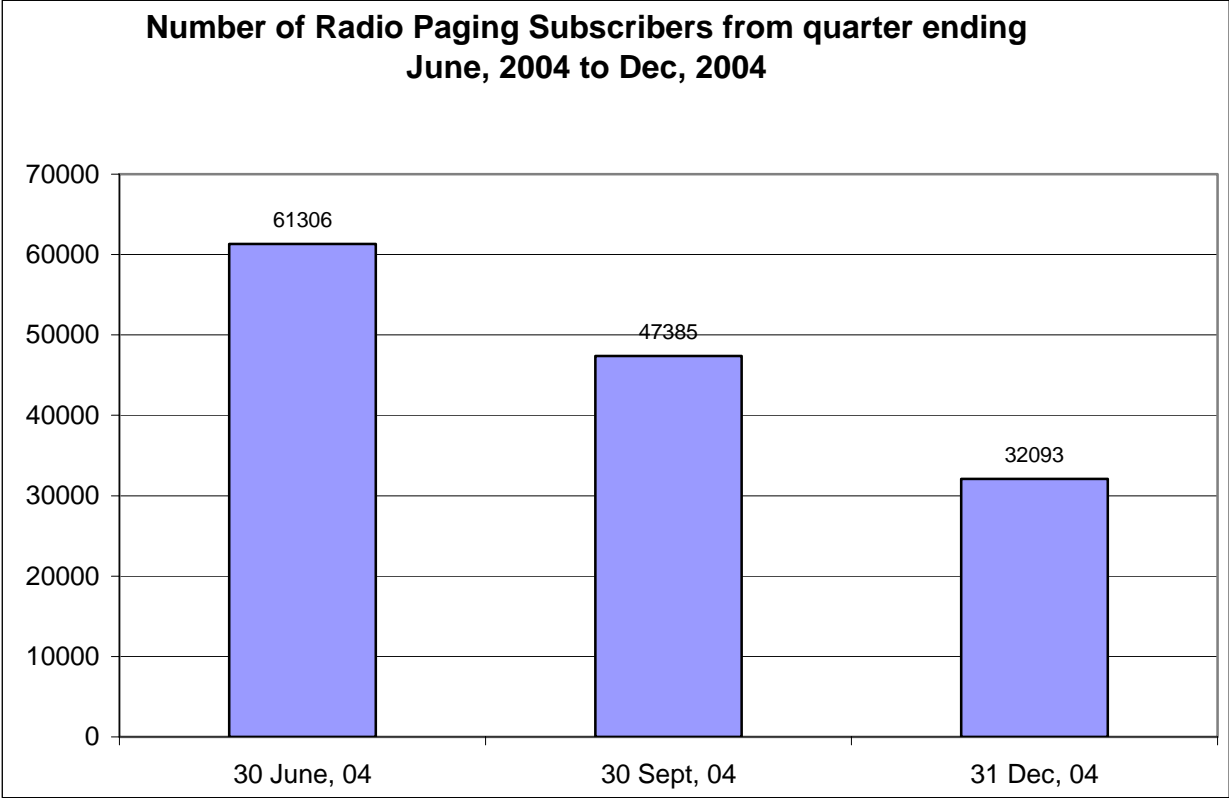
Growth Rate of PMRTS subscribers



Growth Rate of VSAT Subscribers



**Growth Rate of Radio Paging Subscribers**



## Quality of Service Performance for Fixed Services

Performance Monitoring Report of Quality of Service of Basic Service for the Quarter ending Dec, 2004																			
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	100% in < 7days	≤3	>90%			<8 hrs	(2/1000)	>65%	<0.1%,			<3 days	< 24 hrs	< 24hrs	<1% (Month-1)	<1% (Month-2)	<1% (Month-3)
1	ANDRA PRADESH	BSNL	41.74	5.68	87.24	89.92	85.87	16.00	NA	60.00%	0.07	89.88	87.91	58.38	NA	NA	12.49	18.00	17.67
		RELIANCE	100.00	0.00	100.00	100.00	100.00	1.70	0.002	72.88%	0.07	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		TATA	94.09	1.48	84.37	81.17	82.03	14.06	0.0006	78.05%	0.22	N/App	N/App	88.90	100.00	62.93	2.09	1.37	2.41
2	BIHAR	BSNL	4.96	5.50	80.88	84.26	89.50	12.00	NA	29.00%	0.05	83.88	65.99	24.86	NA	NA	3.18	3.94	3.83
		RELIANCE	100.00	0.00	100.00	100.00	100.00	2.30	0.002	58.62%	0.07	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
3	DELHI	MTNL	91.14	17.06	80.20	84.11	83.46	12.37	0.0001	45.00%	0.09	78.50	72.36	88.43	99.22	87.88	15.45	12.79	15.38
		RELIANCE	100.00	0.00	100.00	100.00	100.00	1.10	0.002	67.14%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		BHARTI	85.37	2.78	98.82	99.14	99.20	4.13	0.001	51.71%	0.14	90.39	82.35	17.85	86.08	92.56	7.81	6.89	6.77
		TATA	100.00	6.30	99.66	100.00	100.00	3.73	NA	NA	0.16	N/App	N/App	100.00	20.06	95.48	0.00	0.00	0.00
4	GUJARAT	BSNL	23.11	6.14	95.79	95.38	96.29	8.00	NA	62.00%	0.06	86.32	84.42	79.68	NA	NA	7.35	7.87	7.65
		RELIANCE	100.00	0.00	100.00	100.00	100.00	2.10	0.002	70.85%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		TATA	96.16	0.17	100.00	100.00	100.00	2.20	0.0019	63.50%	0.03	N/App	N/App	67.52	100.00	98.21	11.71	5.20	4.50
5	MP & CHATTISGARH	BSNL(MP)	43.11	7.04	90.00	93.40	95.20	8.00	NA	70.00%	0.09	87.12	84.55	82.25	NA	NA	2.38	1.95	2.10
		BSNL (Chattisgarh)	18.60	10.82	86.10	85.25	86.30	9.00	NA	62.00%	0.04	99.32	99.89	37.58	NA	NA	2.66	2.34	1.94
		RELIANCE	100.00	0.00	100.00	100.00	100.00	2.20	0.002	69.83%	0.07	N/App	N/App	100.00	NA	NA	0.00	0.00	0.00

6	<b>MAHARASHTRA</b>	<b>BHARTI</b>	97.67	2.77	94.77	95.05	94.23	7.00	0.000	64.10%	0.07	92.19	Nil	64.53	100.00	97.66	1.26	1.18	1.46
		<b>BSNL</b>	22.02	7.47	89.40	87.93	89.41	13.00	NA	59.00%	0.04	81.82	88.17	57.42	NA	NA	4.13	4.76	4.69
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	1.80	0.002	68.66%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>TATA</b>	NA	5.15	99.19	99.22	99.19	3.36	0.002	63.93%	1.91	N/App	N/App	98.27	96.16	94.90	5.30	4.79	5.23
7	<b>PUNJAB</b>	<b>BSNL</b>	3.34	8.48	97.44	95.92	94.68	10.00	NA	65.00%	0.06	89.19	93.94	95.75	NA	NA	1.50	1.14	0.91
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	2.00	0.002	67.04%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>HFCL</b>	94.45	2.42	96.78	96.89	95.57	5.85	0.000	75.13%	0.09	N/App	N/App	63.02	86.03	91.93	4.07	4.23	3.44
8	<b>RAJASTHAN</b>	<b>BSNL</b>	48.74	9.58	85.02	82.95	85.99	11.00	NA	60.00%	0.04	91.86	95.01	74.92	NA	NA	2.91	2.59	2.48
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	0.80	0.002	59.75%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>SHYAM</b>	85.02	3.56	98.12	95.58	97.60	4.63	0.001	67.00%	0.09	Nil	80.84	95.67	100.00	95.79	0.72	1.52	0.99
9	<b>TAMILNADU</b>	<b>BSNL</b>	40.98	5.45	96.36	95.86	96.52	10.00	NA	71.00%	0.04	99.04	99.46	NA	NA	NA	0.79	0.87	1.03
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	3.10	0.002	73.58%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>BHARTI</b>	89.09	1.82	99.76	99.53	99.79	2.34	0.002	66.11%	0.22	68.26	Nil	32.94	66.26	72.93	1.64	2.19	1.15
		<b>TATA</b>	92.16	0.05	95.86	96.77	100.00	2.05	0.0002	54.23%	0.03	N/App	N/App	83.01	95.01	97.09	0.69	0.00	0.00
10	<b>HARYANA</b>	<b>BSNL</b>	48.31	8.78	92.51	93.42	90.54	11.00	NA	67.00%	0.08	59.57	83.63	77.70	NA	NA	4.77	4.79	4.83
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	3.80	0.002	63.31%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>BHARTI</b>	96.28	1.96	98.86	98.64	97.91	7.06	0.001	59.38%	0.23	88.79	97.01	19.46	85.32	93.13	3.24	4.63	3.97
11	<b>KARNATAKA</b>	<b>BSNL</b>	47.32	6.30	95.07	93.73	94.47	4.00	NA	56.00%	0.05	93.67	97.48	31.97	NA	NA	5.73	5.83	6.51
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	2.30	0.002	74.24%	0.09	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>BHARTI</b>	92.40	0.45	98.30	99.70	99.89	2.71	0.000	56.63%	0.17	Nil	61.88	66.23	95.98	95.00	4.64	4.12	6.33
		<b>TATA</b>	96.26	0.30	98.36	97.18	99.41	2.24	0.0000	54.43%	0.40	N/App	N/App	71.31	86.36	85.79	1.52	1.28	1.32

N/App

= Not Applicable

Operator not meeting the prescribed benchmark

NA Not available

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			100% in < 7days	<3	>90%					<8 hrs	a) Junction between local exchange (2/1000)				>65%	<0.1%,	Urgent calls: <1 hr
12	<b>A&amp;N</b>	<b>BSNL</b>	26.71	12.17	88.02	88.74	88.35	19.00	NA	43.00%	0.11	77.27	79.14	88.31	NA	NA	10.55	10.95	10.03
13	<b>Assam</b>	<b>BSNL</b>	29.82	9.53	95.57	95.73	96.84	24.00	NA	67.00%	0.08	80.15	76.44	24.86	NA	NA	1.06	1.09	1.10
14	<b>Chennai</b>	<b>BSNL</b>	68.96	9.07	90.79	87.67	92.06	20.00	NA	74.00%	0.08	84.05	83.83	94.69	NA	NA	7.27	7.98	7.51
		<b>Reliance</b>	100.00	0.00	100.00	100.00	100.00	3.10	0.002	76.16%	0.09	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>TATA</b>	92.16	0.08	94.91	94.91	97.95	1.53	0	59.95%	0.03	N/App	N/App	83.10	93.08	98.17	0.20	18.26	0.51
15	<b>HP</b>	<b>BSNL</b>	51.02	9.88	95.55	58.86	96.51	9.00	NA	59.00%	0.05	78.69	83.45	19.09	NA	NA	0.54	0.37	0.54
		<b>RELIANCE</b>	100.00	0.06	100.00	100.00	100.00	2.80		74.24%	0.00	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
16	<b>Jhar khand</b>	<b>BSNL</b>	4.28	9.27	91.58	91.21	90.56	18.00	NA	30.00%	0.05	93.67	97.48	6.62	NA	NA	1.33	1.38	1.53
17	<b>J&amp;K</b>	<b>BSNL</b>	13.05	10.66	9.39	95.44	92.21	12.00	NA	55.00%	0.09	44.59	59.84	34.97	NA	NA	0.00	4.58	3.08
18	<b>Kerala</b>	<b>BSNL</b>	5.05	8.22	85.01	86.58	89.91	18.00	NA	67.00%	0.02	85.41	95.70	56.48	NA	NA	7.78	6.94	7.84
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	3.30	0.002	72.83%	0.09	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
19	<b>Kolkata</b>	<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	1.70	0.002	68.06%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
		<b>BSNL</b>	17.15	5.09	88.66	90.45	88.66	13.00	NA	52.00%	0.10	69.75	81.60	40.18	NA	NA	4.55	6.95	4.55
	<b>Mumbai</b>	<b>TATA</b>	NA	3.12	99.02	99.12	99.14	0.00	0.002	64.12%	1.59	N/App	N/App	55.54	0.00	90.04	5.21	5.00	4.86



		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	1.80	0.002	73.35%	0.07	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
20		<b>MTNL</b>	56.67	9.20	85.43	87.19	88.30	24.03	0.0005	53.37%	0.12	78.46	79.80	30.00	70.10	74.92	17.18	15.51	15.89
21	<b>NE-I</b>	<b>BSNL</b>	13.84	5.35	61.00	60.89	63.81	39.00	NA	52.00%	0.11	92.90	83.90	81.34	NA	NA	5.34	4.32	4.86
22	<b>NE-II</b>	<b>BSNL</b>	23.81	6.78	85.52	81.78	90.20	4.00	NA	48.00%	0.14	73.48	68.55	65.68	NA	NA	2.79	3.34	3.26
23	<b>Orissa</b>	<b>BSNL</b>	28.45	6.63	91.52	92.84	92.31	9.00	NA	52.00%	0.13	90.46	95.65	99.24	NA	NA	1.14	1.22	1.29
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	5.20	0.002	63.78%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
24	<b>UP-E</b>	<b>BSNL</b>	0.98	6.78	98.10	98.20	98.40	8.00	NA	66.00%	0.01	90.26	92.70	44.01	NA	NA	1.30	1.29	1.20
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	3.70	0.002	58.35%	0.07	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
25	<b>UP-W</b>	<b>BSNL</b>	27.10	7.73	95.52	95.55	95.56	5.00	NA	68.00%	0.04	88.21	88.57	42.60	NA	NA	1.28	1.28	1.27
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	3.10	0.002	63.42%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00
26	<b>Uttaranchal</b>	<b>BSNL</b>	16.05	8.26	94.03	94.03	93.92	6.00	NA	66.00%	0.01	90.26	92.70	44.01	NA	NA	1.12	0.52	0.73
27	<b>West Bengal</b>	<b>BSNL</b>	5.43	7.10	88.76	87.14	87.45	22.00	NA	63.00%	0.04	85.12	91.47	58.90	NA	NA	1.03	0.43	1.29
		<b>RELIANCE</b>	100.00	0.00	100.00	100.00	100.00	1.90	0.002	51.11%	0.08	N/App	N/App	100.00	100.00	100.00	0.00	0.00	0.00

Operator not meeting the prescribed benchmark

NA Not available

N/App

= Not applicable

## Quality of Service Performance for Mobile (GSM) Services

## Details QoS Parameters for Cellular Services as reported by CMSPs for the quarter ending 31st Dec, 2004

Sr. No.	Name of the service providers with their service areas	Fault Incidence & Repair			Network Performance				Billing Complaints		
		(i)	(ii)	(iii)	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)
		No. of faults (per 100 subscribers)	Faults cleared within 24 hrs	Accumulated down time of community isolation	Call Success Rate (within licencees own network)	Service Access Delay	Call Drop Rate	% of connection with good voice quality	Complaints per 100 bills issued	% of complaints resolved within 4 weeks	Period of all refunds/ payment due to customers from the date of resolution of complaints as in (ii) above
		Benchmarks									
		<1%	100%	<24 hrs	>99%	9 to 20 sec	<3%	>95%	<.1%	100%	<4 weeks
<b>(i)</b>	<b>'A' Circle</b>										
1	BPL, MH	1.16%	98.11%	28.29	98.31%	11.43 sec	1.30%	98.82%	0.100%	100.00%	30 days
2	IDEA Cellular, MH	0.02%	100.00%	85.10	95.33%	13.41 sec	1.62%	97.56%	1.090%	96.00%	30 days
3	Tata, MH	0.92%	98.34%	2.08	99.82%	12 sec	0.57%	97.55%	0.830%	100.00%	30 days
4	BSNL, MH	0.10%	99.00%	25	98.00%	2 sec	1.30%	96.00%	1.700%	100.00%	30 days
5	Bharti Cellular, MH & Goa	0.45%	100.00%	27.27	99.37%	9.32 sec	1.48%	96.00%	0.100%	100.00%	30 days
6	Fascel - Hutch GJ	0.04%	100.00%	16.23	99.99%	15.04 sec	1.11%	97.80%	0.030%	100.00%	7 days
7	Tata, GJ	0.50%	100.00%	1.19	99.58%	1.21	0.56%	98.17%	0.020%	100.00%	30 days
8	IDEA Cellular, GJ	0.01%	100.00%	3.13	98.41%	14.74	1.25%	96.56%	0.074%	100.00%	35days
9	BSNL, GJ	1.00%	100.00%	Nil	99.00%	2 sec	1.00%	NA	0.09%	100.00%	15 days
10	Bharti Cellular, GJ	0.08%	100.00%	16.67	99.39%	13 sec	1.08%	98.02%	0.050%	100.00%	15 days
11	Tata, AP	1.89%	79.00%	6.92	99.59%	5.37 sec	0.59%	98.48%	0.240%	100.00%	30 days
12	IDEA Cellular, AP	0.29%	100.00%	14.2	99.98%	9.64 sec	0.54%	98.78%	0.250%	100.00%	30 days
13	Bharti Mobile, AP	0.03%	100.00%	47.83	98.61%	12 sec	1.10%	99.21%	0.060%	100.00%	30 days
14	BSNL, AP	0.20%	99.00%	Nil	98.00%	6 sec	1.80%	98.00%	0.000%	100.00%	30 days

15	Hutchison Essar, AP	1.00%	98.32%	24	93.40%	5 sec	1.45%	98.00%	0.120%	100.00%	30 days
16	Bharti Mobile, KTK	0.07%	100.00%	94.1	99.04%	7 sec	1.60%	98.70%	0.005%	100.00%	30 days
17	Spice Comm., KTK	0.09%	100.00%	1.5	99.80%	9 sec	1.34%	99.57%	0.029%	100.00%	7 days
18	BSNL, KTK	0.50%	100.00%	19	88.00%	9 sec	1.20%	95.00%	0.080%	100.00%	30 days
19	Hutchison Essar, KTK	0.50%	100.00%	13.6	99.90%	14.56 sec	1.02%	99.10%	0.024%	100.00%	30 days
20	Tata, KTK	3.06%	98.33%	19.4	99.27%	10 sec	0.97%	96.50%	0.010%	100.00%	30 days
21	Tata, TN	0.02%	100.00%	16.32	99.52%	5.31 sec	1.29%	96.49%	0.020%	100.00%	30 days
22	BPL Cellular, TN	0.69%	100.00%	84.07	99.11%	9 sec	1.29%	99.89%	0.350%	100.00%	30 days
23	Aircel, TN	0.00%	100.00%	21.37	99.01%	11.07 sec	1.61%	95.70%	0.090%	100.00%	27 days
24	BSNL, TN	1.40%	98.00%	Nil	89.00%	9 sec	1.10%	95.00%	0.000%	100.00%	Nil
25	Bharti Cellular, TN	0.07%	98.13%	20	98.84%	12.38 sec	1.11%	98.20%	0.070%	100.00%	30 days
	<b>B' Circle</b>										
26	IDEA-Escotel Mobile, KR	0.24%	100.00%	12.34	99.81%	12.3 sec	1.90%	96.70%	0.190%	100.00%	30 days
27	BPL Cellular, KR	0.00%	100.00%	14.18	99.42%	9 sec	1.28%	100.00%	0.000%	100.00%	30 days
28	BSNL, KR	1.00%	100.00%	NA	88.00%	14 sec	1.80%	95.00%	0.100%	100.00%	30 days
29	Bharti Cellular, KR	0.05%	98.78%	21.00	99.09%	15.14 sec	1.89%	99.01%	0.070%	100.00%	30 days
30	Spice Comm., PB	0.31%	100.00%	12.41	99.54%	4.1 sec	0.69%	99.49%	0.057%	100.00%	30 days
31	Bharti Mobile, PB	0.03%	100.00%	4.8	99.70%	8 sec	1.16%	99.78%	0.065%	100.00%	1 day
32	BSNL, PB	0.00%	99.00%	24	99.00%	4 sec	1.10%	91.00%	0.700%	98.00%	21 days
33	IDEA-Escotel Mobile, HR	0.13%	100.00%	8.49	99.94%	14.2 sec	0.76%	99.39%	0.070%	100.00%	35 days
34	Hutch-Aircel Digilink, HR	0.80%	100.00%	5.2	99.95%	10 sec	1.28%	97.20%	0.090%	100.00%	21 days
35	BSNL, HR	0.10%	100.00%	15	97.00%	9 sec	2.90%	97.00%	0.060%	100.00%	30 days
36	Bharti Cellular, HR	0.09%	100.00%	1	99.56%	8.5 sec	1.32%	99.86%	0.040%	100.00%	1 day
37	IDEA-Escotel Mobile, UP(W)	0.07%	100.00%	8.39	99.87%	11.24 sec	1.56%	95.83%	0.460%	100.00%	35 days
38	BSNL, UP(W)	0.60%	100.00%	NA	100.00%	18 sec	2.90%	98.00%	0.060%	100.00%	NA
39	Bharti Cellular UP (E)	0.18%	100.00%	0	98.88%	10 sec	1.76%	96.00%	0.200%	NA	30 days
40	Hutch, UP(W)	0.60%	100.00%	0	99.30%	10 sec	1.40%	96.00%	0.090%	100.00%	0 days
41	Bharti Cellular, UP(W)	0.44%	100.00%	18.17	99.24%	9 sec	1.88%	95.99%	0.071%	100.00%	30 days

42	Hutch-Aircel Digilink, UP(E)	0.52%	100.00%	0	99.21%	8.5 sec	1.57%	97.50%	0.090%	100.00%	21 days
43	BSNL, UP(E)	1.90%	99.00%	3	95.00%	12 sec	2.80%	95.00%	0.100%	100.00%	35 days
44	Hutch-Aircel Digilink, RJ	0.27%	100.00%	1.92	100.00%	10.74 sec	1.41%	95.20%	0.090%	100.00%	21 days
45	Bharti - Hexacom, RJ	0.69%	100.00%	2.6	99.76%	8 sec	1.30%	99.87%	0.065%	100.00%	1 day
46	BSNL, RJ	0.80%	94.00%	39	92.00%	6 sec	1.00%	92.00%	0.400%	99.00%	30 days
47	Hutch - PB	0.54%	100.00%	0	99.99%	10 sec	1.27%	97.85%	0.090%	100.00%	immediate
48	IDEA Cellular, MP	0.28%	100.00%	5.95	99.06%	12.47 sec	1.29%	99.27%	0.350%	100.00%	30 days
49	Reliance, MP	0.01%	100.00%	60.08	100.00%	8.29 sec	2.50%	95.66%	0.050%	100.00%	1 day
50	BSNL, MP	1.10%	98.00%	Nil	98.00%	2 sec	1.40%	95.00%	0.030%	100.00%	30 days
51	Bharti Cellular, MP	0.01%	100.00%	99.71	99.58%	8 sec	0.56%	98.60%	0.090%	100.00%	NA
52	Reliance, WB	0.09%	100.00%	5	99.00%	9.37 sec	2.69%	99.72%	Nil	NA	NA
53	Bharti Cellular, WB	0.01%	100.00%	0	99.79%	16.9 sec	1.61%	95.56%	0.090%	100.00%	30 days
54	BSNL, WB	0.60%	100.00%	Nil	99.00%	7 sec	2.50%	99.00%	0.000%	100.00%	Nil
	<b>C' Circle</b>										
55	Bharti Telenet, HP	0.07%	100.00%	2.5	99.54%	9.5 sec	1.34%	99.90%	0.060%	100.00%	1 day
56	Reliance, HP	0.05%	100.00%	3.53	100.00%	6.61 sec	2.27%	99.64%	0.000%	100.00%	10 days
57	BSNL, HP	0.40%	91.00%	0.01	97.00%	6 sec	2.97%	90.00%	0.090%	100.00%	30 days
58	Reliance, BR & Jharkhand	0.10%	100.00%	19.15	99.00%	8.34 sec	2.28%	98.01%	0.000%	100.00%	7 days
59	BSNL, NE- I & II	1.50%	100.00%	10	99.00%	12 sec	2.10%	97.00%	0.000%	100.00%	21 days
60	BSNL, BR	2.90%	95.00%	7	98.00%	7 sec	2.70%	92.00%	0.100%	100.00%	30 days
61	Reliance, ORISA	0.06%	100.00%	18.23	99.17%	7.46 sec	2.34%	97.86%	0.010%	100.00%	NA
62	BSNL, ORISSA	0.10%	99.00%	25	89.00%	8 sec	2.00%	93.00%	0.200%	100.00%	Nil
63	Reliance, AS	0.03%	100.00%	0	99.00%	9.80 sec	1.19%	96.09%	0.030%	100.00%	Nil
64	Bharti Cellular, J&K	2.50%	99.50%	5	98.60%	8.5 sec	2.90%	98.00%	0.100%	100.00%	1 day
65	BSNL J&K	0.90%	100.00%	23	99.00%	11 sec	2.00%	98.00%	0.100%	100.00%	21 days
66	Reliance, NE	Nil	Nil	Nil	99.00%	9.76 sec	2.05%	98.16%	Nil	Nil	Nil
67	BSNL, Assam	2.00%	99.00%	Nil	97.00%	13 sec	1.20%	97.00%	0.150%	100.00%	30 days
	<b>METRO</b>										

68	Bharti Cellular, Delhi	0.64%	100.00%	Nil	99.09%	12 sec	1.86%	96.25%	0.063%	100.00%	30 days
69	Hutchison Essar, Delhi	0.20%	100.00%	0	99.90%	10 sec	1.22%	95.95%	0.001%	100.00%	30 days
70	MTNL, Delhi	0.64%	100.00%	0	99.10%	12.11 sec	0.94%	95.01%	0.080%	100.00%	30 days
71	IDEA Cellular, Delhi	0.38%	100.00%	Nil	99.98%	7 sec	0.48%	97.13%	0.120%	100.00%	45 days
72	Tata, Delhi	0.03%	100.00%	0	99.86%	2.6 sec	0.56%	95.80%	0.240%	100.00%	1 day
73	BPL Mobile, Mumbai	0.25%	100.00%	3.45	99.43%	12.60 sec	1.88%	98.34%	0.100%	100.00%	40 days
74	Hutchison Max, Mumbai	0.65%	100.00%	0	99.23%	8 sec	1.58%	97.01%	0.005%	100.00%	3 days
75	MTNL, Mumbai	0.01%	100.00%	Nil	99.10%	14 sec	2.32%	95.80%	0.080%	100.00%	30 days
76	Bharti Cellular, Mumbai	0.03%	97.92%	0	99.68%	9 sec	1.44%	97.00%	0.090%	100.00%	7 days
77	Tata, Mumbai	0.44%	98.92%	0.73	99.85%	12 sec	0.27%	97.08%	1.220%	99.04%	30 days
78	Aircel Cellular Ltd, Chennai	0.15%	99.00%	8.5	100.00%	12 sec	0.91%	95.20%	0.20%	100.00%	30 days
79	Bharti Mbinet, Chennai	0.05%	98.01%	0	99.68%	12.6 sec	0.62%	97.10%	0.090%	100.00%	30 days
80	Hutchison Essar, Chennai	0.07%	100.00%	Nil	99.55%	9 sec	0.72%	98.00%	0.100%	100.00%	30 days
81	Tata, Chennai	0.03%	99.00%	6.44	99.27%	5.19 sec	0.82%	96.73%	0.020%	100.00%	30 days
82	Bharti Mobinet, Kolkata	0.00%	97.82%	0	99.82%	15.6 sec	1.30%	97.85%	0.080%	100.00%	NA
83	Hutchison, Kolkata	0.12%	100.00%	0	99.93%	19 sec	0.87%	96.35%	0.080%	100.00%	35 days
84	BSNL, Kolkata	2.40%	72.00%	Nil	94.00%	7 sec	2.40%	96.00%	2.400%	100.00%	30 days
85	BSNL, Chennai	0.00%	100.00%	Nil	98.00%	12 sec	1.00%	100.00%	0.800%	100.00%	Immediate

NA = Not Available,

Operators not meeting the benchmark

## Annex 5.3

## Quality of Service Performance for ISPs

S. No.	Name of the Service Provider	Service Activation time	Time to Access	Access Portability in 1 <sup>st</sup> attempt (in %)	Access Portability in 2 <sup>nd</sup> attempt (in %)	Access Portability in 3 <sup>rd</sup> attempt (in %)	ISP Node unavailability	Grade of Service (QoS)	Mean time to Restore of faults resulting as per subscriber complaints	
	<b>TRAI Benchmarks</b>	<b>6 hrs</b>	<b>30 sec</b>	<b>80</b>	<b>90</b>	<b>99</b>	<b>30 min</b>	<b>1 : 100</b>	<b>3 days</b>	
1	Bharat Sanchar Nigam Ltd.	0-2 hrs	15-30 sec	92	98	100	Nil	1:100	0-4 hrs	
2	MTNL	Delhi	Immediate	30 sec	99.67	99.99	-	-	0.01	5 min
		Mumbai	Immediate	26 sec	100	-	-	-	0.002	15 min
3	VSNL	2-4 hrs	30 sec	80	90	99	Nil	Not provided by BSO	10-15 min	
4	Sify Ltd.	3 mins	30 sec	90	95	99	20 min	0.005	4 hrs	
5	Data Infosys	3-5 min	25-30 sec	90	95	99	30 min	1:100	15 min	
6	Bharti Infotel Ltd.	5 min	30-35 sec	98.4	99	100	15 min	1:100	2 hrs	
7	BG Broadband India Pvt. Ltd.	2 min	20 sec	95	97	99	Nil	Not provided by BSO	24-48 hrs	
8	HCL Infinet Ltd.	3 min	30 sec	99	99.3	99.4	25 min	1:200	16-18 hrs	
9	Shyam Internet Services Pvt. Ltd.	30 min	30 sec	98	99	100	30 min	1%	2 hrs	
10	Hathway Cable & Datacom Pvt. Ltd.*	-	-	-	-	-	-	-	-	
11	Sab Infotech	<6 hrs	<30 sec	90	95	100	<30 min	0 in 100	>1 hr	
12	Icenet.net Limited	2 hrs	20 sec	85	95	100	Never	1:100	-	
13	Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom)	-	25 sec	98.16	100	N.A.	Nil	1:1000	1 hr	
14	Fascel Ltd.	-	-	-	-	-	-	-	-	
15	WWW Communications Ltd.	4-5 mins	20-35 sec	85	96	99	65 min	-	10-15 min	
16	Asianet Satellite Communications Ltd.	Immediate	10 sec	98	99	100	<1 Hr	1 in 500	3 Hrs 18 mins	
17	HFCL Infotel Ltd.	1.5 min	30 sec	98.20	99.20	100	Nil	0.85 in 100	9.34 min	
18	Broadband Pacenet (I) Pvt. Ltd.	-	-	-	-	-	-	-	3 hrs	
19	Rolta	15 min	28 sec	85.1	91.3	99.2	0 min	0 in 100	4 min 10 sec	
20	Hughes	-	-	-	-	-	-	-	190.5 min	

\*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.

Note: 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.