

Telecom Regulatory Authority of India



The Indian Telecom Services
Performance Indicators Apr-Jun'04

September 2004

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(i) **INTRODUCTION**

- 1.1 This report provides an update on the growth trends for the telecom services for the period **April-June 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 and first, second, third and fourth quarters of financial year 2003-2004. 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 (VPTs). 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.trai.gov.in) and is 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: trai09@bol.net.in.

(ii) Quarterly Results at a Glance

Performance Indicators of Telecom Services for QE Jun 2004

A. Growth of Fixed & Mobile Services:-

| | FE 2003 | QE Jun 2003 | FE 2004 | QE Jun 2004 | %age growth over Jun 2003 (12 months) | %age growth over last quarter (3 months) |
|---|--------------|--------------|--------------|--------------|---------------------------------------|--|
| 1) Subscriber's Base (in millions) | | | | | | |
| i) Fixed Line including WLL(F) | 41.48 | 41.38 | 42.84 | 43.51 | 5.15 | 1.56 |
| ii) Mobile (GSM + CDMA) | 13 | 17.32 | 33.69 | 37.8 | 118.24 | 12.20 |
| Gross Total | 54.48 | 58.70 | 76.53 | 81.31 | 38.52 | 6.25 |
| 2) Traffic (MOU) (minutes of use/ sub/month) | | | | | | |
| i) Mobile (GSM) | 222 | 266 | 322 | * | | |
| 3) ARPU (Rs./sub/ month) | | | | | | |
| i) Mobile (GSM) | 537 | 522 | 436 | * | | |
| ii) Mobile (CDMA) | | | 382 | * | | |
| 4) Teledensity | | | | | | |
| Population in million (Estimated) | 1047 | 1050 | 1067 | 1070 | 1.90 | 0.28 |
| i) Fixed including WLL(F) | 3.96 | 3.94 | 4.01 | 4.07 | 3.18 | 1.28 |
| ii) Mobile (GSM + CDMA) | 1.24 | 1.65 | 3.16 | 3.53 | 114.17 | 11.88 |
| Gross Total | 5.20 | 5.59 | 7.17 | 7.60 | 35.93 | 5.95 |

* Information not made available by service providers

B. Growth of Internet Services:-

| | FE 2003 | QE Jun 2003 | FE 2004 | QE Jun 2004 | %age growth over Jun 2003 (12 months) | %age growth over last quarter (3 months) |
|---|---------|-------------|---------|-------------|---------------------------------------|--|
| 1) Subscriber's Base (in million) | | | | | | |
| i) Internet | 3.64 | 3.77 | 4.55 | 4.93 | 30.77 | 8.35 |
| ii) Broadband | 0.08 | 0.09 | 0.19 | 0.23 | 155.56 | 21.05 |
| 2) Minutes of Use (MOU)/ subs/month) | | | 400 | 400 | | 0.00 |
| 3) ARPU (Rs/subs/month) | | | 406 | 250 | | -38.42 |
| 4) Internet Telephony MOU (in Million) | | | 27.15 | 22.04 | | -18.82 |

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 Jun 2003 | FE 2004 | QE Jun 2004 | %age growth over Jun 2003 (12 months) | %age growth over last quarter (3 months) |
|-----------------------------------|----------------|--------------------|----------------|--------------------|--|---|
| BSNL | 35.90 | 35.73 | 36.11 | 36.03 | 0.84 | -0.22 |
| MTNL | 4.63 | 4.55 | 4.38 | 4.54 | -0.22 | 3.65 |
| Tata/ Hughes | 0.45 | 0.54 | 1.00 | 1.32 | 144.44 | 32.00 |
| Bharti | 0.37 | 0.42 | 0.64 | 0.70 | 66.67 | 9.37 |
| Reliance | 0.00 | 0.0002 | 0.50 | 0.68 | 339900.00 | 36.00 |
| HFCL | 0.08 | 0.08 | 0.12 | 0.14 | 75.00 | 16.67 |
| Shyam | 0.05 | 0.06 | 0.09 | 0.099 | 65.00 | 10.00 |
| Total | 41.48 | 41.38 | 42.84 | 43.51 | 5.14 | 1.56 |

(II) Mobile Services Subscriber Base (in Million)

| Service Providers | FE 2003 | QE Jun 2003 | FE 2004 | QE Jun 2004 | %age growth over Jun 2003 (12 months) | %age growth over last quarter (3 months) |
|--------------------------|----------------|--------------------|----------------|--------------------|--|---|
| Reliance | 0.54 | 2.4 | 7.26 | 8.18 | 240.83 | 12.67 |
| Bharti | 3.07 | 3.75 | 6.50 | 7.67 | 104.53 | 18.00 |
| BSNL | 2.29 | 3.22 | 5.53 | 6.17 | 91.61 | 11.57 |
| Hutch | 2.16 | 2.62 | 5.15 | 5.77 | 120.23 | 12.04 |
| Idea | 1.28 | 1.47 | 2.73 | 2.95 | 100.68 | 8.06 |
| BPL Group | 1.13 | 1.17 | 1.88 | 2.15 | 83.76 | 14.36 |
| Others | 0.73 | 0.78 | 1.29 | 1.17 | 50.00 | -9.30 |
| Spic E | 0.64 | 0.71 | 1.21 | 1.30 | 83.10 | 7.44 |
| Escotel | 0.59 | 0.59 | 0.99 | 1.09 | 84.75 | 10.10 |
| Tata/ Hughes | 0.16 | 0.2 | 0.63 | 0.71 | 255.00 | 12.70 |
| MTNL | 0.35 | 0.35 | 0.46 | 0.54 | 54.29 | 17.39 |
| HFCL | 0.03 | 0.03 | 0.03 | 0.034 | 13.33 | 13.33 |
| Shyam | 0.03 | 0.03 | 0.03 | 0.027 | -10.00 | -10.00 |
| Total | 13.00 | 17.32 | 33.69 | 37.76 | 118.02 | 12.08 |

Chapter One

PERFORMANCE OF FIXED SERVICES

Subscriber Base crosses 43.5 million

1.1 SUBSCRIBERS BASE: -

1.1.1 As on 30th June 2004, the Fixed lines were provided by 5 private operators in addition to incumbents BSNL and MTNL.

List of Fixed Service provider's along with their area of operation is given below:

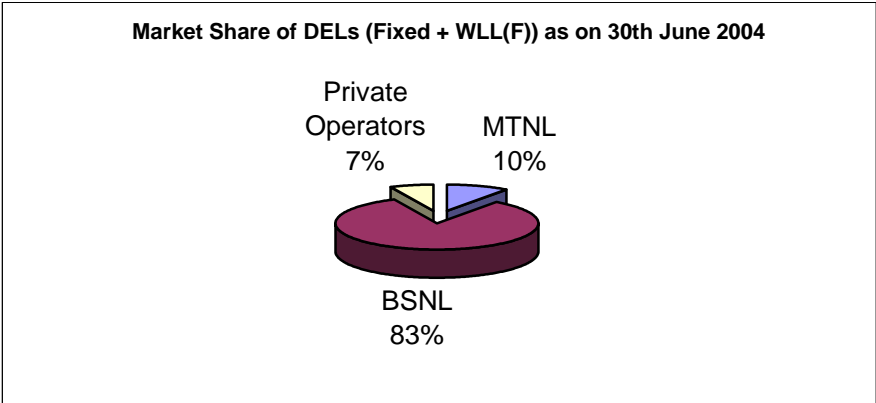
Table 1

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

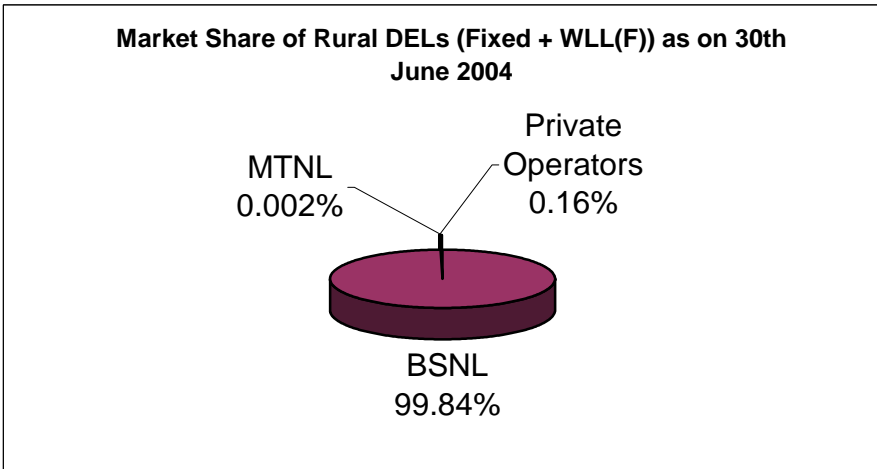
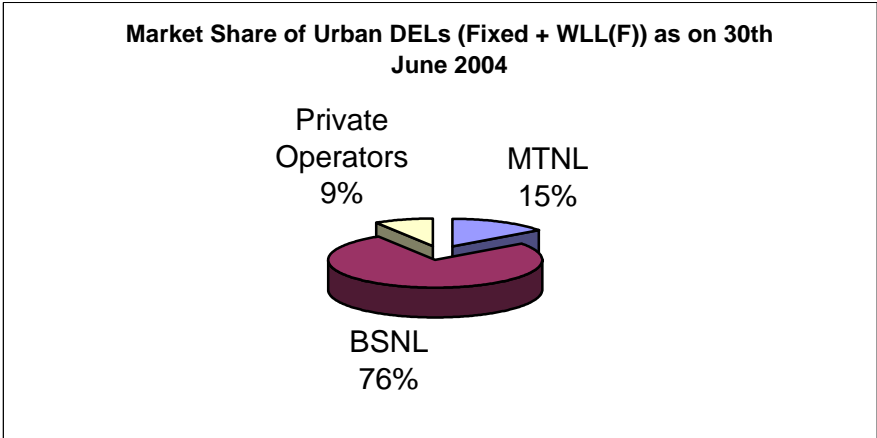
The information in this report is based on the data provided by the Fixed Service Providers. The operator-wise subscriber base is given in Table 1.1.

1.1.2 Market Share of DELs

As on 30th June 2004, the total subscriber base of Fixed lines including WLL (F) & VPTs stood at 43.51 million. The incumbents BSNL and MTNL have 83 % and 10% market share respectively of the subscriber base, while all the five private operators have 7% share. In the current quarter the share of private operators have increased by 3% and the share of BSNL has declined by 2%.

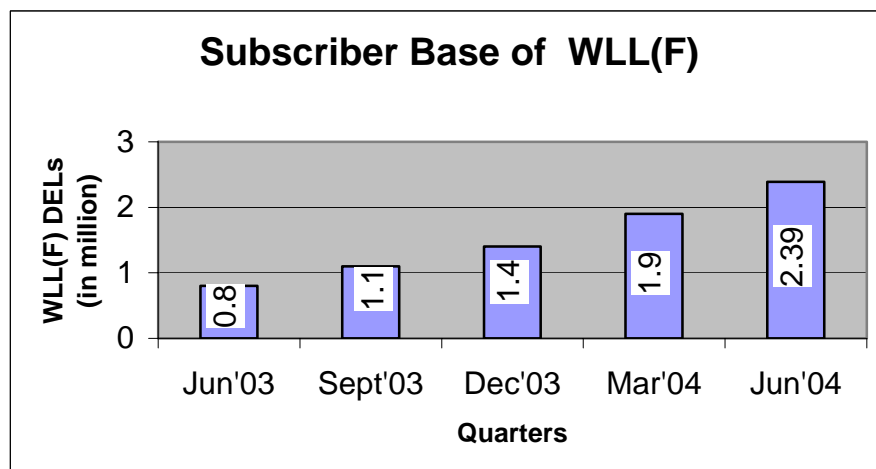
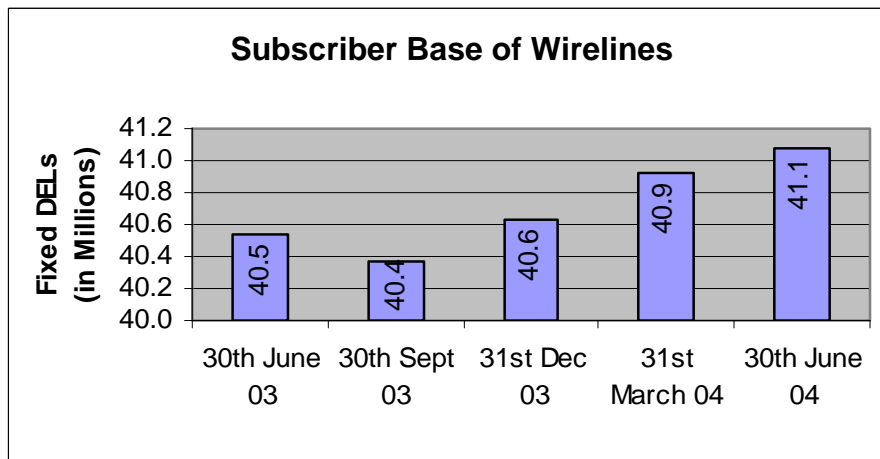
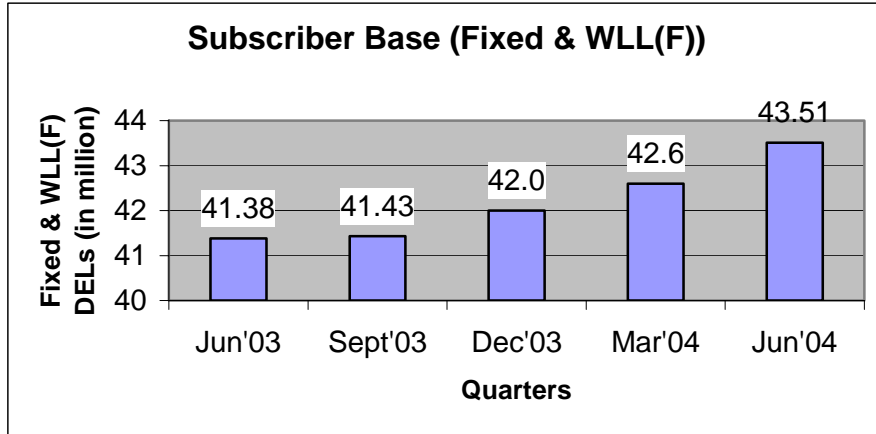


As on 30th June 2004 total urban DELs were 31.18 million and rural DELs including VPTs were 12.32 million. The market share of Fixed Service Providers in Urban DELs and Rural DELs is depicted in the chart below:



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

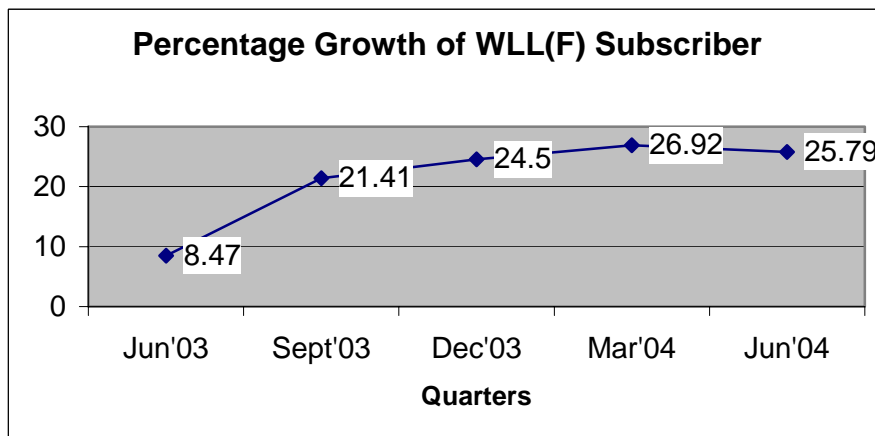
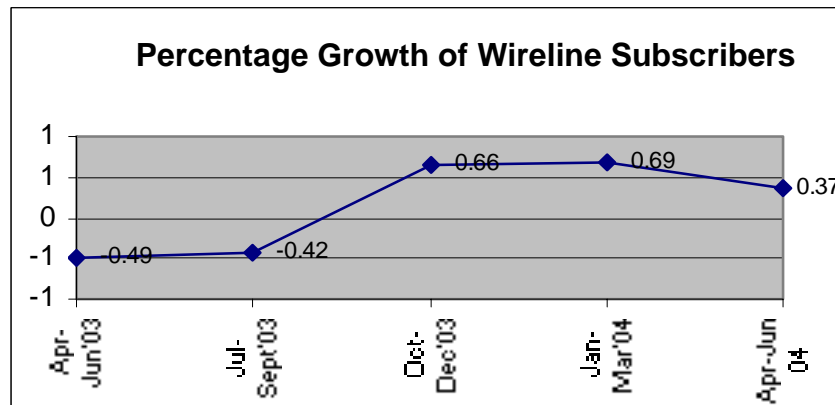
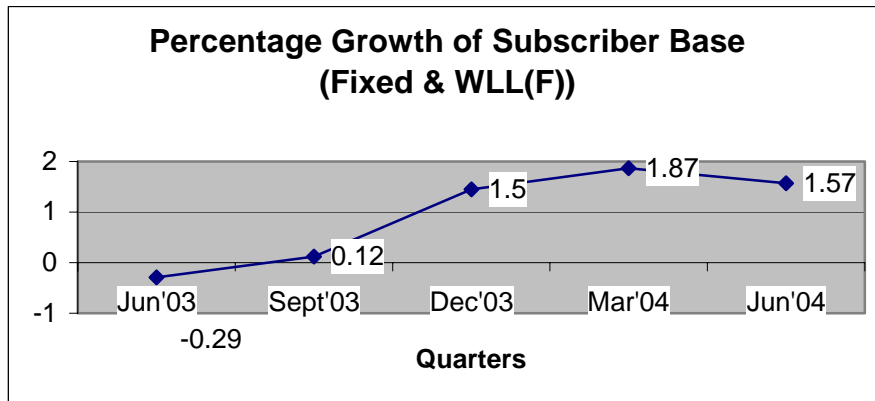
The subscriber base of the Fixed service sector (including VPTs) for last five quarters is depicted in the bar chart below:



1.1.4 Growth of DELs

The Fixed Service sector has registered a growth of 6,71,480 lines during the Quarter from 1st April 2004 to 30th June 2004. The actual number of DELs has increased from 4,28,42,607 as on 31st March 2004 to 4,35,14,087 as on 30th June 2004. The overall percentage of growth in subscriber base during the Quarter was 1.57% as depicted in Table below.

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

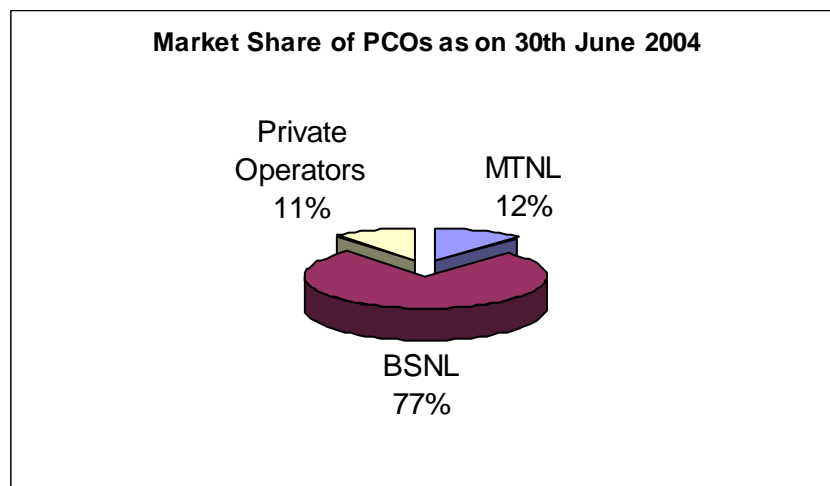


1.2 Other Performance Indicators: -

1.2.1 Public Call Offices:

During the current quarter 1,03,832 new PCOs have been added. Total number of PCOs in the country as on 30th June 2004 was 20,67,287. The contribution of BSNL was 15,97,482 i.e. 77% of the total PCOs. The contribution of MTNL and other private operators was 2,49,642 (12 %) and 2,20,163(11%) respectively.

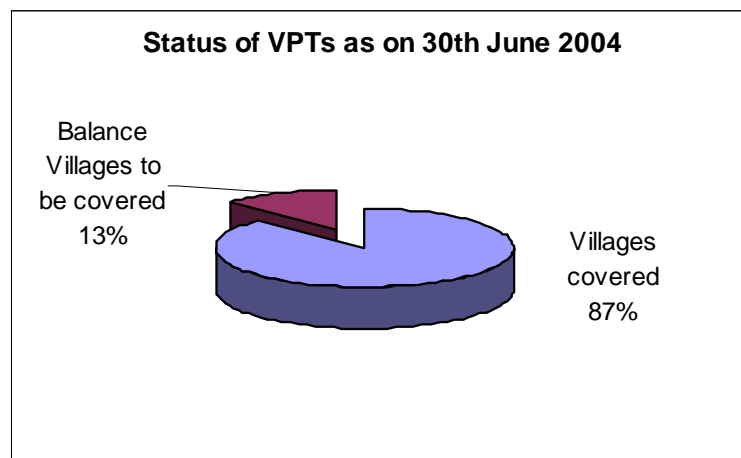
Operator-wise (BSNL / MTNL / Private Operators) market share of PCO is depicted in the chart below. Operator-wise details of PCOs are available at **Table 1.2.**



1.2.2. Village Public Telephones:

During the quarter ending 31st March 2004 there were 5, 22,307 VPTs in the country whereas by the end of this quarter, the total number of VPTs marginally increased to 5,29,263. Thus 6956 VPTs have been added during the current quarter. The total number of villages left uncovered, as on 30th June 2004 were 85228, out of a total of 6,07,491 villages. During the quarter BSNL has added 4278 VPTs. Among the private operators 135 VPTs have been added during the quarter by M/s HFCL Infotel Ltd.

Operator-wise details of Village Public Telephones as on 30th June 2004 and additions during the quarter ending 30th June 2004 is available at **Table 1.3**.



Chapter Two

Performance of Mobile Services

| |
|--|
| Subscriber Base crosses 37.5 million. |
|--|

PART A

2.0 Details of service providers: - Following operators were providing cellular mobile (GSM) service (in addition to 6 operators as shown in 1.1 of Chapter 1 providing Mobile (CDMA) services) in the respective service areas: -

| Service Provider | Service Area | No. of Circles |
|-------------------------|--|-----------------------|
| Bharti | Andhra Pradesh, Karnataka, Punjab, Delhi, UP(W), MP, Maharashtra, Gujarat, Himachal Pradesh, Mumbai, Tamil Nadu, Kerala, Haryana, Chennai, Kolkata and Rajasthan | 16 |
| Hutch | Delhi, Kolkata, Mumbai, Andhra Pradesh, Karnataka, Chennai, Gujarat, Punjab, Haryana, Rajasthan, UP(E) | 11 |
| MTNL | Delhi, Mumbai | 2 |
| Idea | Gujarat, Madhya Pradesh, Andhra Pradesh, Maharashtra, Delhi | 5 |
| Reliance | Madhya Pradesh, West Bengal, Himachal Pradesh, Assam, Bihar, Orissa, NE | 7 |
| BPL | Mumbai, Maharashtra, Kerala, Tamil Nadu | 4 |
| Aircel | Tamil Nadu, Chennai | 2 |
| Spice | Punjab, Karnataka | 2 |
| BSNL | Andhra Pradesh, Karnataka, Punjab, UP(W), Madhya Pradesh, Maharashtra, Gujrat, Himachal Pradesh, Tamil Nadu, Kerala, Haryana, Chennai, Kolkata, UP(E), Rajasthan, West Bengal, Bihar, Orissa, North-East, Assam, J&K | 21 |
| Escotel | Kerala, Haryana, UP(W) | 3 |

In addition, all the Basic Service Operators migrated to Unified Access service & are providing mobile service. Circle-wise details of Private 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 service has achieved 37.8 million subscriber mark at the end of quarter ending on 30th June 2004, as against 33.7 millions at the end of March 2004.

2.1.2 Addition in Subscribers Base

Approximately 4.10 lakhs subscribers were added during April-June, 2004 quarter as against 5.25 lakhs subscribers added during the previous quarter.

2.1.3 Growth Rate

All India growth rate in the quarter ending June, 2004 was 12.2% as compared to 18.46% during the quarter ending March, 2004.

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 June, 04 | Market Share | Technology Used |
|---------------|-------------------------|--------------|-----------------|
| Reliance Grp | 81.79 | 21.7 | GSM & CDMA |
| Bharti Grp | 76.72 | 20.3 | GSM |
| BSNL | 61.72 | 16.3 | GSM & CDMA |
| Hutchison Grp | 57.71 | 15.3 | GSM |
| IDEA Grp | 29.56 | 7.8 | 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 as on June'04 among Metros, Circles A to C is given in Table 2.3.

2.1.5 Change in Market Structure

M/s Bharti Televentures Ltd has acquired 67.5% stake in M/s Hexacom India Ltd in Rajasthan and now they are providing services in 16 circles with Unified Access Service License in 22 circles except one circle i.e. North East. Reliance Group is also having Unified Access Service License in 22 circles except one circle i.e. Jammu and Kashmir and is also providing services in all the 22 circles. M/s BSNL is providing Unified Access Services in 21 circles.

PART B

2.2 Mobile Tariff Trends: -

2.2.1 Minimum tariff in Mobile Services for the quarter ending June 2004

Trends in 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 pots-paid assuming 400 minutes of usage (both incoming and outgoing) per month.

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

| Service | Mar-04 | Jun-04 | % decline over the last quarter |
|----------------|---------------|---------------|--|
| Mobile | 0.44 | 0.44 | 0 |

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 2 minutes.
- 5) Interest on security deposit & advance month rental has been take @ 8% p.a.

There has been no change in the minimum effective charge for mobile services during the quarter under review as compared to the previous quarter.

Chapter Three

Performance of Internet Services

| |
|--|
| Subscribers base nears 50 million mark |
|--|

3.1 Service Providers & Subscribers Base: -

Around 189 Internet Service Providers were operational during quarter ending June 2004. Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of 12,75,522 against 11,28,172 during the last quarter. Videsh Sanchar Nigam Limited has moved up to second position from fourth position with a subscriber base of 9,25,062 against 6,00,509. Mahanagar Telephone Nigam Limited (MTNL) moved down to third position and reported a subscriber's base of 8,48,267 against 6,91,717 subscribers during the last quarter. (ref Table 3.1).

The reported subscriber base has touched 49.26 lakhs as on quarter ending 30th June, 2004 as compared to 45.49 lakhs during the preceding quarter registering an increase of 8.28 % during the quarter.

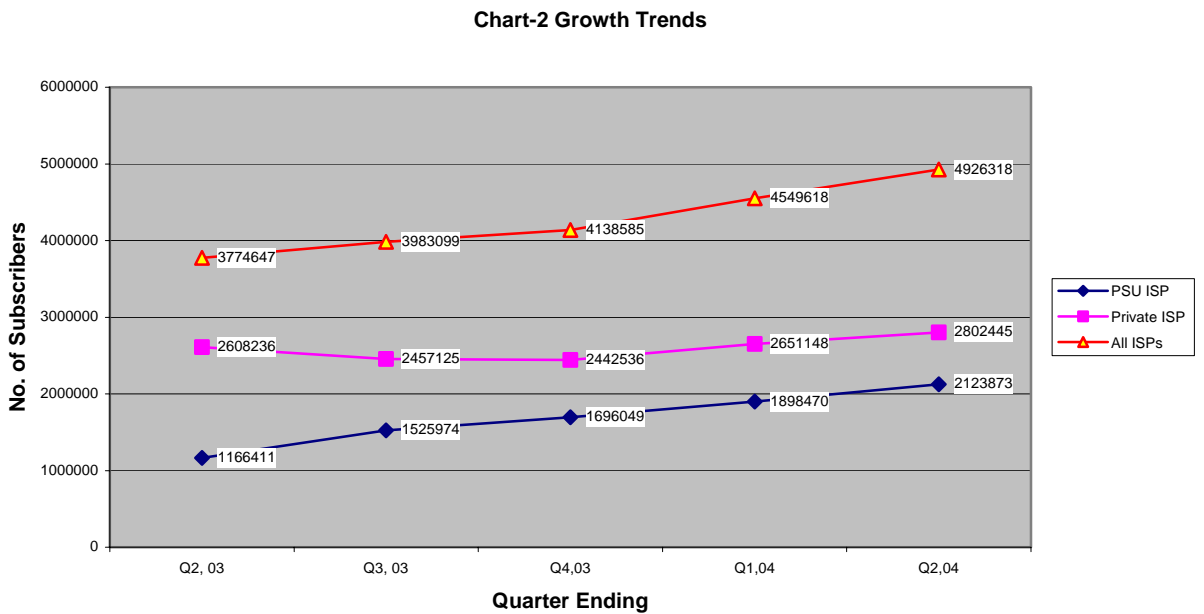
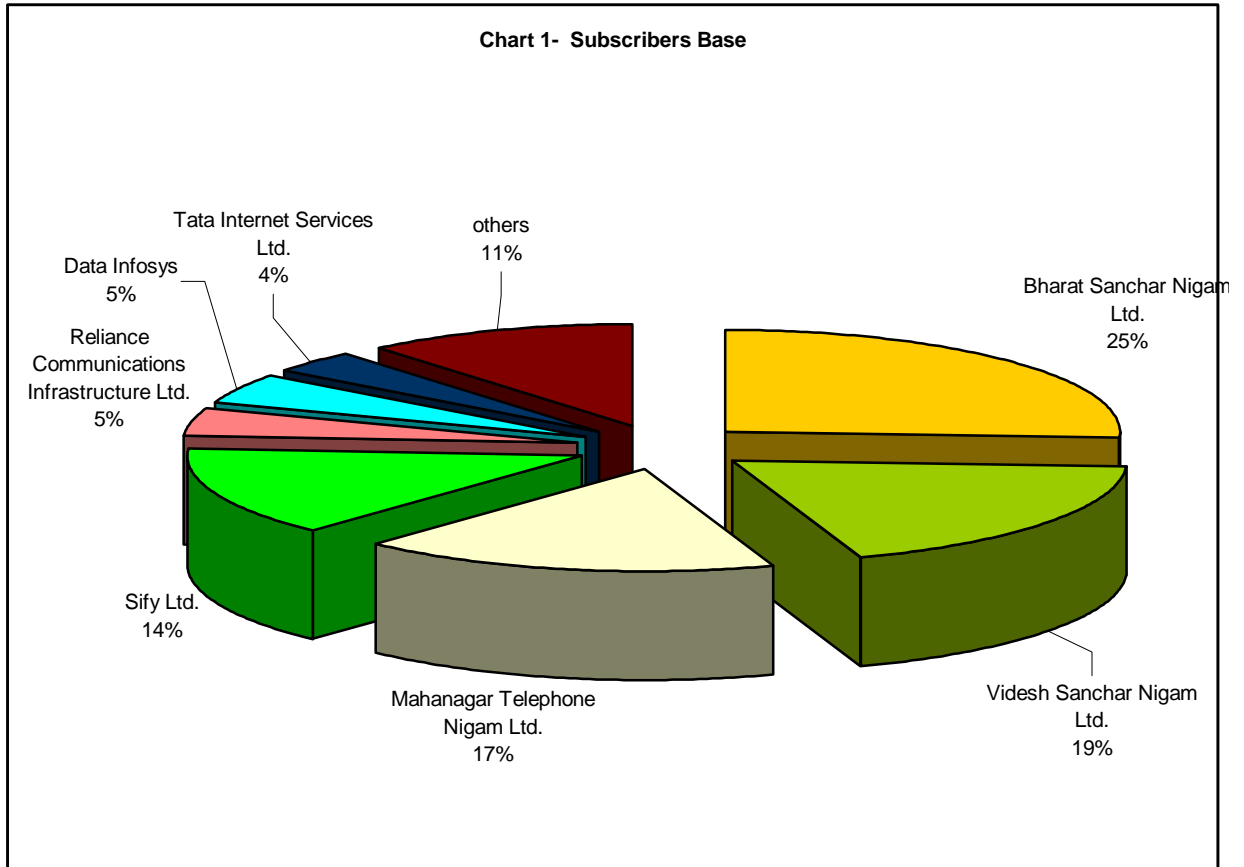
3.2 Internet Telephony: -

The Internet Telephony was thrown open for Internet service provider's w.e.f 1st April'02. DOT has given permission to 121 ISPs to offer Internet Telephony services as on June,2004, and as per the report submitted to TRAI, 43 ISPs have started Internet Telephony services, the list of these is enclosed at Annex 3.2. Total minutes of the use for Internet Telephony during the quarter were 22.04 million.

3.3 Market Share: -

Bharat Sanchar Nigam Ltd (BSNL) has retained its top position and reported a subscriber base of 12,75,522 against 11,28,172 during the last quarter. Videsh Sanchar Nigam Limited has moved up to second position from fourth position with a subscriber base of 9,25,062 against 6,00,509. Mahanagar Telephone Nigam Limited (MTNL) moved down to third position and reported a subscriber's base of 8,48,267 against 6,91,717 subscribers during the last quarter. M/s Sify Ltd. moved down from third to fourth position during the quarter and has reported a subscriber base of 6,93,181. Reliance Infocomm has reported a subscriber base of 2,24,345 and remained at fifth place during the quarter ending 30th June,2004.

Among PSU owned ISPs, M/s BSNL has reported a subscriber's base of 12,75,522 during the quarter ending 30th June,2004 as against 11,28,172 during the previous quarter registering an increase of 13.06%. M/s MTNL have reported a subscriber base of 8,48,267 against the subscriber base of 7,69,434 reported during the previous quarter, registering an increase of 10.24 %.



3.4 Leased Lines Connectivity: -

The number of Leased Lines connections was 11,581 during quarter ending 30th June, 2004.

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

There existed 10417 Cyber Cafes during the quarter ending 30th June,2004, out of which 9237 have been franchised by the ISPs and 1090 are non-franchised.

3.6 High Speed Connectivity: -

The number of 'Always-On' highspeed subscribers has reached 2,26,203 showing a growth of 21% over the previous quarter.

3.7 Minutes of use per subscriber: -

As reported by 44 ISPs the average minutes of use per subscriber/ month was approximately 400.

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

A total of approx. Rs 339 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 250.

3.9 International connectivity: -

The bandwidth owned by various IGSP for their ISP operations and Leased lines was reported to be 3.5 GB for downlink and 3.2 GB for uplink.

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 15 operators in 19 service areas.

4.1.1 Performance during the Quarter Ending 30th June 2004:

- The subscriber base of PMRTS decreased from 25474 in March 2004 to 25409 in June 2004 registering a negative growth rate of 0.26%.
- After a gap of 4 quarters from Sept.,2002,the PMRTS industry has registered a modest growth in the last three quarters.
- 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 8650 subscribers followed by Mumbai and Bangalore with the market share of 3526 and 3486 subscribers respectively.
- Procall Ltd. leads the tally of subscribers with a subscriber base of 7596 followed by Arvind Mills and Quick Calls Pvt. Ltd with a subscriber base of 6524 and 3593 respectively.
- In the present quarter Mumbai has added maximum number of subscribers (387). This is followed by Bangalore (139)
- In the present quarter, Iconet Communication Pvt. Ltd. has terminated their services.
- Hofintel and ITI Ltd. have not submitted their report since quarter ending June, 2003.

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 30th June 2004:

- In the present quarter, there was an addition of 3026 new subscribers. The total number of subscribers increased from 27601 in March, 2004 to 30627 in June 2004 registering a growth of 10.96% against the growth rate of 18.31% in quarter ending March, 2004.
- Hughes Escorts Communications Ltd. (HECL) remained the market leader with 9955 VSAT subscribers followed by HCL Comnet with 9581, Comsat Max with 4085 and Bharti BT with 4053 VSAT subscribers respectively.
- Hughes Escorts Communications Ltd. (HECL) added the maximum number of new connections 1560 with a percentage growth rate of 18.58%.
- Comsat Max had negative growth of 2.97% in this quarter.

The number of subscribers of each service providers from quarter ending 30th Sep, 2003 to 30th June 2004 along with the Market Share in terms of percentage of subscribers as on 30.06.2004 is given in Table 4.2.

Chapter Five

Quality of Service (QoS) Performance

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

Based on Quality of Service Parameters reported by Basic Service Operators for the quarter ending June 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”.

Only Shyam Telelink (Rajasthan) and Reliance Infocom Limited have met the TRAI's benchmark. The performance of MTNL (Mumbai), Tata (KTK) and BSNL (Most of the circles) 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)

Only Bharti (Delhi & Haryana) and Tata (except Maharashtra & Mumbai) have met the prescribed benchmark of <3 in all service areas.

(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. Among the private service providers except Tata (Karnataka) and HFCL (Punjab), all others have met the stipulated benchmark.

(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 met 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) have achieved the desired benchmark. Among the private operators, Tata (Gujarat) and Bharti (Delhi & Haryana) have not met the stipulated benchmark.

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

11 out of 26 of BSNL and MTNL (Delhi and Mumbai) have not met the OoS benchmark. Among the private Operators HFCL (PB), Shyam Telelink (RJ), Bharti (TN), Tata (AP, chennai) & Reliance (except Orissa , UP-E, UP-W, HR, RJ, PB, DL, BR) 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 6 out of 26 circles of BSNL have not met the overall QOS benchmark on disputed bills. These circles are Gujarat, MP, NE-I, Orissa, HP & Chennai. MTNL (Delhi & Mumbai) has also not met the same. Among the Private Operators, TATA and Bharti (except in TN & KTK) have not 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 Trunk calls BSNL and MTNL have failed to meet the benchmark in all the circles. Among the private operators TATA (MP) and Bharti , (TN) have met the QoS benchmark.

For Operator assisted ordinary trunk calls BSNL (All circles) and MTNL (Delhi, Mumbai) have failed to meet the QOS benchmark. Among the private operators only TATA has met the benchmark in MH, KTK & Gujarat 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 (Except in A&N) have failed to meet the requirement on customer care in all circles (Shifts). MTNL(Delhi, Mumbai) have also failed to meet the requirement on Customer care. Among the private operators only Shyam Telelink 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. MTNL (Delhi & Mumbai) has met the benchmark. Among the private operators except Bharti (KTK, Delhi), Tata (KTK, Mumbai, MH, Delhi, AP) and HFCL, (Punjab) have met the stipulated benchmark.

(iii) Additional Facility:-

BSNL has not reported the figure for additional facility. MTNL(Delhi and Mumbai) have failed to meet the QOS benchmark. Bharti (MP, TN, HR, KTK, Delhi), Tata & Shyam (RJ), have not 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 in Assam, TN, UTTR) & MTNL (Delhi & Mumbai) have failed to meet the QOS benchmark. Among the private Operators Reliance, HFCL, Bharti and Tata (except Delhi,Gujarat,TN) are within TRAI's benchmark limits.

5.2 Quality of Service performance of Cellular Mobile Service Providers: -

- a) In this quarter all Cellular Mobile Service Providers have submitted their QoS report to TRAI.
- b) Tata indicom WLL (M) has migrated to 10 digits numbering plan, in 8 service areas and submitted the PMR on the format prescribed for Cellular Mobile Service Providers. Hence, Tata indicom has been included in the list of CMSPs in this quarter.

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

| Sr. No. | Parameter | Benchmark | No. of operators not meeting benchmarks | |
|---------|---|---------------------|---|------------------|
| | | | This Quarter | Previous Quarter |
| | | | Out of 78 | Out of 69 |
| 1. | No. of faults (per 100 subscribers per | <1 | 16 | 9 |
| 2 | Faults cleared within 24 hrs | 100.00% | 29 | 26 |
| 3 | Accumulated down time of community isolation | <24 hrs | 11 | 13 |
| 4 | Call Success Rate (within licensee's own network) | >99% | 35 | 24 |
| 5 | Service Access Delay | Between 9 to 20 Sec | 0 | 0 |
| 6 | Call Drop Rate | <3.0% | 1 | 1 |
| 7 | % of connection with good voice quality | >95% | 11 | 8 |
| 8 | Complaints per 100 bills issued | <0.1% | 35 | 23 |
| 9 | % of complaints resolved with 4 weeks | 100.00% | 9 | 10 |
| 10 | Period of all refunds/payment due to customers from the date of resolution of complaints as in (ii) above | <4 weeks | 4 | 3 |

5.2.1 The analysis of QoS of 78 CMSPs is as under: -

- i) **From the table, it is observed that out of ten only three parameters namely Accumulated down time of community isolation, Call Drop Rate, and %age of complaints resolved within 4 weeks are showing improvement in the performance as compared to previous quarter.**
- ii) **No. of faults (per 100 subscribers) for BSNL, Kolkata is 3.90%, which is way beyond the stipulated benchmark of TRAI <1%.**
- iii) **For the parameter “Fault cleared within 24 hrs” the performance of BSNL (MH, UP (W), HP, KOLKATA) Haxacom (RAJ), BPL (MH) and TATA (AP, Delhi) are 71%, 82%, 71.30%, 73.70%, 54.13%, 62% and 84%, 84% respectively, which is way below the stipulated benchmark of 100%.**
- iv) **The Call Success Rate for BSNL (MH, KR) and Bharti cellular (MH & Goa) are 85.60%, 87.40% and 89.14% respectively, which is much below the benchmark of 99%.**
- v) **No. of Complaints per 100 bills issued for BSNL (MH, KTK, KR, PB, RJ, HP, KOLKATA), Hutchison Essar (AP) and TATA (GJ, Mumbai) are 1.6%, 3.1%, 1.6%, 6.7%, 1.2%, 1.2%, 1.5%), 2.13% , 1.82% and 3.12% 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.

5.3.2.2 Time to Access:

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

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.

5.3.2.4 ISP Node unavailability:

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

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. One ISP (Trak Online Net India Pvt. Ltd.) has not able to meet the target, another ISP (Reliance Communications Infrastructure 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.

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

| Operator wise details of Subscriber base as on 30 th June 2004 | | | | | |
|---|-------------------|--|-----------------|-----------------|-----------------|
| Sr. No. | BSO | Area of Operation | 30th June 2004 | | |
| | | | Urban | Rural | Total |
| 1 | BSNL | All India (except Delhi & Mumbai) | 23719306 | 12313020 | 36032326 |
| 2 | MTNL | Delhi & Mumbai | 4543464 | 191 | 4543655 |
| 3 | Bharti Group | MP, Delhi, Haryana, Tamil Nadu including Chennai, Karnataka | 703823 | 607 | 704430 |
| 4 | Tata Teleservices | Maharashtra, AP, Tamil Nadu, Karnataka, Gujarat, Delhi, Chennai | 1315481 | 4061 | 1319542 |
| 5 | HFCL Infotel | Punjab | 138284 | 968 | 139252 |
| 6 | Shyam Telelink | Rajasthan | 96248 | 3010 | 99258 |
| 7 | Reliance Infocom | AP, Bihar, Delhi, Gujarat, Haryana, HP, Karnataka, Kerala, MP, Maharashtra, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu incl. Chennai UP(E), UP(W), West Bengal, Kolkata | 663662 | 11962 | 675624 |
| Grand Total | | | 31180268 | 12333819 | 43514087 |

Table 1.2

Details of Public Call Offices (PCO)

| S. No | Service Providers | Area of Operation | PCOs as on 30.06.04 | PCOs Added during the quarter |
|-------|-------------------|--|---------------------|-------------------------------|
| 1 | BSNL | All India (except Delhi & Mumbai) | 1597482 | 77796 |
| 2 | MTNL | Delhi & Mumbai | 249642 | 9988 |
| 3 | Bharti | MP, Delhi, Haryana, Tamil Nadu Including Chennai, Karnataka | 78577 | 4708 |
| 4 | HFCL | Punjab | 23707 | 1444 |
| 5 | Tata Teleservices | Maharastra, AP, Tamil Nadu Including Chennai, Karnataka, Gujarat, Delhi | 58110 | 6288 |
| 6 | Reliance Infocom | AP, Bihar, Delhi, Gujarat, Haryana, HP, Karnataka, Kerala, MP, Maharashtra, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu (incl. Chennai), UP(E), UP(W), WB, Kolkata | 45266 | 3452 |
| 7 | Shyam Telelink | Rajasthan | 14503 | 156 |
| | TOTAL | | 2067287 | 103832 |

* Source - Operators

Table 1.3

Details of Village Public Telephones (VPT)

| S. No | Service Providers | Area of Operation | VPTs * as on 30.6.04 | Additions during the Quarter (Apr-June 04) |
|-------|-------------------|--|----------------------|--|
| 1 | BSNL | All India (except Delhi & Mumbai) | 513769 | 4278 |
| 2 | MTNL | Delhi & Mumbai | 191 | 0 |
| 3 | Bharti | MP, Delhi, Haryana, Tamil Nadu including Chennai, Karnataka | 607 | 0 |
| 4 | HFCL | Punjab | 968 | 135 |
| 5 | Tata Teleservices | Maharastra, AP, Tamil Nadu Including Chennai, Karnataka, Gujarat, Delhi | 4061 | 0 |
| 6 | Reliance Infocom | AP, Bihar, Delhi, Gujarat, Haryana, HP, Karnataka, Kerala, MP, Maharashtra, Mumbai, Orissa, Punjab, Rajasthan, Tamil Nadu (incl. Chennai), UP(E), UP(W), WB, Kolkata | 6657 | 2543 |
| 7 | Shyam Telelink | Rajasthan | 3010 | 0 |
| | TOTAL | | 529263 | 6956 |

* 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

| Mobile Groups and their market share | | | |
|---|--------------------------------|---------------------|------------------------|
| Mobile Group | Subscribers on June, 04 | Market Share | Technology Used |
| Reliance Grp | 8,179,429 | 21.7 | GSM & CDMA |
| Bharti Grp | 7,672,123 | 20.3 | GSM |
| BSNL | 6,171,736 | 16.3 | GSM & CDMA |
| Hutchison Grp | 5,770,593 | 15.3 | GSM |
| IDEA Grp | 2,955,528 | 7.8 | GSM |
| BPL Grp | 2,148,393 | 5.7 | GSM |
| Spice Grp | 1,302,997 | 3.4 | GSM |
| Aircel Grp | 1,171,814 | 3.1 | GSM |
| Escotel Grp | 1,089,945 | 2.9 | GSM |
| Tata Teleservices | 709,332 | 1.9 | CDMA |
| MTNL | 537,169 | 1.4 | GSM & CDMA |
| HFCL | 33,983 | 0.1 | CDMA |
| Shyam Telelink | 27,124 | 0.1 | CDMA |
| Total Subscribers | 37,770,166 | 100 | GSM & CDMA |

* Source - Operators

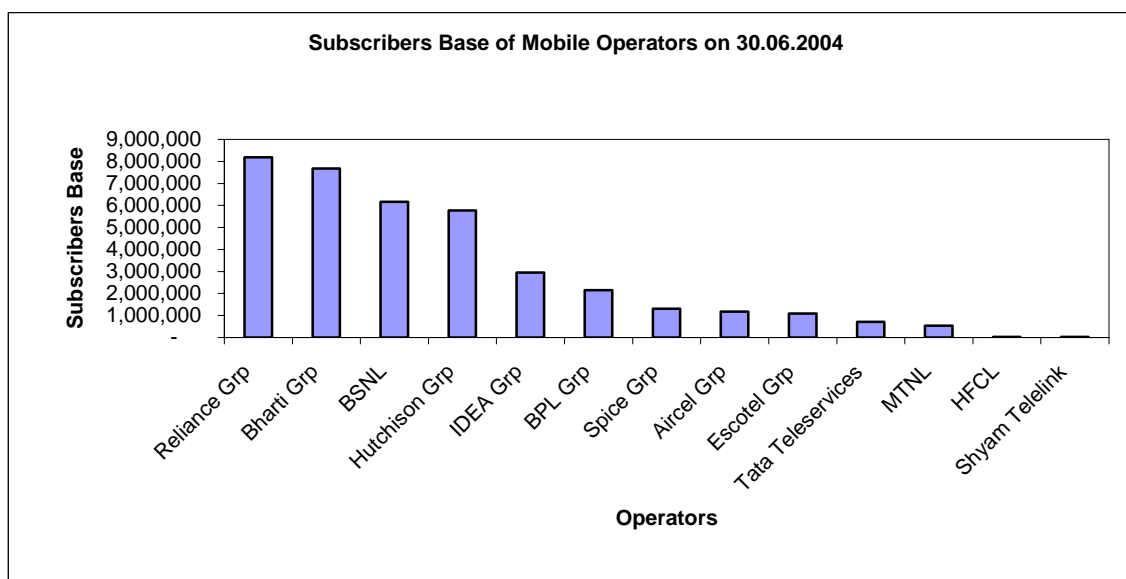


Table 2.2

Market Share of Mobile (GSM + CDMA) Service Providers

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

| Cellular Group | No of Subscribers | Market Share |
|-----------------------|--------------------------|---------------------|
| Bharti Group | 7672123 | 26.3 |
| BSNL | 5793800 | 19.8 |
| Hutchison Group | 5770593 | 19.8 |
| Idea Group | 2955528 | 10.1 |
| BPL | 2148393 | 7.4 |
| Spice Group | 1302997 | 4.5 |
| Escotel | 1089945 | 3.7 |
| Reliance Group | 881710 | 3.0 |
| MTNL | 416873 | 1.4 |
| Others - Aircel Group | 1171814 | 4.0 |
| Total | 29203776 | 100 |

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

| CDMA Group | No of Subscribers | Market Share |
|-------------------|--------------------------|---------------------|
| Reliance Infocomm | 7297719 | 85.19 |
| Tata Teleservices | 709332 | 8.28 |
| BSNL | 377936 | 4.41 |
| MTNL | 120296 | 1.40 |
| HFCL | 33983 | 0.40 |
| Shyam Telelink | 27124 | 0.32 |
| Total | 8566390 | 100 |

Growth Pattern of Mobile Subscriber Base

Cellular 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 | 11.53 million | 30.53% |
| Circles 'A' | 13.86 million | 36.71% |
| Circles 'B' | 10.84 million | 28.79% |
| Circles 'C' | 1.53 million | 4.06% |

The details are given below:

| Category | March'04 | June'04 |
|-----------|----------|---------|
| Metros | 10.55 | 11.53 |
| A' Circle | 12.55 | 13.86 |
| B' Circle | 9.29 | 10.84 |
| C' Circle | 1.31 | 1.53 |

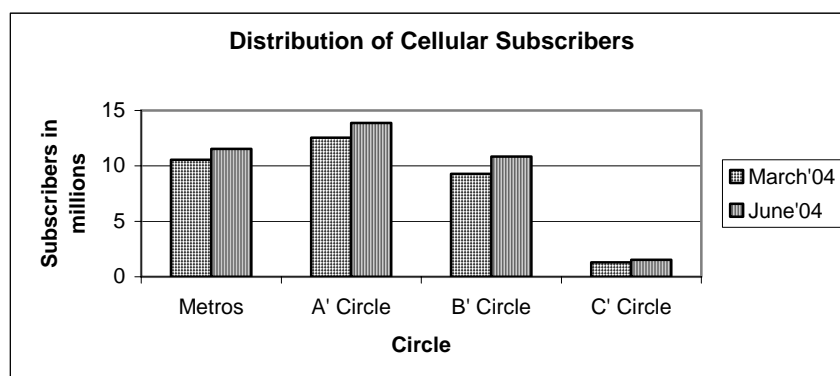


Table 3.1

Subscribers Base of Internet Services

| S. NO. | Name of ISP | Category | Area of Operation | Total subscribers as on 31st March 2004 | Total subscribers as on 30th June 2004 |
|--------|--|----------|------------------------------|---|--|
| 1 | Bharat Sanchar Nigam Ltd. | A | All India | 1128172 | 1275522 |
| 2 | Videsh Sanchar Nigam Ltd. | A | All India | 600509 | 925062 |
| 3 | Mahanagar Telephone Nigam Ltd. | B | Mumbai & Delhi | 766585 | 848267 |
| 4 | Sify Ltd. | A | All India | 658192 | 693181 |
| 5 | Reliance Communications Infrastructure Limited | A | All India | 174038 | 224345 |
| 6 | Data Infosys | A | All India | 198993 | 223850 |
| 7 | Tata Internet Services Ltd. | A | All India | 179224 | 179477 |
| 8 | Bharti Infotel Ltd. (Bharati Broadband Network Ltd.(Bharti BT Internet Ltd)) | A | All India | 73872 | 64430 |
| 9 | HCL Infinet Ltd. | A | All India | 55242 | 56135 |
| 10 | Sab Infotech | B | Punjab, Karnal & Dharamshala | 29839 | 31660 |
| 11 | ICENET.NET Ltd. | B | Gujarat | 28937 | 31317 |
| 12 | Shyam Internet Service Pvt. Ltd. | A | All India | 24335 | 30788 |
| 13 | BG Broadband India Pvt. Ltd. | B | Surat SSA, Mumbai | 30367 | 30367 |
| 14 | Trak Online Net India | A | All India | 31210 | 25588 |
| 15 | Hathway Cable & Data Pvt Ltd. | A | All India | 19447 | 23172 |
| 16 | Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom) | A | All India | 20483 | 21594 |
| 17 | Data Access Pvt. Ltd. | A | All India | 40769 | 20398 |
| 18 | Fascel Ltd. | B | Gujarat | 18001 | 18001 |
| 19 | WWW Communications Ltd. | B | Delhi | 11988 | 13032 |
| 20 | Roita India Ltd. | B | Mumbai | 12783 | 12042 |
| 21 | Broadband Pacenet (I) Pvt. Ltd. | B | Mumbai | | 10800 |
| 22 | Emmsons Infotech Ltd. | B | Punjab | 10200 | 10200 |
| 23 | HFCL Infotel Ltd. | B | Punjab | 8534 | 9852 |
| 24 | Asianet Sattelite Communications Ltd. | B | Kerala | 7242 | 9050 |
| 25 | S. S. net Com Pvt Ltd. | B | North East | 6759 | 6968 |
| 26 | Wilnet Communications | B | Gujarat | 6073 | 6192 |
| 27 | Primus Telecommunications India Ltd. | A | All India | 5940 | 5940 |
| 28 | RPG Infotech Ltd. (Sprint RPG India) | A | All India | 5047 | 5299 |
| 29 | Seven Star Dot Com Pvt. Ltd. | B | Khar(w), Jogeshwari (w) | 4297 | 5101 |
| 30 | In 2 Cable.com(India) pvt. Ltd. | A | All India | 4433 | 5003 |
| 31 | Space Online (P) Ltd. | B | Gujarat | 3803 | 4332 |
| 32 | Southern Online Services Ltd. | B | Andhra Pradesh | 5063 | 4263 |
| 33 | Nettlinx Ltd. | B | Andhra Pradesh | 2124 | 4102 |
| 34 | Jindal Online.com Ltd. | B | Gujarat | 3177 | 3177 |
| 35 | E-Comm Opportunities Pvt. Ltd. | B | Gujarat | 2802 | 3124 |
| 36 | City Online Services Pvt. Ltd. | B | Andhra Pradesh & Karnataka | 6525 | 3033 |
| 37 | Spectra Net Ltd | A | All India | 1941 | 2940 |
| 38 | Narmada Cyberzone Pvt. Ltd. | B | Gujarat | 2910 | 2910 |
| 39 | Forum Infotech (P) Ltd. | C | Srinagar SSA | 2882 | 2882 |
| 40 | Blazenet Pvt. Ltd. | B | Gujarat | 2774 | 2809 |
| 41 | West Bengal Electronics Industry Development Corporation Ltd. | B | Kolkata | 2475 | 2745 |
| 42 | Data Link Impex Pvt. Ltd. | B | Gujarat | 2709 | 2709 |

| | | | | | |
|----|--|-----|-----------------------|------|------|
| 43 | Sixth Sense Informatics Pvt. Ltd. | B | Mumbai | 2550 | 2550 |
| 44 | Navin.com (I) Pvt. Ltd. | A | All India | 2257 | 2257 |
| 45 | Digital 2 Virtual ISP Private Ltd. | C | Vadodara | 2021 | 2199 |
| 46 | Hughes Escorts Communications Ltd. | A | All India | 1286 | 2027 |
| 47 | Primenet Global Ltd. | A | All India | 2056 | 2001 |
| 48 | iPath India Pvt. Ltd. | C | Ernakulam | 2275 | 1983 |
| 49 | Ankhnet Information Pvt. Ltd. | B | Mumbai | 1691 | 1977 |
| 50 | Trikon Electronics | B | Mumbai | 1433 | 1750 |
| 51 | HCL Comnet | A | All India | 1227 | 1718 |
| 52 | Kelnet Communication Services (P) Ltd. | C | Trivendrum | 1715 | 1715 |
| 53 | Pioneer Online Service Pvt. Ltd. | B | Andhra Pradesh | 1609 | 1630 |
| 54 | Tawi e.com | C | Jammu Tawi | 1611 | 1611 |
| 55 | Descon Ltd. | B&C | Kolkata, West Bengal | 1682 | 1555 |
| 56 | Pacific Internet India | A | All India | 1732 | 1400 |
| 57 | Ortel Communications Ltd. | C | Bhubaneshwar | 987 | 1382 |
| 58 | Vasnet Communications Pvt. Ltd. | C | Mangalore SSA | 5008 | 1320 |
| 59 | Mylai Karpagamba Information System Pvt. Ltd. | B | Chennai | 1251 | 1275 |
| 60 | Online Media Solutions Ltd. | B | Andhra Pradesh | 1201 | 1201 |
| 61 | Swiftmail Communications Ltd. | A | All India | 1256 | 1169 |
| 62 | Siti Cable Network (Zee Interactive Multimedia Ltd.) | A | All India | 1113 | 1153 |
| 63 | Weikfield Mnemonix Infonetworks Pvt. Ltd. | B | Pune | 1150 | 1150 |
| 64 | Comsat Max Ltd. | A | All India | 982 | 1042 |
| 65 | GTL Ltd. | A | All India | 3245 | 1028 |
| 66 | Jain Info net Pvt Ltd. | B | Rajasthan | 916 | 986 |
| 67 | Patriot Automation | A | All India | 956 | 956 |
| 68 | Spectrum softech Solutions | C | Ernakulam SSA | 929 | 955 |
| 69 | Hathway Bhawani Cable & Datacom | B | Mumbai | 856 | 949 |
| 70 | Micky Online Pvt. Ltd. | C | Moradabad, Nainital | 1105 | 850 |
| 71 | ERNET India Ltd. | A | All India | 780 | 837 |
| 72 | Broadlane Network Pvt. Ltd. | C | Kalyan SSA | 617 | 774 |
| 73 | Bhasinsoft India Ltd. | B | Karnataka | 922 | 761 |
| 74 | IOL Broadband Ltd. (India Online Network Ltd.) | B | Mumbai | 721 | 721 |
| 75 | Speed Online.net Pvt. Ltd. | C | Rajkot | 655 | 719 |
| 76 | Rida Communications Pvt. Ltd. | C | Aligarh | 1291 | 703 |
| 77 | Sujan Engineering Pvt. Ltd. | C | Vadodara SSA | 667 | 667 |
| 78 | Bohra Prastithan Pvt. Ltd. | C | Udaipur SSA | 675 | 665 |
| 79 | Value Healthcare Ltd. | B | Mumbai | 476 | 630 |
| 80 | Opto Networks Pvt.Ltd. | C | Ghaziabad, Meerut SSA | 624 | 624 |
| 81 | CJ Online Pvt. Ltd. | C | Ghaziabad SSA | 402 | 594 |
| 82 | Kappa Infotech Pvt Ltd. | C | Kota SSA | 594 | 594 |
| 83 | Growth Compusoft Exports Ltd. | B | Gujarat | 603 | 559 |
| 84 | Chanchalan Electronics Pvt. Ltd. | C | Ranchi | 531 | 531 |
| 85 | Antriksh Technologies Pvt. Ltd. | C | Jammu SSA | 489 | 516 |
| 86 | Viraj Telecom Ltd. | B | Karnataka | 502 | 502 |
| 87 | Bhaskar Multinet Pvt. Ltd. | C | Jaipur SSA | 465 | 465 |
| 88 | Quest Consultancy Pvt. Ltd. | C | Valsad | 454 | 439 |
| 89 | Lee & Nee Softwares (Exports) Ltd. | C | Bhubaneshwar | 423 | 422 |
| 90 | deLaila Industry Pvt. Ltd. | C | Srinagar SSA | 416 | 416 |
| 91 | Silicon Mountains (I) Ltd. | B | Maharashtra | 409 | 409 |
| 92 | Websurf Pvt. Ltd. | C | Kalyan SSA | 468 | 398 |

| | | | | | |
|-----|---|---|---------------------------|-----|-----|
| 93 | Gateway Systems Pvt. Ltd. | A | All India | 353 | 393 |
| 94 | Jumpp India Pvt. Ltd. | A | All India | 441 | 350 |
| 95 | My Net Services Pvt | C | Salem | 395 | 346 |
| 96 | Mac Info Pvt. Ltd. | B | Hydrabad | 340 | 340 |
| 97 | ISP Solutions India pvt. Ltd. | C | Coimbatore SSA | 296 | 335 |
| 98 | My Guru Online | B | Andhra Pradesh | 329 | 329 |
| 99 | Rajasthan Telematics Ltd. | B | Rajasthan | 325 | 325 |
| 100 | GUJ Info Petro Ltd.(GIPL) | A | All India | 311 | 311 |
| 101 | Excel Infotech Ltd. | B | Punjab | 308 | 308 |
| 102 | Excel media Pvt Ltd. | B | Andhra Pradesh | 308 | 308 |
| 103 | Digital Nagpur Online Pvt. Ltd. | C | Nagpur | 315 | 304 |
| 104 | Vital Continuity Electronics Pvt. Ltd. | C | Ranchi SSA | 300 | 300 |
| 105 | SpaceCom Broadband Network Ltd. | B | Delhi | 476 | 292 |
| 106 | Bareilly Communications Pvt Ltd. | C | Bareilly SSA | 290 | 290 |
| 107 | Sanchar Telenetwork Pvt. Ltd. | C | Bhavnagar SSA | 283 | 283 |
| 108 | n-Logue Communications(P) Ltd | A | All India | 210 | 266 |
| 109 | Diksha Cyber city (P) Ltd. | C | Sri Ganganagar | 199 | 237 |
| 110 | CJM Consultancy Services Pvt. Ltd. | B | Delhi | 182 | 232 |
| 111 | Emtici Engineering Ltd. | C | Khera SSA | 207 | 207 |
| 112 | Planet Internet Satellite Pvt. Ltd. | C | Nadiad SSA | 221 | 203 |
| 113 | NetMagic Solutions (P) Ltd. | B | Mumbai | 167 | 198 |
| 114 | Swastik netvision telecom pvt. Ltd. | B | Gujrat | 175 | 178 |
| 115 | Starnet Online Services Ltd. | C | Visakhapatnam SSA | 294 | 154 |
| 116 | Surevin Internet Services Ltd | C | Ghaziabad SSA | 157 | 150 |
| 117 | Trans Virtual Pvt. Ltd. | C | Guwahati | 150 | 150 |
| 118 | Dialnet Communications Ltd. | B | Delhi | 159 | 145 |
| 119 | Assured Web Technologies Pvt. | C | Bhopal SSA | 143 | 143 |
| 120 | Srishti Open systems Pvt ltd. | C | Trivendrum | 142 | 143 |
| 121 | North East Online Services Pvt. Ltd. | C | Guwahati | 126 | 141 |
| 122 | Aksh Broadband Ltd. | C | Jaipur SSA | 140 | 140 |
| 123 | Chandra net Pvt. Ltd. | B | Gujrat | 140 | 140 |
| 124 | del DSL Internet Pvt. Ltd. | B | Delhi, Ghaziabad, Gurgaon | 124 | 139 |
| 125 | Trident Netcom Solutions Pvt. Ltd. | A | All India | 136 | 136 |
| 126 | Manipal Ecommerce Ltd. (Manipal Control Data Electronic Commerce Ltd.) | B | Karnataka | 111 | 127 |
| 127 | A-Team Information Technology Ltd. | C | Erode | 125 | 125 |
| 128 | Bhupati Hotels Pvt. Ltd. | C | Visakhapatnam | 138 | 123 |
| 129 | Estel Comm. Pvt. Ltd. | A | All India | 105 | 120 |
| 130 | Q Tel Comtech Ltd. | C | Gurgaon | 109 | 109 |
| 131 | Reach Network India Pvt. Ltd. | A | All India | 50 | 105 |
| 132 | Broad Range Application Integrated Networks Solutions Pvt. Ltd. | C | Bokaro SSA | 88 | 88 |
| 133 | Amber Online Services Ltd. | B | Hydrabad | 86 | 86 |
| 134 | Gujrat State Petroleum Corp Ltd. | B | Gujarat | 86 | 86 |
| 135 | Centre for Development of Advanced Computing, C-DAC (Electronics Research and Development Centre of India (ER&DC) | C | Ghaziabad | 76 | 76 |
| 136 | Master Chip | C | Nizamabad | 72 | 72 |
| 137 | i2i Enterprise Ltd. | A | All India | 36 | 65 |
| 138 | L&T Finance Ltd. (L&T Netcom Ltd.) | A | All India | 60 | 61 |
| 139 | Micromap Satcom Pvt. Ltd. | C | Lucknow | 60 | 60 |
| 140 | Direct Internet Pvt. Ltd. | B | Delhi | 56 | 56 |
| 141 | shreedhar Infosys Ltd. | C | Varanasi SSA | 61 | 54 |
| 142 | Czars Oleoresin Pvt. Ltd. | C | Gulbarga | 90 | 49 |

| | | | | | |
|-----|---|---|------------------------------------|----------------|----------------|
| 143 | Apna Telelink Pvt LTD | C | Jalandhar SSA | 46 | 46 |
| 144 | Access Online Pvt. Ltd. | B | Mumbai | 49 | 45 |
| 145 | Tata Power Company Ltd. | A | All India | 66 | 37 |
| 146 | Arun Girija Communications Pvt Ltd. | C | Patna SSA | 42 | 36 |
| 147 | Indian Quotations Systems Pvt. Ltd. | B | Mumbai | 32 | 32 |
| 148 | Karvy Consultant Ltd. | B | Andhra Pradesh | 30 | 30 |
| 149 | PBC Venture Ltd. (earlier Chemical & Metallurgical Design Co. Ltd..0) | B | Delhi | 14 | 20 |
| 150 | Sree Sree Infotainment Pvt. Ltd. | C | Vishakapatnam | 20 | 20 |
| 151 | Paya Computers Services (P) Ltd. | C | Dhanbad | 19 | 19 |
| 152 | Essel Shyam Communication Ltd, | A | All India | 18 | 18 |
| 153 | GNFC | A | All India | 21 | 18 |
| 154 | MX Solutions Pvt. Ltd. | B | Kerala | 17 | 17 |
| 155 | Astra Infonets Pvt. Ltd. | B | Hydrabad | 12 | 15 |
| 156 | Ice Network (P) Ltd. | B | Bangalore | 15 | 15 |
| 157 | World Phone Internet services (P) Ltd. | A | All India | 15 | 15 |
| 158 | Astro Network India Pvt. Ltd. | A | All India | 13 | 13 |
| 159 | RailTel Corporation of India Ltd. | A | All India | 12 | 12 |
| 160 | Beacon Broadband Networks Pvt. Ltd. | C | Durg SSA | 10 | 10 |
| 161 | Uttar Pradesh Network Pvt. Ltd. | B | Uttar Pradesh (E&W) | 10 | 10 |
| 162 | World tel TamilNadu Pvt. Ltd. | B | Tamilnadu circle excluding Chennai | 10 | 10 |
| 163 | Cyquator Technologies Ltd. | A | All India | 7 | 9 |
| 164 | Samkhya Networks (P) Ltd. | C | Gurgaon | 8 | 8 |
| 165 | Software Technology Park of India | A | All India | 8 | 8 |
| 166 | Bihar Network Pvt. Ltd. | B | Bihar | 5 | 5 |
| 167 | Giga Solutions Pvt. Ltd. | B | Maharashtra | 5 | 5 |
| 168 | Haryana Cybernet Pvt. Ltd. | B | Haryana | 5 | 5 |
| 169 | Indus ind Cable Television Pvt. Ltd. | B | Mumbai | 5 | 5 |
| 170 | Infomagic Services Pvt. Ltd. | B | Mumbai | 5 | 5 |
| 171 | Kerala communication Network Pvt. Ltd. | B | Kerala | 5 | 5 |
| 172 | Kushagra Telecom Pvt Ltd. | C | Ghaziabad SSA | 16 | 5 |
| 173 | MP Network Pvt. Ltd. | B | Madhya Pradesh | 5 | 5 |
| 174 | Orissa Network Pvt. Ltd. | B | Orissa | 5 | 5 |
| 175 | Punjab Communications Ltd | B | Punjab | 5 | 5 |
| 176 | Punjab Cybernet pvt. Ltd. | B | Punjab | | 5 |
| 177 | Tandem Infotech Pvt. Ltd., | C | Trivandrum | 5 | 5 |
| 178 | Godrej Infotech Ltd. | B | Mumbai | 4 | 4 |
| 179 | Compucom (I) Ltd. | C | Jaipur SSA | 3 | 3 |
| 180 | Surana Telecom Ltd. | B | Andhra Pradesh | 3 | 3 |
| 181 | Worldwide com Pvt. Ltd. | C | Saharanpur | 3 | 3 |
| 182 | Bharti Aquanet Ltd. | A | All India | 2 | 2 |
| 183 | CMC Ltd. | A | All India | 2 | 2 |
| 184 | Bharat Connect Ltd. | B | Delhi | 2 | 1 |
| 185 | iServe India Pvt Ltd. | A | All India | 1 | 1 |
| 186 | Nomus Internet Systems | B | Andhra Pradesh | 14 | 1 |
| 187 | Reliance Engineering Associates Pvt. Ltd. (Broadband Solutions) | A | All India | 1 | 1 |
| 188 | Tata Power Broadband Company Ltd. | B | Mumbai | | 1 |
| 189 | Vebtel Obconic Internet Protocol Pvt. Ltd. | B | Andhra Pradesh | | 1 |
| | Total | | | 4549618 | 4926318 |

Table 4.1

Subscriber Base of Public Mobile Radio Trunking Service (PMRTS)

Total number of operators: 15

Number of operators who submitted reports: 13

| Sr. No. | Name of the Service Provider | Operative Area | Subscriber Base as on 31-03-2003 | Subscriber Base as on 30-06-004 |
|---------|--|-----------------------|----------------------------------|---------------------------------|
| 1 | Aryadoot Transport Pvt Limited | Vishakhapatnam | 930 | 939 |
| | Total | | 930 | 939 |
| 2 | Jet-Aiu Skyline Transport Pvt Ltd. | Indore | 377 | 370 |
| | Total | | 377 | 370 |
| 3 | Container Movement (Bombay) Transport Pvt Ltd. | Delhi | 239 | 239 |
| | Total | | 239 | 239 |
| 4 | Arya Offshore Services Pvt Ltd. | Mumbai | 944 | 901 |
| | | Chennai | 828 | 717 |
| | Total | | 1772 | 1618 |
| 5 | Hapag Llyod (German Express Shipping Agency (India) Pvt Ltd. | Navi Mumbai (Belapur) | 474 | 396 |
| | | Delhi | 343 | 353 |
| | Total | | 817 | 749 |
| 6 | United Liner Agencies of India (Pvt) Ltd | Delhi | 815 | 569 |
| | | Jamnagar | 0 | 0 |
| | | Calcutta | 1039 | 953 |
| | Total | | 1854 | 1522 |
| 7 | Procall Limited | Delhi | 6237 | 6475 |
| | | Jaipur | 220 | 219 |
| | | Gurgaon | 605 | 629 |
| | | Faridabad | 299 | 273 |
| | Total | | 7361 | 7596 |
| 8 | The Arvind Mills Ltd. | Delhi | 984 | 948 |
| | | Faridabad | 1 | 1 |

| | | | | |
|----|---------------------------------------|------------|---------------------|---------------------|
| | | Mumbai | 1118 | 1182 |
| | | Vashi | 46 | 46 |
| | | Ahmedabad | 311 | 305 |
| | | Baroda | 635 | 668 |
| | | Surat | 871 | 920 |
| | | Chennai | 1069 | 1022 |
| | | Bangalore | 1146 | 1432 |
| | Total | | 6181 | 6524 |
| 9 | Iconet Communication Pvt. Ltd | Kotagiri | License Surrendered | License Surrendered |
| | | Yercaud | License Surrendered | License Surrendered |
| | | Kodaikanal | License Surrendered | License Surrendered |
| | Total | | 0 | 0 |
| 10 | Smartalk Pvt Limited | Pune | 442 | 449 |
| | | Vashi | 433 | 420 |
| | | Mumbai | 290 | 303 |
| | Total | | 1165 | 1172 |
| 11 | QuickCall | Bangalore | 1776 | 1794 |
| | | Hyderabad | 935 | 925 |
| | | Chennai | 879 | 874 |
| | Total | | 3590 | 3593 |
| 12 | Bhilwara Telenet Services Pvt Limited | Mumbai | 787 | 744 |
| | | Delhi | 0 | 0 |
| | Total | | 787 | 744 |
| 13 | Mobilkom India Limited | New Delhi | 66 | 66 |
| | | Shimla | 17 | 17 |
| | | Dhanbad | 0 | 0 |
| | Total | | 83 | 83 |
| 14 | India Satcom Ltd. | Bangalore | 318 | 260 |
| | Total | | 318 | 260 |

| | | | | |
|----|--------------------|-----------|----------------------|----------------------|
| 15 | ITI LTD. | Madurai | Report Not Submitted | Report Not Submitted |
| | | Hyderabad | | |
| | | Chennai | | |
| | | Ahmedabad | | |
| | | Vadodra | | |
| | Total | | NA | NA |
| 16 | Hofintel Ltd. | Hyderabad | Report Not Submitted | Report Not Submitted |
| | | Chennai | | |
| | Total | | NA | NA |
| | Grand Total | | 25474 | 25409 |

Table 4.2

Subscriber Base of VSAT Service Providers

| S.No. | Service Provider | 30.9.2003 | 31.12.2003 | 31.03.2004 | 30.6.2004 | Percentage of Market Share (%) as on 31.06.2004 |
|-------|--|--------------|--------------|--------------|--------------|---|
| 1 | Hughes | 5928 | 7263 | 8395 | 9955 | 32.50% |
| 2 | HCL Comnet | 4578 | 5833 | 8376 | 9581 | 31.28% |
| 3 | Comsat Max | 3700 | 3833 | 4210 | 4085 | 13.34% |
| 4 | Bharti BT | 3462 | 3824 | 3829 | 4053 | 13.23% |
| 5 | Essel Shyam | 1631 | 2005 | 2040 | 2066 | 6.75% |
| 6 | Tata Services | 90 | 176 | 367 | 503 | 1.64% |
| 7 | Telstra Vishesh* | 156 | 159 | 159 | 159 | 0.52% |
| 8 | RPG Satellite Communications Pvt. Ltd. | 87 | 91 | 79 | 79 | 0.26% |
| 9 | HFCL* | 67 | 67 | 67 | 67 | 0.22% |
| 10 | ITI | 53 | 53 | 53 | 53 | 0.17% |
| 11 | GNFC* | 26 | 26 | 26 | 26 | 0.08% |
| | Total | 19778 | 23330 | 27601 | 30627 | 100% |

* The Service Providers have not provided the data so the last quarter data have been retained.

Details of Basic Service Licenses issued to private operators

| 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 |
| Tata | Maharashtra including Mumbai | 10-10-2003-BS-II | 17-11/95-BS-II | 30.09.97 |
| Shyam | Rajasthan | 10-10-2003-BS-II / Vol-II | 17-16/95-BS-II/Rajasthan | 04.03.98 |
| Tata | A P | 10-10-2003-BS-II | 17-1/95-BS-II/Andra Pradesh | 04.11.97 |
| Tata | TN | 10-10-2003-BS-II | 18-61/2001-BS-II | 31.08.2001 |
| Tata | Karnataka | 10-10-2003-BS-II | 18-59/2001-BS-II | 31.08.2001 |
| Tata | Delhi | 10-10-2003-BS-II | 18-57/2001-BS-II/Delhi | 31.08.2001 |
| Tata | Gujarat | 10-10-2003-BS-II | 18-58/2001- BS-II | 31.08.2001 |
| Reliance | Bihar | 10-10-2003-BS-II / Vol-II | 18-113/2001-BS-II | 20.07.2001 |
| Reliance | Delhi | 10-10-2003-BS-II / Vol-II | 18-32/2001-BS-II | 20.07.2001 |
| Reliance | Gujarat | 10-10-2003-BS-II / Vol-II | 17-6/95-BS-II | 18.03.97 |
| Reliance | Haryana | 10-10-2003-BS-II / Vol-II | 18-30/2001-BS-II | 20.07.2001 |
| Reliance | HP | 10-10-2003-BS-II / Vol-II | 18-116/2001-BS-II | 20.07.2001 |
| Reliance | Karnataka | 10-10-2003-BS-II / Vol-II | 18-35/2001-BS-II | 20.07.2001 |
| Reliance | Kerala | 10-10-2003-BS-II / Vol-II | 18-38/2001-BS-II | 20.07.2001 |
| Reliance | MP | 10-10-2003-BS-II / Vol-II | 18-32/2001-BS-II | 20.07.2001 |
| Reliance | Maharashtra | 10-10-2003-BS-II / Vol-II | 18-36/2001-BS-II | 20.07.2001 |
| Reliance | Orissa | 10-10-2003-BS-II / Vol-II | 18-112/2001-BS-II | 20.07.2001 |
| Reliance | Punjab | 10-10-2003-BS-II / Vol-II | 18-31/2001-BS-II | 20.07.2001 |
| Reliance | Rajasthan | 10-10-2003-BS-II / Vol-II | 18-115/2001-BS-II | 20.07.2001 |
| Reliance | Tamil Nadu | 10-10-2003-BS-II / Vol-II | 18-29/2001-BS-II | 20.07.2001 |
| Reliance | UP(East) | 10-10-2003-BS-II / Vol-II | 18-34/2001-BS-II | 20.07.2001 |
| Reliance | UP(West) | 10-10-2003-BS-II / Vol-II | 18-39/2001-BS-II | 20.07.2001 |

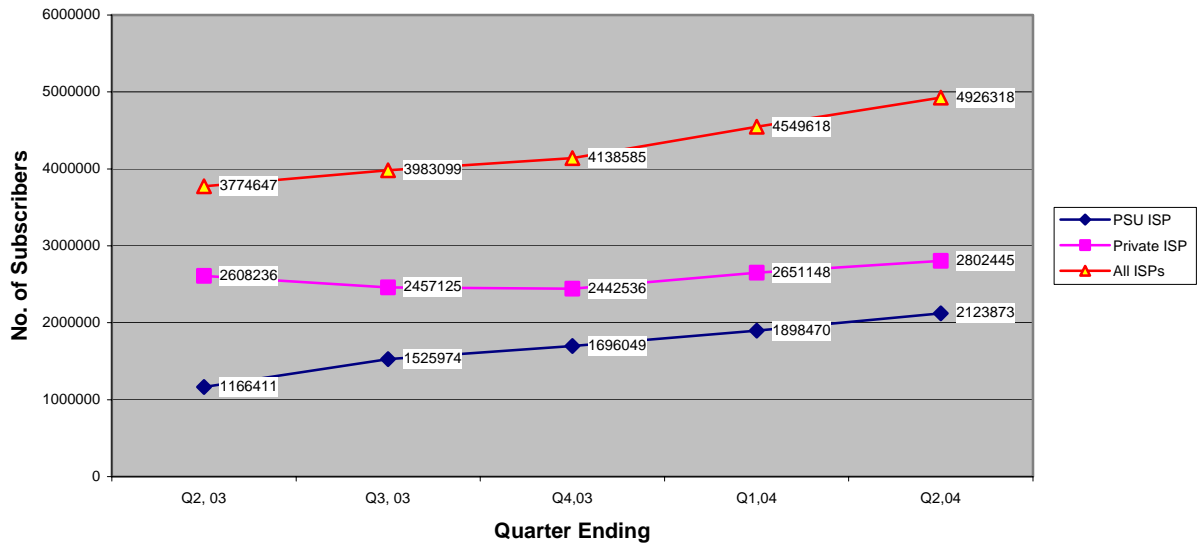
List of Private Unified Access Service Providers

| SERVICE AREA | Name of Service Provider |
|---|--|
| Metro and Category A Service Areas | |
| Delhi | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Mumbai | Reliance Infocomm Ltd., Tata Teleservices (Maharashtra) Ltd., Bharti Cellular Ltd. |
| Chennai | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Kolkata | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Andhra Pradesh | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Mobile Ltd. |
| Gujarat | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Karnataka | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Mobile Ltd. |
| Maharashtra | Reliance Infocomm Ltd., Tata Teleservices (Maharashtra) Ltd., Bharti Cellular Ltd. |
| Tamil Nadu | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Category B Service Areas | |
| Haryana | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Kerala | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd. |
| Madhya Pradesh | Bharti Infotel Ltd., Reliance Infocomm Ltd., Tata Tele Service Ltd., Bharti Cellular Ltd. |
| Punjab | HFCL Infotel Ltd., Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Mobile Ltd., Spice Communication Pvt. Ltd. |
| Rajasthan | Reliance Infocomm Ltd., Shyam Telelink Ltd., Tata Teleservices Ltd. |
| U.P. (West) | Hutchison Essar South Ltd. , Reliance Infocomm Ltd.,Tata Teleservices Ltd., Bharti Cellular Ltd. |
| U.P. (East) | Bharti Cellular Ltd., Reliance Infocomm Ltd., Tata Teleservices Ltd. |
| West Bengal | Bharti Cellular Ltd., Reliance Infocomm Ltd., Tata Teleservices Ltd., Hutchison Essar South Ltd., Dishnet DSL Ltd. |
| Category C Service Areas | |
| Assam | Dishnet DSL Ltd. |
| Bihar | Bharti Cellular Ltd., Reliance Infocomm Ltd., Tata Teleservices Ltd., Dishnet DSL Ltd. |
| Himachal Pradesh | Reliance Infocomm Ltd., Tata Teleservices Ltd., Bharti Cellular Ltd., Dishnet DSL Limited |
| Jammu & Kashmir | Bharti Cellular Ltd., Dishnet DSL Ltd. |
| North-East | Dishnet DSL Ltd. |
| Orissa | Bharti Cellular Ltd., Reliance Infocomm Ltd., Tata Teleservices Ltd., Dishnet DSL Ltd. |

Source: DOT

Growth Pattern of Internet Subscribers

Growth Trends- Subscribers Base



Growth Trends-Rate

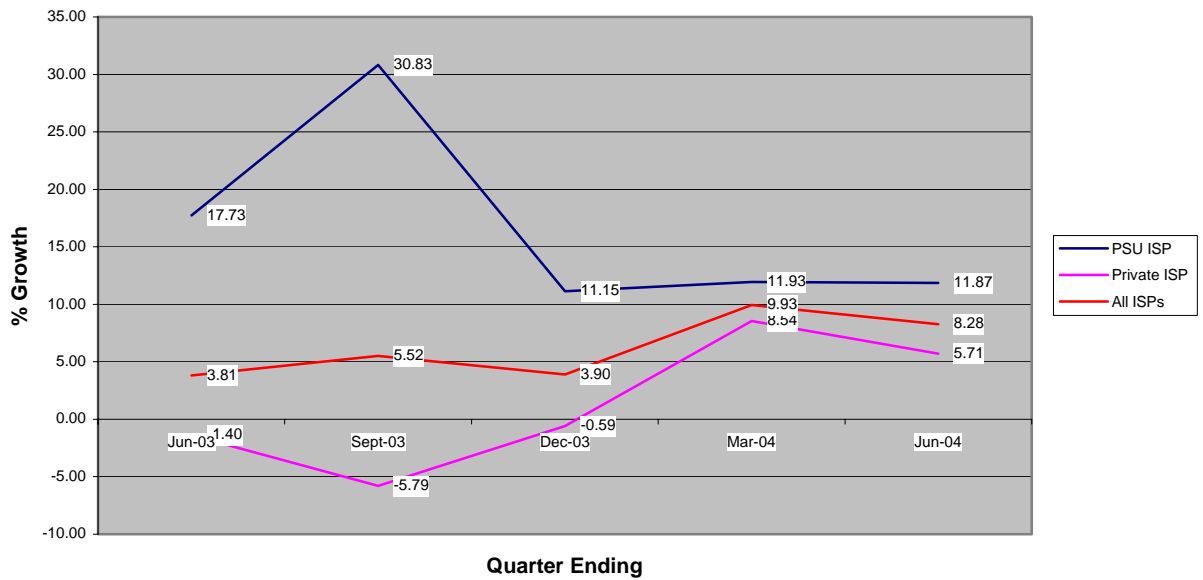
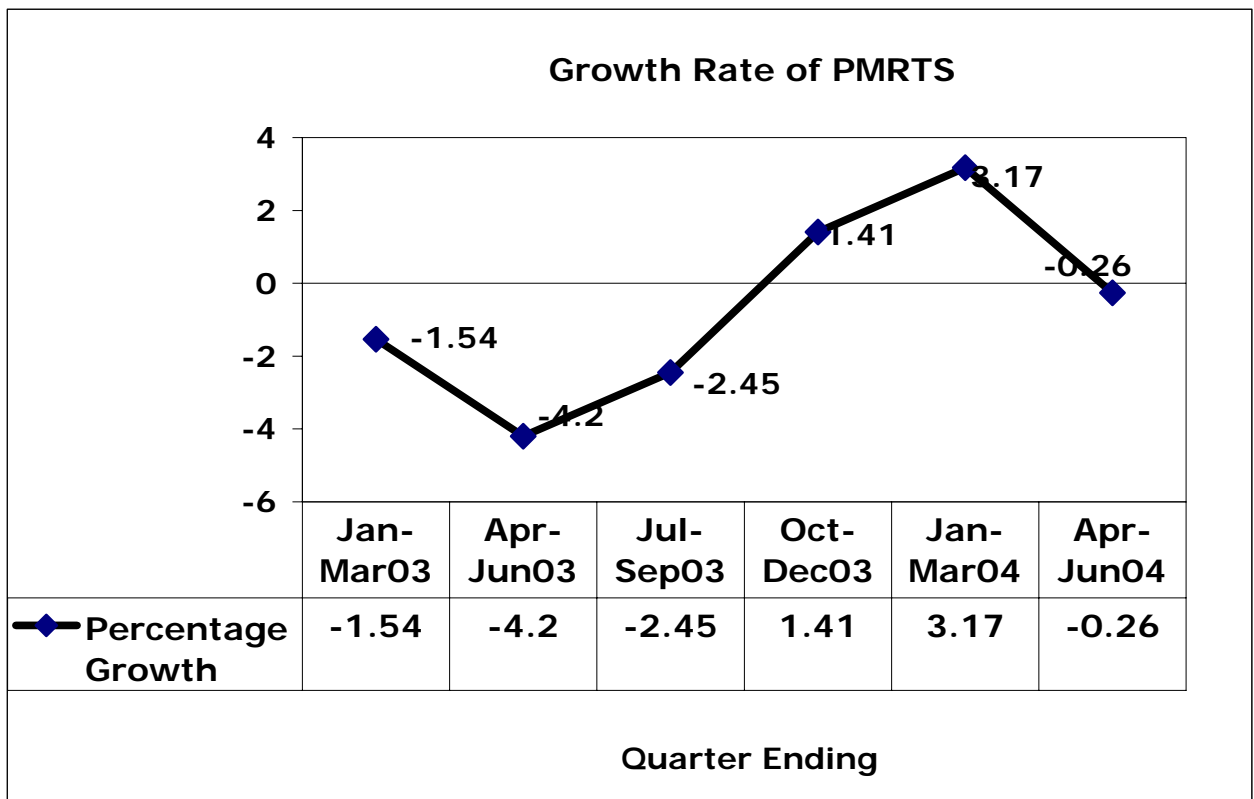


Table 3.2

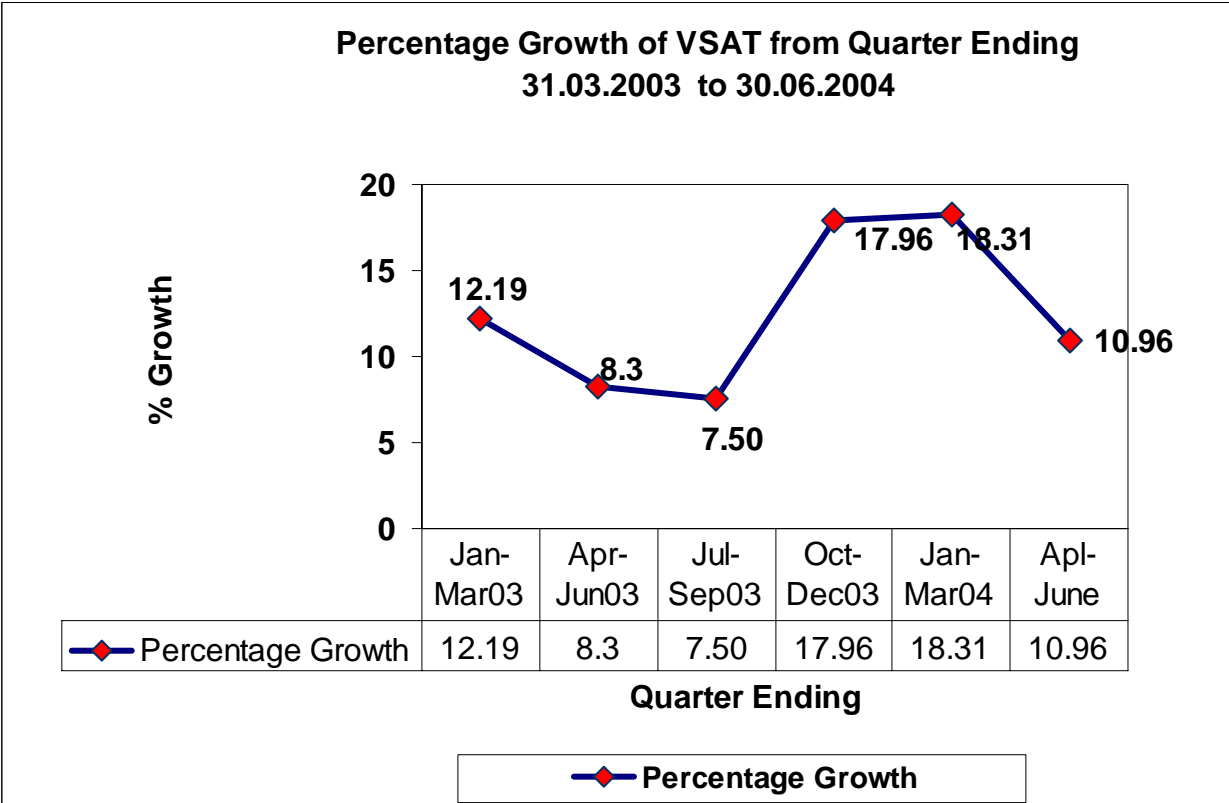
List of Internet Telephony Subscribers

| S.No. | Name of ISPs |
|-------|--|
| 1 | Apna Telelink Pvt. Ltd. |
| 2 | Asianet Satellite Communications Ltd. |
| 3 | BG Broadband India Pvt. Ltd. |
| 3 | Bharti Broadband Network Ltd. |
| 4 | BSNL |
| 5 | City Online Services Pvt. Ltd. |
| 6 | Data Infosys Ltd. |
| 7 | Data Link Impex Pvt. Ltd. |
| 8 | Digital2Virtual SP Pvt. Ltd. |
| 9 | Dishnet DSL 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 | MTNL |
| 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. |

Growth Rate of PMRTS subscribers



Growth Rate of VSAT Subscribers



Quality of Service Performance 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 | | | 100% in < 7days | <3 | >90% (Month-1) | | | | | | | | | >90% (Month-2) | >90% (Month-3) | <8 hrs between local exchange (2/1000) | >65% | <0.1%, |
| | | | | | | | | | | | | | < 3 days | < 24 hours | < 24hours | <1% (Month-1) | <1% (Month-2) | <1% (Month-3) | | |
| 1 | ANDRA PRADESH | BSNL | 65.78 | 7.42 | 92.50 | 89.52 | 86.80 | 12.00 | NA | 55.90% | 0.05 | 86.77 | 86.54 | 61.88 | NA | NA | 11.6 | 14.10 | 14.5 | |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 100.00 | 2.80 | 0.002 | 67.44% | 0.07 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | TATA | 93.30 | 2.04 | 96.17 | 98.28 | 83.15 | 83.15 | 9.20 | 0.001 | 78.48% | 0.61 | N/App | N/App | 55.49 | 0.00 | 74.15 | 5.76 | 5.59 | 3.02 |
| 2 | BIHAR | BSNL | 38.33 | 7.27 | 86.12 | 88.95 | 90.23 | 12.00 | NA | 54.90% | 0.02 | 81.74 | 85.88 | 44.18 | NA | NA | 2.42 | 2.40 | 2.34 | |
| | | RELIANCE | 100.00 | 0.01 | 100.00 | 100.00 | 100.00 | 100.00 | 2.10 | 0.002 | 59.87% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 3 | DELHI | MTNL | 80.67 | 22.36 | 80.66 | 77.28 | 65.10 | 14.88 | 0.002 | 43.40% | 0.14 | 80.91 | 77.61 | 74.23 | 99.74 | 91.56 | 11.9 | 11.59 | 11.4 | |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 100.00 | 0.80 | 0.002 | 63.22% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | BHARTI | 71.53 | 3.75 | 98.37 | 99.28 | 98.24 | 98.24 | 4.50 | 0.15 | 50.08% | 0.06 | 55.03 | 63.00 | 20.35 | 74.00 | 91.66 | 8.66 | 9.44 | 8.25 |
| | | TATA | 98.97 | 0.24 | 99.59 | 96.49 | 35.26 | 35.26 | 14.00 | 0.001 | 46.00% | 0.50 | N/App | N/App | 80.00 | 11.06 | 52.76 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | | |
|----|------------------|--------------------|--------|-------|--------|--------|--------|-------|--------|--------|------|--------|--------|--------|--------|--------|------|------|------|
| 4 | GUJARAT | BSNL | 76.24 | 9.82 | 96.15 | 95.04 | 96.48 | 9.00 | NA | 60.60% | 0.07 | 87.16 | 85.09 | 85.80 | NA | NA | 5.69 | 5.97 | 3.51 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 2.60 | 0.002 | 64.98% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | TATA | 87.68 | 0.54 | 99.67 | 99.22 | 99.13 | 2.10 | 0.0059 | 56.31% | 0.51 | 100.00 | 100.00 | 53.82 | 100.00 | 88.16 | 0.00 | 0.00 | 0.00 |
| 5 | MP & CHATTISGARH | BSNL(MP) | 41.65 | 8.28 | 89.38 | 88.01 | 87.60 | 11.33 | NA | 67.70% | 0.10 | 86.30 | 83.97 | 80.87 | NA | NA | 0.31 | 2.56 | 2.78 |
| | | BSNL(Chhattisgarh) | 66.16 | 16.13 | 84.23 | 51.05 | 75.66 | 19.00 | NA | 60.80% | 0.11 | 99.79 | 99.87 | 65.09 | NA | NA | 1.13 | 1.55 | 3.43 |
| | | RELIANCE | 100.00 | 0.01 | 100.00 | 100.00 | 100.00 | 3.80 | 0.002 | 67.57% | 0.08 | N/App | N/App | 100.00 | NA | NA | 0.00 | 0.00 | 0.00 |
| | | BHARTI | 98.54 | 1.67 | 98.27 | 97.00 | 95.62 | 5.00 | 0.000 | 64.10% | 0.06 | 93.72 | N/App | 56.29 | 100.00 | 94.89 | 2.73 | 1.93 | 1.89 |
| 6 | MAHARASHTRA | BSNL | 64.16 | 7.75 | 85.06 | 90.27 | 85.61 | 16.00 | NA | 58.80% | 0.04 | 84.94 | 91.23 | 77.83 | NA | NA | 5.02 | 5.14 | 4.43 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 1.80 | 0.002 | 66.78% | 0.06 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | TATA | 91.81 | 5.03 | 100.00 | 100.00 | 99.01 | 3.00 | 0.001 | 61.05% | 2.35 | N/App | N/App | 51.84 | 0.00 | 17.51 | 7.23 | 9.33 | 7.98 |
| 7 | PUNJAB | BSNL | 93.19 | 12.53 | 93.21 | 93.49 | 94.10 | 14.00 | NA | 65.50% | 0.05 | 87.03 | 20.19 | 93.93 | NA | NA | 1.49 | 1.54 | 1.75 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 2.50 | 0.002 | 57.64% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | HFCL | 95.90 | 7.11 | 94.15 | 88.74 | 65.41 | 9.74 | 0.000 | 74.69% | 0.06 | N/App | N/App | 62.76 | 93.97 | 98.98 | 6.27 | 8.50 | 9.20 |
| 8 | RAJASTHAN | BSNL | 34.15 | 10.43 | 91.66 | 85.56 | 100.00 | 11.00 | NA | 60.50% | 0.05 | 89.16 | 100.00 | 42.90 | NA | NA | 3.62 | 2.90 | 2.50 |
| | | RELIANCE | 100.00 | 0.01 | 100.00 | 100.00 | 100.00 | 2.10 | 0.002 | 64.21% | 0.08 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | SHYAM | 100.00 | 3.71 | 94.90 | 96.58 | 99.80 | 5.20 | 0.001 | 66.00% | 0.03 | N/App | N/App | 95.18 | 100.00 | 94.76 | 0.59 | 0.57 | 0.44 |
| 9 | TAMILNADU | BSNL | 70.53 | 5.93 | 96.57 | 96.27 | 96.54 | 8.00 | NA | 69.10% | 0.03 | 99.00 | 98.88 | 80.16 | NA | NA | 0.17 | 1.64 | 0.99 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 0.60 | 0.002 | 65.71% | 0.07 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | BHARTI | 87.12 | 1.86 | 100.00 | 99.94 | 100.00 | 1.80 | 0.001 | 67.46% | 0.26 | 100.00 | 100.00 | 49.89 | 100.00 | 37.31 | 0.98 | 2.04 | 2.12 |
| | | TATA | 87.12 | 0.10 | 92.68 | 100.00 | 95.03 | 4.50 | 0.0018 | 64.69% | 0.19 | N/App | N/App | 15.59 | 100.00 | 70.72 | 0.00 | 0.00 | 0.55 |
| 10 | HARYANA | BSNL | 64.45 | 8.88 | 92.58 | 93.26 | 93.40 | 13.67 | NA | 69.40% | 0.06 | 54.49 | 78.37 | 39.86 | NA | NA | 3.70 | 3.75 | 3.89 |
| | | RELIANCE | 100.00 | 0.01 | 100.00 | 100.00 | 100.00 | 2.60 | 0.002 | 57.02% | 0.06 | 54.49 | 78.37 | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | BHARTI | 91.58 | 3.27 | 99.70 | 99.34 | 98.75 | 5.80 | 0.100 | 47.43% | 0.04 | 64.78 | 64.56 | 38.07 | 96.68 | 87.84 | 7.57 | 7.26 | 7.75 |
| 11 | KARNATAKA | BSNL | 69.52 | 7.42 | 95.09 | 94.60 | 95.67 | 3.00 | NA | 58.60% | 0.06 | 94.95 | 96.96 | 69.91 | NA | NA | 6.23 | 6.92 | 7.54 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 1.60 | 0.002 | 69.52% | 0.07 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | BHARTI | 94.49 | 0.56 | 99.86 | 99.67 | 97.77 | 3.10 | 0.000 | 60.04% | 0.25 | Nil | 40.37 | 21.52 | 10.05 | 89.99 | 4.27 | 6.22 | 5.09 |
| | | TATA | 17.61 | 0.25 | 88.04 | 97.46 | 84.51 | 11.31 | 0.0003 | 57.51% | 0.62 | N/App | N/App | 58.64 | 37.49 | 54.45 | 5.43 | 5.08 | 4.48 |

Operator not meeting prescribed benchmark

NA Not available

N/App = Not Applicable

| 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% (Month-1) | | | | | >90% (Month-2) | >90% (Month-3) | | | | <8 hrs | a) Junction between local exchange (2/1000) | >65% |
| 12 | A&N | BSNL | 80.35 | 14.91 | 91.42 | 89.69 | 94.13 | 13.00 | NA | 44.40% | 0.08 | 90.91 | 74.96 | 100.00 | NA | NA | 1.86 | 2.32 | 2.89 |
| 13 | Assam | BSNL | 72.07 | 7.96 | 97.07 | 97.03 | 96.96 | 24.00 | NA | 72.70% | 0.09 | 80.95 | 80.95 | 44.18 | NA | NA | 0.83 | 0.84 | 0.56 |
| 14 | Chennai | BSNL | 34.84 | 10.77 | 92.41 | 81.81 | 93.05 | 20.00 | NA | 74.80% | 0.06 | 84.14 | 83.21 | 64.69 | NA | NA | 20.00 | 26.97 | 20.00 |
| | | Reliance | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 1.20 | 0.002 | 68.07% | 0.08 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | | TATA | 71.48 | 0.29 | 94.71 | 99.57 | 89.07 | 5.27 | 0.0002 | 65.42% | 0.31 | 54.16 | N/App | 28.22 | 100.00 | 58.71 | 1.76 | 11.74 | 1.52 |
| 15 | HP | BSNL | 12.63 | 10.07 | 96.54 | 96.79 | 97.35 | 6.00 | NA | 63.50% | 0.15 | 83.81 | 81.75 | 57.96 | NA | NA | 0.74 | 1.12 | 1.26 |
| | | RELIANCE | 100.00 | 0.18 | 100.00 | 100.00 | 100.00 | 0.50 | | 69.52% | 0.00 | N/App | N/App | 100.00 | Nil | 100.00 | 0.00 | 0.00 | 0.00 |
| 16 | Jhar khand | BSNL | 17.57 | 8.70 | 82.98 | 75.21 | 90.45 | 17.00 | NA | 29.40% | 0.09 | 94.95 | 96.96 | 5.54 | NA | NA | 1.20 | 1.22 | 1.54 |
| 17 | J&K | BSNL | 1.86 | 14.58 | 68.81 | 82.32 | 69.73 | 12.00 | NA | 46.20% | 0.03 | 66.38 | 74.06 | 42.93 | NA | NA | 7.42 | 8.19 | 8.18 |
| 18 | Kerala | BSNL | 54.21 | 10.12 | 88.35 | 84.97 | 85.30 | 20.00 | NA | 65.80% | 0.03 | 91.65 | 58.29 | 58.29 | NA | NA | 7.67 | 10.28 | 10.54 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 2.20 | 0.002 | 65.91% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| | Kolkata | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 1.50 | 0.002 | 65.98% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | | |
|----|--------------------|-----------------|--------|------|--------|--------|--------|-------|--------|--------|------|-------|-------|--------|--------|--------|-------|-------|-------|
| 19 | | BSNL | 42.81 | 6.15 | 90.80 | 90.80 | 90.80 | 23.00 | NA | 48.10% | 0.07 | 37.55 | 79.23 | 51.61 | NA | NA | 2.79 | 2.96 | 2.79 |
| | Mumbai | TATA | NA | 4.85 | 94.71 | 99.57 | 89.07 | 2.00 | 0.002 | 62.52% | 7.55 | N/App | N/App | 62.89 | 0.00 | 73.83 | 1.76 | 11.74 | 1.52 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 2.80 | 0.002 | 66.64% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 20 | | MTNL | 18.37 | 9.23 | 82.91 | 81.57 | 80.40 | 28.68 | 0.0007 | 52.10% | 0.14 | 75.08 | 72.03 | 18.67 | 99.74 | 75.81 | 14.78 | 13.04 | 16.36 |
| 21 | NE-I | BSNL | 29.61 | 7.19 | 71.22 | 73.50 | 68.48 | 43.00 | NA | 40.50% | 0.12 | 84.11 | 84.61 | 24.88 | NA | NA | 0.19 | 2.13 | 3.40 |
| 22 | NE-II | BSNL | 28.38 | 6.70 | 64.28 | 66.58 | 81.09 | 15.00 | NA | 34.00% | 0.05 | 78.84 | 68.89 | 33.07 | NA | NA | 2.78 | 1.25 | 3.71 |
| 23 | Orissa | BSNL | 20.82 | 7.05 | 88.47 | 93.90 | 93.06 | 10.00 | NA | 62.30% | 0.14 | 88.41 | 98.18 | 78.96 | NA | NA | 1.31 | 1.16 | 1.22 |
| | | RELIANCE | 100.00 | 0.02 | 100.00 | 100.00 | 100.00 | 2.20 | 0.002 | 64.06% | 0.08 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 24 | UP-E | BSNL | 38.79 | 8.26 | 88.00 | 86.00 | 89.00 | 8.00 | NA | 67.40% | 0.01 | 75.17 | 94.15 | 34.22 | NA | NA | 1.10 | 1.20 | 0.93 |
| | | RELIANCE | 100.00 | 0.00 | 100.00 | 100.00 | 100.00 | 1.50 | 0.002 | 58.15% | 0.09 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 25 | UP-W | BSNL | 42.66 | 8.25 | 96.02 | 96.04 | 96.05 | 5.00 | NA | 67.70% | 0.07 | 87.41 | 86.89 | 71.08 | NA | NA | 3.67 | 1.60 | 1.22 |
| | | RELIANCE | 100.00 | 0.01 | 100.00 | 100.00 | 100.00 | 1.20 | 0.002 | 58.53% | 0.08 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 26 | Uttaranchal | BSNL | 46.95 | 9.00 | 92.05 | 93.44 | 98.06 | 6.00 | NA | 67.40% | 0.01 | 75.17 | 94.15 | 34.22 | NA | NA | 1.43 | 0.93 | 0.90 |
| 27 | West Bengal | BSNL | 25.79 | 7.42 | 89.39 | 90.04 | 89.03 | 19.00 | NA | 70.90% | 0.05 | 93.26 | 93.37 | 46.19 | NA | NA | 2.03 | 1.43 | 1.10 |
| | | RELIANCE | 100.00 | 0.02 | 100.00 | 100.00 | 100.00 | 1.00 | 0.002 | 66.77% | 0.08 | N/App | N/App | 100.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |

Quality of Service Performance for Cellular Services

| Details QoS Parameters for Cellular Services as reported by CMSPs for the quarter ending 31st June 2004 | | | | | | | | | | | |
|---|---------------------------|--|------------------------------|---|---|----------------------|----------------|--|------------------------------------|--|---|
| Sr. No. | Operators with Circles | Fault Incidence & Repair | | | Network Performance | | | | Billing Complaints | | |
| | | (i) | (ii) | (iii) | (i) | (ii) | (iii) | (iv) | (i) | (ii) | (iii) |
| | | No. of faults (per 100 subscribers/Month) | 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 |
| (i) | 'A' Circle | | | | | | | | | | |
| 1 | BPL, MH | 1.44% | 62.00% | 58.37 hrs | 99.33% | 5 sec | 1.27% | 98.05% | 0.100% | 100.00% | 30 Days |
| 2 | IDEA Cellular, MH | 0.00% | 100.00% | 105.33 hrs | 96.39% | 13.55 sec | 1.24% | 98.15% | 0.034% | 100.00% | 30 Days |
| 3 | Tata, MH | 1.83% | 99.04% | Nil | 93.09% | 18 sec | 0.83% | 97.39% | 0.510% | 93.00% | NA |
| 4 | BSNL, MH | 1.90% | 71.00% | 77.3 hrs | 85.60% | 2.3 sec | 2.20% | 92.30% | 1.600% | 93.00% | 4 Days |
| 5 | Bharti Cellular, MH & Goa | 0.45% | 100.00% | 21.45 hrs | 89.14% | 9.31 sec | 1.04% | 94.58% | 0.200% | 100.00% | 30 Days |
| 6 | Fascel - Hutch GJ | 0.01% | 100.00% | 17.5 hrs | 99.99% | 10.9 sec | 1.20% | 96.60% | 0.100% | 100.00% | 12 Days |
| 7 | Tata, GJ | 1.67% | 100.00% | 36.42 hrs | 98.27% | 1.34 sec | 0.72% | 98.50% | 1.820% | 100.00% | 30 Days |
| 8 | IDEA Cellular, GJ | 0.01% | 100.00% | 2.8 hrs | 99.00% | 14.52 sec | 1.06% | 97.80% | 0.650% | 100.00% | 30 Days |
| 9 | BSNL, GJ | 1.60% | 99.98% | Nil | 99.56% | 2.1 sec | 1.20% | NA | 0.090% | 100.00% | 30 Days |

| | | | | | | | | | | | |
|----|----------------------|-------|---------|-----------|--------|-----------|-------|--------|--------|---------|---------|
| 10 | Bharti Cellular, GJ | 0.11% | 100.00% | 20.82 hrs | 99.55% | 13 sec | 1.12% | 98.22% | 0.040% | 100.00% | 14 Days |
| 11 | Tata, AP | 1.63% | 84.00% | 1.32 hrs | 99.42% | 7 sec | 1.33% | 99.60% | 0.510% | 93.00% | NA |
| 12 | IDEA Cellular, AP | 0.00% | 100.00% | 1.10 hrs | 99.97% | 9.59 sec | 0.59% | 97.71% | 0.070% | 100.00% | 2 Days |
| 13 | Bharti Mobile, AP | 0.01% | 100.00% | 12.41 hrs | 98.67% | 10 sec | 1.34% | 98.61% | 0.040% | 100.00% | 30 Days |
| 14 | BSNL, AP | 0.02% | 97.33% | NIL | 98.00% | 6 sec | 1.80% | 99.00% | 0.020% | 97.00% | 7 Days |
| 15 | Hutchison Essar, AP | 1.00% | 94.00% | 24 hrs | 90.10% | 5 sec | 1.02% | 98.00% | 2.130% | 99.80% | 30 Days |
| 16 | Bharti Mobile, KTK | 0.07% | 100.00% | 23.5 hrs | 99.05% | 7 sec | 1.98% | 95.60% | 0.005% | 100.00% | 30 Days |
| 17 | Spice Comm., KTK | 0.18% | 100.00% | 2.3 hrs | 99.71% | 9 sec | 1.54% | 98.67% | 0.040% | 100.00% | 7 Days |
| 18 | BSNL, KTK | 0.80% | 100.00% | 8.4 hrs | 90.50% | 9 sec | 1.30% | 97.00% | 3.100% | 100.00% | 7 Days |
| 19 | Hutchison Essar, KTK | 0.50% | 100.00% | 25.76 hrs | 97.80% | 10.37 sec | 1.12% | 98.33% | 0.050% | 100.00% | 2 Days |
| 20 | Tata, KTK | 0.10% | 95.00% | 9.04 hrs | 98.00% | 15 sec | 1.35% | 96.00% | 0.160% | 95.00% | 30 Days |
| 21 | Tata, TN | 0.03% | 90.00% | 4.57 hrs | 98.02% | 1.26 sec | 1.01% | 92.20% | 0.200% | 100.00% | 30 Days |
| 22 | BPL Cellular, TN | 0.35% | 100.00% | 66.32 hrs | 99.13% | 9.77 sec | 1.33% | 99.56% | 0.320% | 100.00% | 30 Days |
| 23 | Aircel, TN | 0.00% | 100.00% | 14.30 hrs | 99.20% | 11.3 sec | 1.71% | 95.70% | 0.090% | 99.30% | 24 Days |
| 24 | BSNL, TN | 1.40% | 99.10% | NIL | 95.10% | 9 sec | 1.30% | 93.60% | 0.400% | 100.00% | 14 Days |
| 25 | Bharti Cellular, TN | 0.47% | 99.00% | 4.8 hrs | 93.00% | 20 sec | 3.23% | 97.34% | 0.300% | 100.00% | 2 Days |
| | B' Circle | | | | | | | | | | |
| 26 | Escotel Mobile, KR | 0.00% | 100.00% | 7.49 hrs | 99.36% | 1.92 sec | 1.54% | 97.29% | 0.570% | 100.00% | 30 Days |
| 27 | BPL Cellular, KR | 0.26% | 100.00% | 4.24 hrs | 99.73% | 12.3 sec | 2.37% | 96.83% | 0.140% | 100.00% | 30 Days |
| 28 | BSNL, KR | 1.80% | 95.70% | 199 hrs | 87.40% | 16 sec | 1.80% | 91.40% | 1.600% | 82.00% | 30 Days |
| 29 | Bharti Cellular, KR | 0.07% | 100.00% | 0 hrs | 99.19% | 20 sec | 1.91% | 98.59% | 0.060% | 100.00% | 1 Day |
| 30 | Spice Comm., PB | 0.49% | 98.90% | 41.66 hrs | 99.20% | 8 sec | 1.12% | 99.30% | 0.016% | 100.00% | 30 Days |
| 31 | Bharti Mobile, PB | 0.03% | 100.00% | 2.91 hrs | 99.10% | 9 sec | 1.31% | 99.70% | 0.065% | 100.00% | 1 Day |
| 32 | BSNL, PB | 0.00% | 92.70% | 207 hrs | 97.40% | 3.8 sec | 0.80% | 91.80% | 6.700% | 100.00% | 30 Days |
| 33 | Escotel Mobile, HR | 0.23% | 100.00% | 10.04 hrs | 99.77% | 14.91 sec | 0.96% | 99.22% | 0.070% | 100.00% | 35 Days |
| 34 | Aircel Digilink, HR | 0.01% | 100.00% | 20 hrs | 99.85% | 9 sec | 1.90% | 99.00% | 0.100% | 100.00% | 24 Days |
| 35 | BSNL, HR | 0.20% | 99.19% | 9 hrs | 93.43% | 5.61 sec | 2.81% | 97.16% | 0.040% | 100.00% | 30 Days |
| 36 | Bharti Cellular, HR | 0.10% | 100.00% | 2.08 hrs | 99.40% | 9 sec | 1.37% | 99.80% | 0.067% | 100.00% | 1 Day |

| | | | | | | | | | | | |
|----|-------------------------------|-------|---------|-----------|---------|-----------|-------|--------|--------|---------|---------|
| 37 | Escotel Mobile, UP(W) | 0.07% | 100.00% | 8.93 hrs | 99.51% | 11.67 sec | 1.52% | 97.81% | 0.670% | 100.00% | 30 Days |
| 38 | BSNL,UP(W) | 0.90% | 82.00% | NIL | 100.00% | 17 sec | 2.90% | 99.00% | 0.260% | 99.20% | NA |
| 39 | Bharti Cellular, UP(W) | 0.28% | NA | 13.67 hrs | 99.15% | 11 sec | 2.28% | 96.20% | 0.086% | 100.00% | 30 Days |
| 40 | Aircel Digilink, UP(E) | 0.79% | 100.00% | Nil | 99.98% | 14 sec | 2.20% | 96.25% | 0.045% | 100.00% | 18 Days |
| 41 | BSNL, UP(E) | 1.30% | 98.00% | 3 hrs | 94.50% | 11 sec | 4.20% | 95.00% | 0.100% | 100.00% | 30 Days |
| 42 | Aircel Diglink, RJ | 0.11% | 100.00% | 14.40 hrs | 100.00% | 13 sec | 1.77% | 98.46% | 0.080% | 100.00% | 7 Days |
| 43 | Hexacom, RJ | 0.87% | 54.13% | 68.29 hrs | 98.20% | 5.45 sec | 1.49% | 91.70% | 0.014% | 100.00% | 1 Day |
| 44 | BSNL, RJ | 1.60% | 92.40% | 28 hrs | 98.40% | 5.4 sec | 1.50% | 92.00% | 1.200% | 99.70% | 35 Days |
| 45 | IDEA Cellular, MP | 0.18% | 100.00% | 9.8 hrs | 99.20% | 12.17 sec | 0.91% | 99.45% | 0.190% | 100.00% | 30 Days |
| 46 | Reliance, MP | 0.00% | 98.00% | 47.21 hrs | 100.00% | 8.91 sec | 2.58% | 95.31% | 0.050% | 100.00% | 1 Day |
| 47 | BSNL, MP | 1.20% | 96.10% | NIL | 94.70% | 2.6 sec | 1.20% | 99.00% | 0.100% | 100.00% | 30 Days |
| 48 | Bharti Cellular, MP & Chhatt. | 0.10% | 100.00% | 2.28 hrs | 99.70% | 7.31 sec | 0.96% | 99.48% | 0.094% | 100.00% | 30 Days |
| 49 | Reliance, WB | 0.02% | 100.00% | 37.10 hrs | 99.00% | 9.52 sec | 2.55% | 98.30% | 0.000% | NA | NA |
| 50 | BSNL, WB | 0.60% | 100.00% | NIL | 98.60% | 5.8 sec | 2.70% | 98.60% | 0.000% | 100.00% | NIL |
| | C' Circle | | | | | | | | | | |
| 51 | Bharti Telenet, HP | 0.06% | 100.00% | 3.08 hrs | 99.08% | 9 sec | 1.36% | 99.82% | 0.060% | 100.00% | 1 Day |
| 52 | Reliance, HP | 0.16% | 100.00% | 16.08 hrs | 95.19% | 7.48 sec | 2.14% | 99.07% | 0.000% | 100.00% | 10 Days |
| 53 | BSNL, HP | 1.20% | 71.30% | NIL | 90.40% | 5.7 sec | 3.40% | 90.00% | 1.200% | 100.00% | NIL |
| 54 | Reliance, BR & Jharkhand | 0.01% | 100.00% | 20.52 hrs | 99.00% | 8.51 sec | 2.06% | 99.30% | 0.000% | 100.00% | 7 Days |
| 55 | BSNL, BR | 0.10% | 93.50% | 10.5 hrs | 97.20% | 7 sec | 3.00% | 91.78% | 0.200% | 99.90% | 21 Days |
| 56 | Reliance, ORISA | 0.10% | 100.00% | 0 hrs | 99.44% | 8.38 sec | 2.18% | 98.50% | 0.000% | 100.00% | NA |
| 57 | BSNL, OR | 0.20% | 90.00% | 103 hrs | 90.00% | 7 sec | 2.50% | 93.00% | 0.730% | 100.00% | Nil |
| 58 | Reliance, AS | 0.02% | 100.00% | 0 hrs | 99.00% | 9.87 sec | 1.18% | 97.09% | 0.020% | 100.00% | NA |
| 59 | BSNL J&K | 1.90% | 99.50% | 23.5 hrs | 97.00% | 11 sec | 2.50% | 98.00% | 0.100% | 100.00% | 21 Days |
| 60 | Reliance, NE | 0.00% | 100.00% | 0 hrs | 99.00% | 9.68 sec | 1.14% | 98.37% | 0.003% | 100.00% | 5 days |
| | METRO | | | | | | | | | | |
| 61 | Bharti Cellular, Delhi | 0.32% | 100.00% | Nil | 99.21% | 12 sec | 1.89% | 96.12% | 0.058% | 100.00% | 30 Days |

| | | | | | | | | | | | |
|----|------------------------------|-------|---------|-----------|---------|-----------|-------|---------|--------|---------|---------|
| 62 | Hutchison Essar, Delhi | 1.00% | 100.00% | Nil | 99.98% | 10 sec | 1.21% | 95.62% | 0.016% | 100.00% | 3 Days |
| 63 | MTNL, Delhi | 0.21% | 100.00% | Nil | 98.89% | 12 sec | 1.06% | 95.20% | 0.096% | 100.00% | 30 Days |
| 64 | IDEA Cellular, Delhi | 0.40% | 100.00% | Nil | 99.08% | 7 sec | 0.48% | 97.13% | 0.120% | 100.00% | 45 Days |
| 65 | Tata, Delhi | 0.10% | 84.00% | 2.1 hrs | 95.66% | 13.1 sec | 0.82% | NA | 0.620% | 100.00% | 1 Day |
| 66 | BPL Mobile, Mumbai | 0.29% | 100.00% | 10.24 hrs | 99.34% | 15.65 sec | 1.63% | 98.38% | 0.100% | 100.00% | 40 Days |
| 67 | Hutchison Max, Mumbai | 0.28% | 100.00% | Nil | 99.23% | 9 sec | 1.65% | 98.04% | 0.030% | 100.00% | 30 Days |
| 68 | MTNL, Mumbai | 0.00% | 100.00% | Nil | 99.20% | 12 sec | 1.95% | 96.00% | 0.010% | 100.00% | 30 Days |
| 69 | Bharti Cellular, Mumbai | 0.03% | 97.14% | 0 hrs | 98.00% | 13 sec | 1.24% | 99.72% | 0.070% | 100.00% | 1 Day |
| 70 | Tata, Mumbai | 1.75% | 100.00% | 1.8 hrs | 95.85% | 29 sec | 0.97% | 94.88% | 3.120% | 65.00% | NA |
| 71 | Aircel Cellular Ltd, Chennai | 0.42% | 100.00% | 23 hrs | 100.00% | 12 sec | 1.06% | 95.10% | 0.230% | 100.00% | 30 Days |
| 72 | Bharti Mbinet, Chennai | 0.33% | 95.37% | 0 hrs | 96.30% | 17.41 sec | 1.92% | 97.74% | 0.140% | 100.00% | 5 days |
| 73 | Hutchison Essar, Chennai | 0.09% | 100.00% | Nil | 100.00% | 560 sec | 0.75% | 98.30% | 0.670% | 100.00% | 30 Days |
| 74 | Tata, Chennai | 0.06% | 91.00% | 0 hrs | 96.97% | 1.28 sec | 1.12% | 92.45% | 0.240% | 100.00% | 30 Days |
| 75 | Bharti Mobinet, Kolkata | 1.54% | 100.00% | 0 hrs | 99.61% | 15.3 sec | 1.26% | 98.77% | 0.610% | 100.00% | 30 Days |
| 76 | Hutchison, Kolkata | 0.04% | 100.00% | Nil | 99.76% | 17 sec | 1.00% | 96.15% | 0.110% | 100.00% | 30 Days |
| 77 | BSNL, Kolkata | 3.90% | 73.70% | NIL | 98.00% | 7 sec | 2.00% | 98.00% | 1.500% | 100.00% | 30 Days |
| 78 | BSNL, Chennai | 0.78% | 100.00% | NIL | 98.70% | 12 sec | 1.20% | 100.00% | 0.600% | 100.00% | 7 Days |

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 st attempt (in %) | Access Portability in 2 nd attempt (in %) | Access Portability in 3 rd attempt (in %) | ISP Node unavailability | Grade of Service (QoS) | Mean time to Restore of faults resulting as per subscriber complaints | |
|----------|---|-------------------------|----------------|--|--|--|-------------------------|---------------------------|---|--------|
| S | TRAI Benchmarks | 6 hrs | 30 sec | 80 | 90 | 99 | 30 min | 1 : 100 | 3 days | |
| 1 | Bharat Sanchar Nigam Ltd. | 0-2 hrs | 15-30 sec | 92 | 98 | 100 | Nil | 1:100 | 0-4 hrs | |
| 2 | VSNL | 2-4 hrs | 30 sec | 80 | 90 | 99 | Nil | Not provided by BSO | 10-15 min | |
| 3 | MTNL | Delhi | Instant Online | 30 sec | 99.67 | 99.99 | Nil | - | 0.01 | 5 min |
| | | Mumbai | Immediate | 26 sec | 100 | - | - | - | 1 in 200 | 15 min |
| 4 | Sify Ltd. | 3 min | 30 sec | 90 | 95 | 99 | 20 min | 0.005 | 4 hrs | |
| 5 | Reliance Communications Infrastructure Ltd. | Online | <28 sec | 96 | 100 | - | Nil | Not provided by BSO | Within 3 days | |
| 6 | Data Infosys | 3-5 min | 25-30 sec | 90 | 95 | 99 | 30 min | 1:100 | 15 min | |
| 7 | Tata Internet Services Ltd. | <5 min | 30 sec | 90 | 95 | 99 | 0.01% | 100 users for 1 PSTN port | 40 min | |
| 8 | Bharti Infotel Ltd. | Online | 30-35 sec | 98.5 | 99 | 100 | 15 min | 1:100 | 2 hrs | |
| 9 | HCL Infinet Ltd. | 3 min | 30 sec | 99 | 99.2 | 99.5 | 18 min | 1:200 | 16-18 hrs | |
| 10 | Sab Infotech | <6 hrs | <30 sec | 90 | 95 | 100 | <30 min | 0 in 100 | >1 Hr | |
| 11 | Icenet.net Limited | 2 hr | 20 sec | 85 | 95 | 100 | Never | 1:100 | - | |
| 12 | Shyam Internet Services Pvt. Ltd. | 30 min | 30 sec | 98 | 99 | 100 | 30 min | 1% | 2 hrs | |
| 13 | Trak Online Net India Pvt. Ltd. | 5½ hrs | 31 sec | 83 | 97 | 100 | Nil | 0.03 | 1-2 hrs | |
| 14 | Hathway Cable & Datacom Pvt. Ltd.* | - | - | - | - | - | - | - | - | |
| 15 | Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom) | 0 sec | 25 sec | 98.1 | 100 | N.A. | Nil | 1:1000 | 1 hr | |
| 16 | Data Access Pvt. Ltd. | Online | 30 sec | 98 | 99 | 99.5 | Nil | No blocked calls | - | |
| 17 | Fascel Ltd. * | - | - | - | - | - | - | - | - | |
| 18 | WWW Communications Ltd. | 4-5 min | 20-35 sec | 85 | 96 | 99 | 30 min | - | 10-15 min | |
| 19 | Rolta India Ltd. | 15 min | 28 sec | 83.7 | 90.3 | 99 | Nil | 0 in 100 | 3.40 min | |
| 20 | HFCL Infotel Ltd. | 2 min | 30 sec | 98.20 | 99.20 | 100 | Nil | 0.85 in 100 | 10.27 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.

Quarterly Growth rate of Cellular Subscribers

