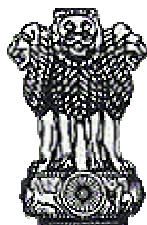


Telecom Regulatory Authority of India



The Indian Telecom Services
Performance Indicators for FY 2003-04

JULY 2004

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(i) **INTRODUCTION**

- 1.1 This report provides an update on the growth trends for the telecom services for the financial year **2003-04**. 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 four quarters of financial year 2003-2004. Due to the Unified Access Service Regime, the details under mobile services cover both GSM & CDMA known as Cellular & WLL (M) services respectively. The Fixed service details also include WLL(F). The summary of the growth pattern of Fixed, Mobile and Internet services in form of 'Quarterly results at a Glance' for the period 2000-2004 is given at the beginning of this compilation. A new chapter Six has been added to cover details pertaining to various investment incentives in telecom services.
- 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 trends in the sector. 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 annual report is available on the TRAI website (www.traigov.in) and will be updated on annual basis. Some of the suggestions made by stakeholders have been considered for updating the report. Any further suggestions pertaining to this may please be addressed to S. N. Gupta, Advisor (CN), TRAI; Tel. 26167914, Fax. 26103294 and e-mail: traio9@bol.net.in.

Performance Indicators of Telecom Services (2000-2004)
Annual Performances at a Glance

Indicators	FE 2000	FE 2001	FE 2002	FE 2003	FE 2004	%age growth over FE 2003 (One Year)
1) Subscriber's Base (in millions)						
i) Fixed	26.65	32.71	38.33	41.48	42.84	3
ii) Mobile	1.90	3.58	6.54	13	33.69	159
Gross Total	28.55	36.29	44.87	54.48	76.53	40
iii) Internet	0.95	3.04	3.42	3.64	4.55	25
iv) Broadband	NA	NA	NA	0.08	0.19	138
2) Traffic (MOU) (minutes of use/ sub/month) *						
i) Mobile (Cellular)	197	223	218	225	302	34
3) ARPU (Rs./sub/ month) **						
i) Mobile (Cellular)	1319	1113	884	634	469	-26
ii) All Services (Fixed, Mobile, NLDO, ILDO)	NA	NA	794	682	575***	-16
4) Teledensity (%age)						
Population in million (Estimated)	1016	1032	1048	1069	1088	2
i) Fixed	2.62	3.17	3.66	3.88	3.94	2
ii) Mobile	0.19	0.35	0.62	1.22	3.10	155
Gross Total	2.81	3.52	4.28	5.10	7.04	38

* Data regarding MOU for fixed lines not available

** Data regarding ARPU for fixed lines not available

*** Estimated ARPU for all services combined

Performance of service providers: -

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

Service Providers	FE 2000	FE 2001	FE 2002	FE 2003	FE 2004	%age growth over FE 2003 (One Year)
BSNL	22.48	28.11	33.22	35.90	36.11	0.58
MTNL	4.03	4.33	4.63	4.63	4.37	-5.62
Tata/ Hughes	0.05	0.13	0.31	0.45	1.00	122.22
Bharti	0.09	0.12	0.18	0.37	0.64	72.97
Reliance	0	0	0	0	0.50	--
HFCL	0	0.01	0.06	0.08	0.13	62.50
Shyam	0	0.01	0.03	0.05	0.09	80.00
Total	26.65	32.71	38.43	41.48	42.84	3.28

(II) Mobile (Cellular & WLL (M) Services Subscriber Base (in Million)

Service Providers	FE 2000	FE 2001	FE 2002	FE 2003	FE 2004	%age growth over FE 2003 (One Year)
Reliance	0.07	0.19	0.38	0.54	7.26	1244.44
Bharti	0.36	0.69	1.35	3.07	6.50	111.73
BSNL			0.04	2.29	5.53	141.48
Hutch	0.45	0.71	1.27	2.16	5.15	138.43
Idea	0.16	0.34	0.81	1.28	2.73	113.28
BPL Group	0.34	0.64	0.90	1.13	1.88	66.37
Others	0.21	0.41	0.54	0.73	1.29	76.71
Spice	0.17	0.27	0.47	0.64	1.21	89.06
Escotel	0.14	0.31	0.50	0.59	0.99	67.80
Tata/ Hughes			0.05	0.16	0.63	293.75
MTNL		0.02	0.22	0.35	0.46	31.43
HFCL			0.01	0.03	0.03	0.00
Shyam			0.004	0.03	0.03	0.00
Hexacomm	0.02	0.05	0.09	0.13	0.26	100.00
Total	1.90	3.58	6.54	13.00	33.69	159.15

CHAPTER ONE

PERFORMANCE OF FIXED SERVICES

Fixed lines growth flattens. WLL(F) starts showing up.

1.0 Fixed Service Providers: -

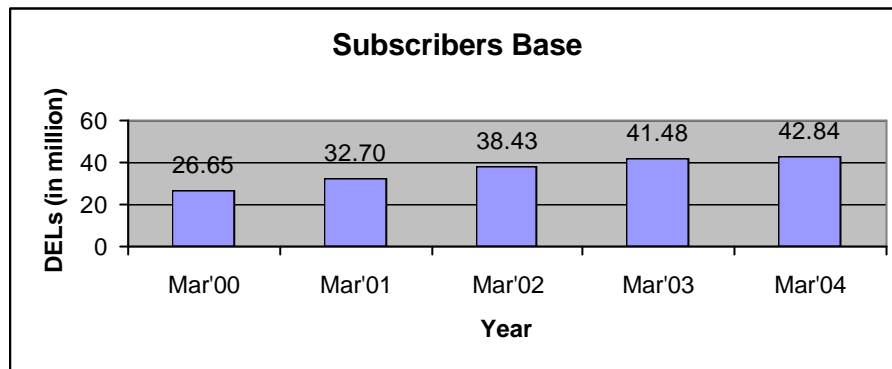
During the year 2003-04, the Basic Service sector had 5 licensed private operators providing services in their respective licensed areas in addition to incumbents MTNL and BSNL. List of Fixed Service Providers alongwith their areas of operation is as following:-

Service Provider	Area of Operation	No. of Circles
Bharti	Delhi, Karnataka, Madhya Pradesh, Haryana and Tamil Nadu	5
Tata Teleservices Ltd.	Andhra Pradesh, Maharashtra, Delhi, Gujrat, Karnataka and Tamil Nadu	6
HFCL	Punjab	1
Shyam Telelink Ltd.	Rajasthan	1
BSNL	All India (except Delhi & Mumbai)	26
Reliance	Delhi, Gujarat, Karnataka, Tamil Nadu, Haryana, Kerala, UP(W), UP(E), West Bengal, Andaman & Nicobar, Bihar, Himachal Pradesh, Orissa, Andhra Pradesh, Madhya Pradesh, Maharashtra, Punjab and Rajasthan	18
MTNL	Delhi and Mumbai	2

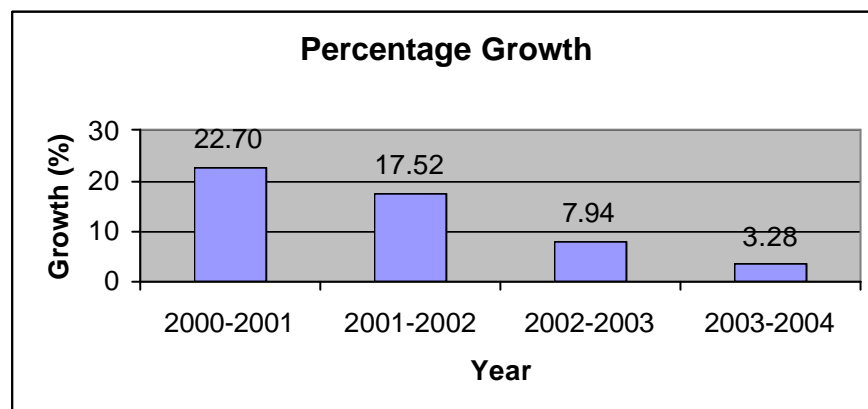
All the 5 private Basic Service Operators have migrated to Unified Access Service License (UASL) regime during the year. The details of migration of service providers to UASL is at Annex 1.1.

1.1 Subscriber Base:

As on 31st March 2004, the total Fixed & WLL (F) subscribers are 42.84 million. The actual number of DELs has increased from 41.48 million as on 31st March 2003 to 42.84 million as on 31st March 2004. The overall percentage of growth in subscriber base during the year is 3.28%. The subscriber base of Fixed lines including WLL (F) for last five years is depicted in the bar chart below:



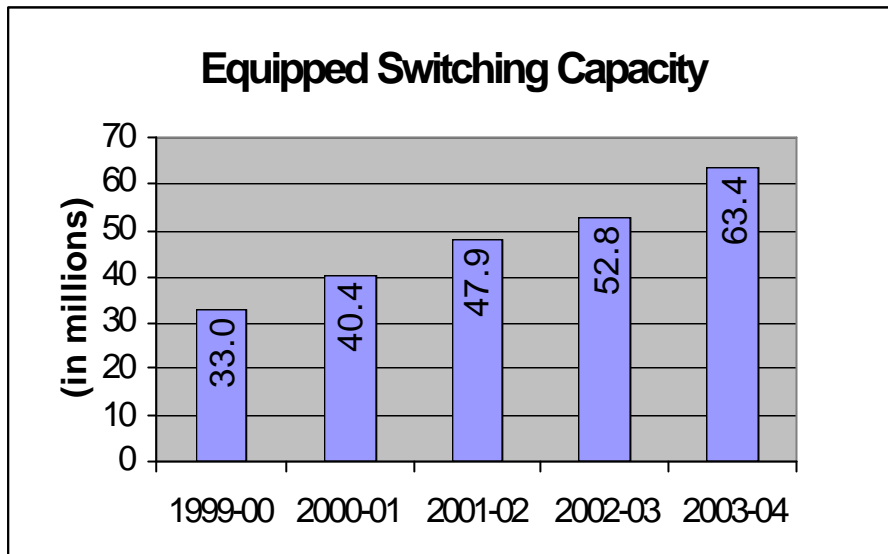
The average percentage growth rate of the subscriber (including Fixed & WLL (F) for last four years are as shown below:



1.2 Performance Indicators:-

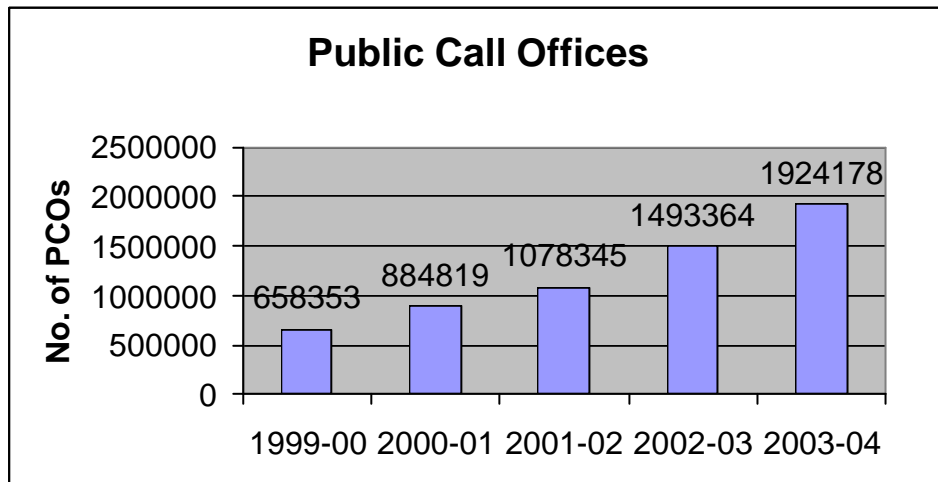
1.2.1 Switching Capacity: -

The actual total equipped switching capacity of all the basic service operators (including Basic Service Operators who migrated to Unified Access Service regime) in the country has registered a growth of 10.5 million switch capacity during the year. The total equipped switching capacity has increased from 52.8 million as on 31st March 2003 to 63.4 million as on 31st March 2004. The Equipped Capacity (including Fixed,WLL(F) & WLL(M)) of the Basic service providers for last five years is depicted in the bar chart below



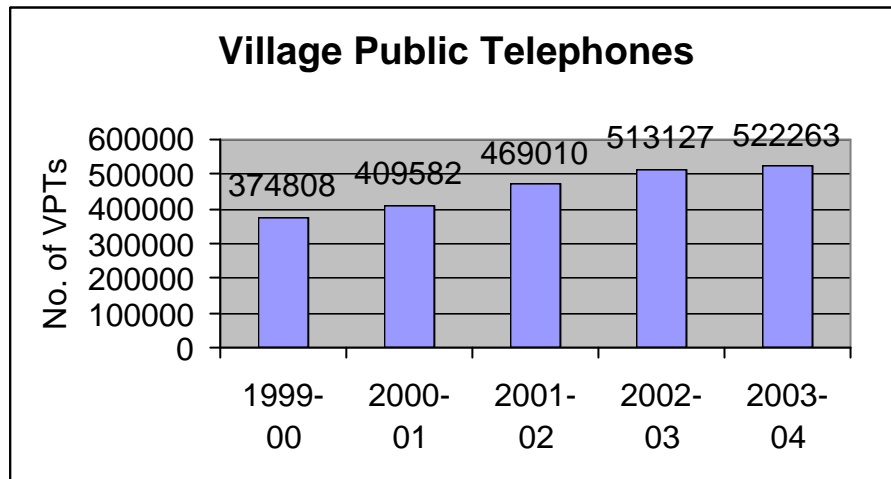
1.2.2 Public Call Offices (PCOs): -

Total number of PCOs in the country was 19.24 lakhs as on 31st March 2004 as compared to 14.93 lakhs on 31st March 2003. 4.31 lakhs new PCOs have been added during the year 2003-04. The total number of PCOs for last five years has been depicted in the bar chart below.

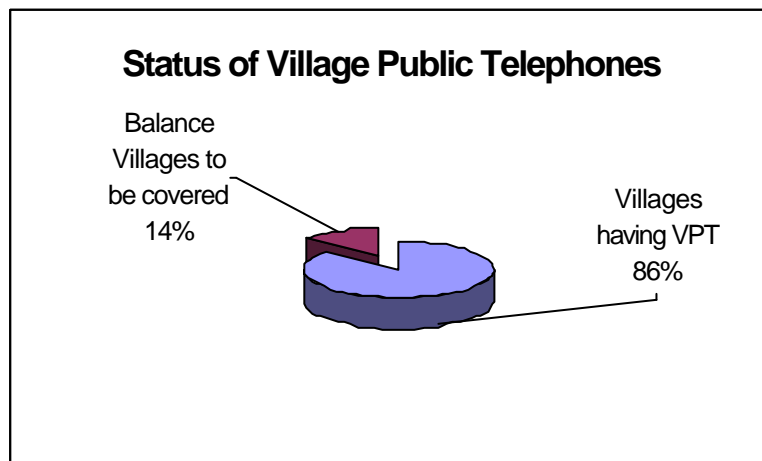


1.2.3 Village Public Telephones (VPTs): -

There are around 6.07 lakhs villages in India. During the year ending 31st March 2003 there were 5.13 lakhs VPTs in the country whereas by the end of this financial year, the total number of VPTs has increased to 5.23 lakhs. Thus around 0.09 lakhs VPTs have been added during the current year. The total number of village public telephones of the Basic Service Operators/UASPs for last five years is depicted in the bar chart below



During the year 2003-04, 5.22 lakhs villages are having VPTs whereas about 0.85 lakhs villages are left uncovered. The overall percentage of villages left uncovered, at the end of year 2003-04 is depicted in the chart given below.



Chapter Two

Performance of Mobile Services

Subscriber Base crosses 33.69 million, Annual Growth 160%

2.0 Details of service providers: - During the year following operators were providing cellular mobile (GSM) service in the respective service areas: -

Service Provider	Service Area	No. of Circles
Bharti	Andhra Pradesh, Karnataka, Punjab, Delhi, UP(W), MP, Maharashtra, Gujrat, Himachal Pradesh, Mumbai, Tamil Nadu, Kerala, Haryana, Chennai, Kolkata	15
Hutch	Delhi, Kolkata, Mumbai, Andhra Pradesh, Karnataka, Chennai, Gujrat, 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
Hexacom	Rajasthan	1

Circle-wise details of Private Unified Access Service Providers at the end of the year is given at Annex 2.1.

2.1 Growth of Subscribers Base: -

2.1.1 Subscribers Base

The Mobile service subscribers consisting of Cellular & WLL (M) have reached 33.69 million at the end of March 2004 as against 13.00 millions at the end of March 2003, thus registering a growth of 159.15% during the year

2.1.2 Addition in Subscribers Base

During the year 2003-2004, 20.69 million mobile subscribers were added as compared to 6.56 million during the preceding financial year.

2.1.3 Growth Rate

All India growth rate in 2004 was 159.15% as compared to 98.7% for the pervious year, i.e., 2002-03.

2.1.4 Entry of 3rd and 4th Operator

BSNL has commenced its services during March 2002 and as third operator has been providing its cellular services in 21 circles by the end of March 2004. BSNL is the third largest mobile service provider after Reliance and Bharti. Reliance Infocomm started its commercial operations in May 2003 and achieved a subscriber base of 7.26 million at the end of March 2004. Four operators (Reliance, Bharti, BSNL & Hutch) have already achieved a subscriber base exceeding 5 million each.

2.1.5 Company-wise Market Share:

- a) The market share of different Mobile operators as on March 2004 is given in Table 2.1. The top five Mobile operators on the basis of market share alongwith subscriber base in March 2003 and March 2004 are as under: -

Service provider	Subscriber Base (in million)		%age share on March'03	%age share on March'04
	March '03	March '04		
Reliance	0.54	7.26	4.15	21.55
Bharti	3.07	6.50	23.62	19.29
BSNL	2.29	5.53	17.62	16.41
Hutchison	2.16	5.15	16.62	15.29
Idea	1.28	2.73	9.85	8.10

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

b) Subscriber Base Cellular (GSM) services as on March'04:

(Subscribers in millions)

Category	Mar'04
Metros	7.94
'A' Circle	9.71
'B' Circle	7.40
'C' Circle	1.11
All India	26.2

2.1.6 Change in Market Structure

During the year, BSNL started its services in 4 new circles i.e. Assam, Chennai, Jammu & Kashmir and North East. M/s. Aircel Digilink India Ltd has been taken over by M/s. Hutchison Group, M/s. Escotel's Punjab Circle operations has also been over taken by M/s. Hutchison and now they are providing services in 11 Circles. The name of RPG Limited has been changed as M/s. Aircel Cellular Ltd in Chennai. M/s. Reliance is operating in 22 circles in the country.

2.2 GSM Services Trends: -

2.2.1 Highlights: -

- ?? In the last five years, distribution of market share between postpaid and prepaid services has shifted in favour of prepaid service. At the end of financial year 2004, 75% of the cellular subscribers were on prepaid service (Annex 2.2).
- ?? As far as rate of growth of subscriber base is concerned, both postpaid and prepaid segments have grown, but growth of prepaid segment has been tremendous. Prepaid segment has grown by 26.7 times whereas growth in postpaid has been just 5.6 times in last five years.
- ?? Unprecedented growth achieved by prepaid service in the years 2002 and 2004 were driven by TRAI's order of May 2001 making it mandatory for the CMSPs to offer a prepaid card with a denomination value of Rs. 300 with a validity period of at least one month and introduction of CPP in May 2003 (Annex 2.3).
- ?? With the introduction of low rental plans by the CMSPs, the postpaid segment has also started recording impressive growth rates in the recent times. Plans with Rs.150 monthly rental are available in almost all the areas enabling the consumer to remain connected to the network at a cost which is lower than the minimum outgo of Rs.300 per month in prepaid (Annex 2.3).

2.2.2 ARPU – Cellular (GSM) Service: -

In the last five years ARPU for GSM Cellular services has declined from Rs. 1319 per month that prevailed at the earlier stages of competition to Rs. 469 per month. It is almost one third of what prevailed in the year 2000 signifying the fact but competition in mobile telephony is intense. ARPU for postpaid service alone has declined from Rs. 1560 per month to Rs. 1056 per month in last five years, thereby showing a decline of 32%. For prepaid service, there has been a sharp decline of 65% in ARPU in the last five years from Rs. 822 per month to Rs. 288 per month (Annex 2.4).

2.2.3 Usage Pattern in Cellular Service: -

In the last five years MOU per subscriber per month for GSM Cellular services has increased from 197 to 302 i.e. by 53%. The increase has been 148% (from 238 to 590) for postpaid and 85% (from 112 to 208) for prepaid. Substantial increase in the usage is witnessed in FY 2003-04 coinciding with introduction of Cellular Party Pays regime (CPP) w.e.f 1.5.03. However the increase in the usage is mainly on account of increased incoming traffic. Major effect of incoming calls made free has been seen in prepaid service. Incoming MOU per subscriber for prepaid service increased from 60% to 72% (Annex 2.4).

2.2.4 Revenue per Minute (RPM) [incoming + outgoing]– Cellular Service: -

Trends in Revenue earned per minute [incoming + outgoing] (RPM)

Financial Year	Postpaid		Prepaid		Blended	
	RPM (Rs.)	% Change	RPM (Rs.)	% Change	RPM (Rs.)	% Change
FY 2000	6.55	NA	7.32	NA	6.70	NA
FY 2001	4.82	-27%	5.65	-23%	4.98	-26%
FY 2002	3.67	-24%	5.43	-4%	4.05	-19%
FY 2003	2.55	-30%	3.49	-36%	2.82	-30%
FY 2004	1.79	-30%	1.39	-60%	1.55	-45%

Note: data for FY 2000 covers period from May 99 to March '00

RPM for GSM Cellular services has declined from Rs. 6.70 to Rs. 1.55 in the 5 year period. RPM for postpaid service alone has declined from Rs. 6.55 to Rs. 1.79 thereby showing a decline of 73%. For prepaid service, the decline has been 81% (from Rs. 7.32 to Rs. 1.39).

Chapter Three

Performance of Internet Services

Subscribers base crosses 4.5 million mark.

3.1 Service Providers & Subscribers Base: -

Around 189 Internet Service Providers were operational during the year 2004. Bharat Sanchar Nigam Ltd (BSNL) has emerged at top position and reported a subscriber base of 11.28 lakhs. Mahanagar Telephone Nigam Limited (MTNL) follows it with a subscriber's base of 7.69 lakhs (ref Table 3.1).

The reported subscriber base has touched 45.49 lakhs as on 31st March 2004 as compared to 36.36 lakhs during the preceding year registering an increase of 25.11% during the year.

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 31st March 2004 and as per the report submitted to TRAI, 43 ISPs have started Internet Telephony services. Total Minutes of Use (MOU) for Internet Telephony during year 2003-2004 were estimated to be of the order of around 70 millions. List of Internet Service Providers, offering Internet Telephony is at Annex 3.2.

3.3 Market Share: -

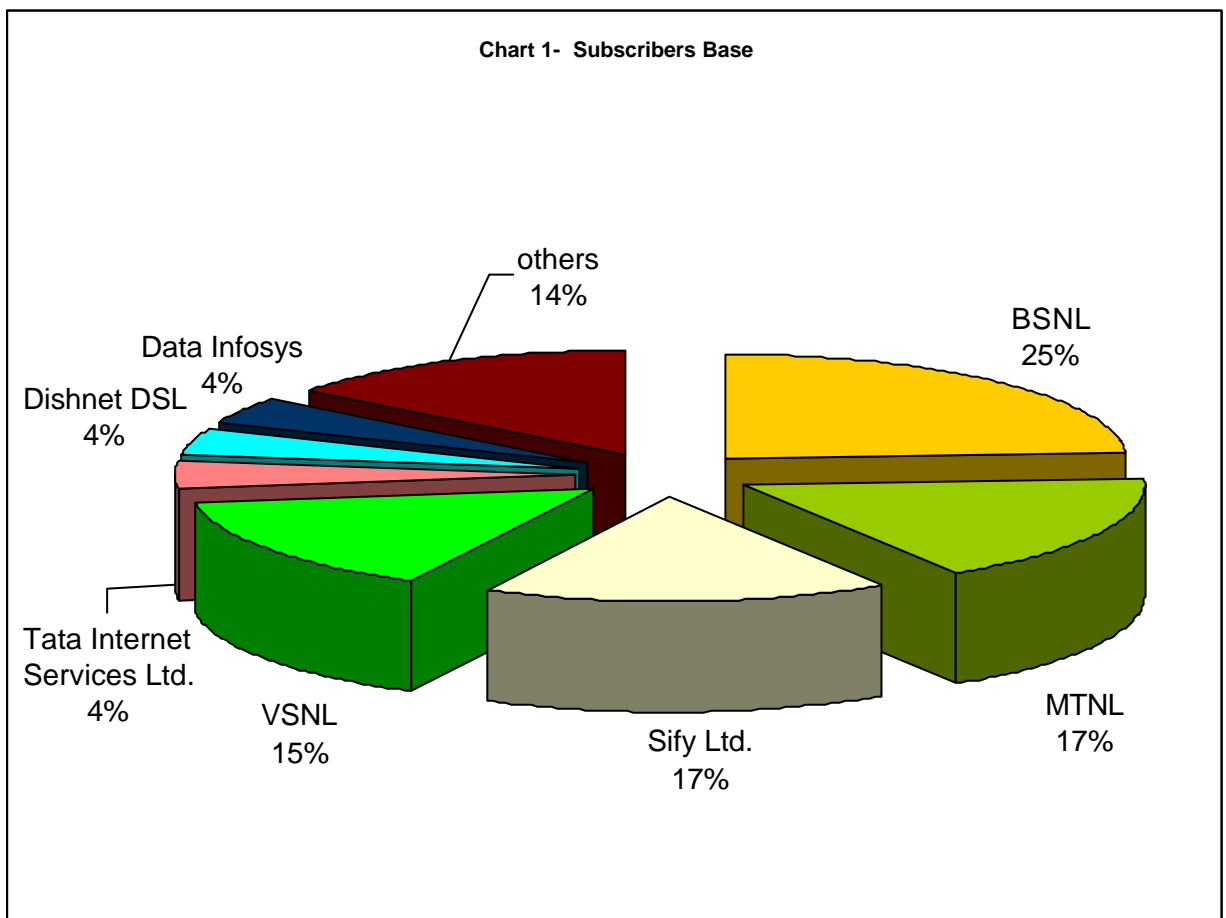
At the end of March 2004, Bharat Sanchar Nigam Ltd (BSNL) is at top position and reported a subscriber base of 11.28 lakhs. Mahanagar Telephone Nigam Limited (MTNL) follows it with a subscriber's base of 7.69 lakhs. M/s Sify Ltd. has reported a subscriber base of 6.58 lakhs. Videsh Sanchar Nigam Limited (VSNL) was having a subscriber base of 6.01 lakhs. Dishnet DSL has reported a subscriber base of 2.65 lakhs.

Share of PSU ISPs has shown an increase of 91.62% over the last year, increasing the number of subscribers from 9.91 lakhs as on March, 2003 to 18.98 lakhs as on March 2004. During the same time, the share of Private ISPs have shown a marginal increase of 4.2% from 26.5 as on March, 2003 to 27.6 as on March,2004 (Annex 3.1).

The top five service providers in March 2004 & March 2003 are given below: -

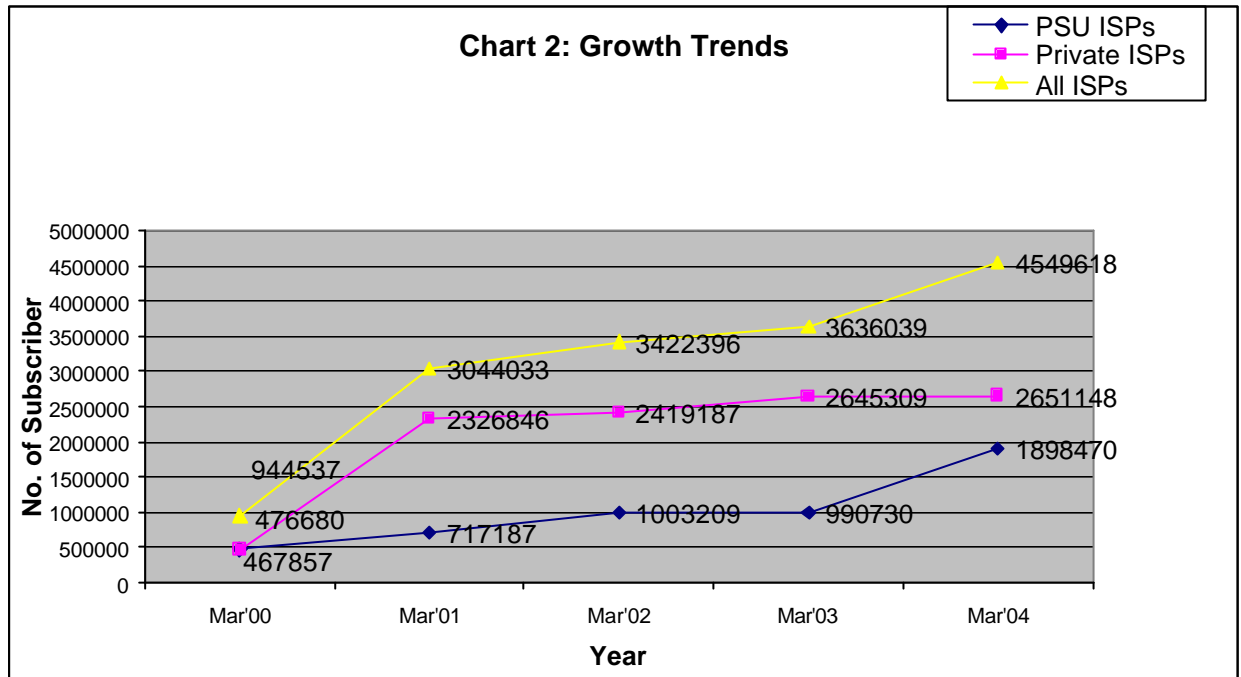
Service Provider	March 2003	March 2004
BSNL	4,45,992	11,28,172
MTNL	5,44,659	7,66,585
Sify Ltd.	6,17,324	6,58,192
VSNL	7,00,558	6,00,509
Dishnet DSL	1,78,434	3,65,126

The market share of top seven ISPs is shown in Chart - 1.



3.4 Growth Trend: -

Growth trend in Internet subscriber base during last 4 years are shown in chart no. 2. Growth between FE 2001 to 2003 had flattened but has gained momentum during year FE 2004.



3.5 Leased Lines Connectivity: -

The leased line customer base has increased to 12,782 as compared to 8077, during the preceding year, showing a growth of 59% over previous year.

3.6 Cafes/Community Internet Centres (CIC): -

There are reported to be 10,237 Cyber Cafes/ CICs during March 2004 as compared to 8,388 in March 2003, thereby showing a growth of 22% during the year.

3.7 High Speed Connectivity: -

On the Broadband front, there were 97,525 DSL customers, 5308 DIAS and 2948 radio-based customers, in addition to 82805 subscribers, who access the Internet through Cable TV network. The "Always-On" Internet connections have shown a growth of 150% over the previous year, totalling about 1.90 lakhs as compared to 0.75 lakhs connections during the last year.

3.8 Minutes of use per subscriber: -

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

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

A total of approx. Rs. 1520 crores revenue has been estimated during the year. The Average Revenue Per User (ARPU) for Internet usage during the year was of the order of Rs 310 per month.

3.10 International connectivity: -

The bandwidth owned by various Internet Gateway Service Providers for their ISP operations and leasing to other ISPs was 3.4 GB for downlinking and 3.0 GB for uplinking.

Chapter Four

Performance of Other Value Added Services

VSAT Service accelerates the growth rate

4.1 Public Mobile Radio Trunked Service (PMRTS): -

Public Mobile Radio Trunked Service (PMRTS) is being provided by 15 operators in 19 service areas.

The total subscriber base of PMRTS on March 2002, March 2003 and March 2004 was 27479, 26027 and 25474 respectively. There was negative (5.28%) growth for year ending March 2003. However, 3.35% growth was recorded for the year ending 2004.

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

4.2 VSAT services: -

VSAT services are being provided by 11 service providers.

The total subscriber base of VSAT subscribers on March 2002, March 2003 and March 2004 was 9762, 16988 and 27601 respectively.

The %age growth of the subscriber base was 74.02% and 62.47% during the year ended March 2003 and March 2004 respectively.

Hughes Escort Communications Ltd (HECL) remained the market leader with subscriber base of 8,395 VSAT subscribers followed by HCL Comnet with 8,376, Comsat Max with 4,210 and Bharti BT with 3,829 VSAT subscribers respectively for year ending 2004.

The number of subscribers of each service providers from 2002 to 2004 is given in Table 4.2.

4.3 Radio Paging: -

The Radio paging Industry has been declining gradually as the subscriber base has been decreasing from 578397 in the year ending March 2002 to 289265 for year ending March 2003 and 102569 for year ending March 2004 respectively.

The subscriber base of service providers of Radio Paging is given in Table 4.3.

Chapter Five

Quality of Service (QoS) Performance

5.1 Quality of Service: -

The clause 11(b)(v) of TRAI (Amendment) Act 2000 stipulates that TRAI shall "lay-down the standards of quality of service to be provided by the service providers and ensure the quality of service and conduct the periodical survey of such service provided by the service providers so as to protect interest of the consumers of telecommunication service".

With a view to ensuring the implementation of the quality of service norms in telecommunication service, TRAI had released QoS Regulation for Basic and Cellular services on 5th July 2000. This widely covers all aspects of the services rendered by these service providers. The service providers submit quarterly performance monitoring report with respect to the parameters specified in the above regulation.

TRAI has also appointed an independent Agency namely M/s IMRB International to check the veracity of performance monitoring reports of the service providers on sample basis. The IMRB has also been assigned the job of Customer Satisfaction Survey. The Agency had submitted its first report for quarter ending Dec 2003. The press release of the same has already been issued. IMRB's second report for quarter ending March 2004 has also been received and will be shortly released.

The comparison of QoS performance of two years viz. 2002-03 and 2003-04 for basic and cellular services reveals as follows.

5.2 Basic Service: -

There has been an improvement on average in respect of parameters viz. **"New connection after registration of demand, Fault Incidences per 100 subs/month, Fault repair by next working day, Mean Time to Repair, Call Completion Rate and Operator Assisted Trunk Calls and Percentage of Repeat Faults"**. However, Metering and Billing is an area of concern where the performance of the service providers has deteriorated as compared to the last year performance. Details are annexed at Annex 5.1.

5.3 Cellular Service: -

There is an improvement on average in respect of parameters like **"Accumulated down time of community Isolation, Service Access Delay, Complaints per 100 bills issued, and period of all refunds"**. However, the service providers in respect of other parameters are either not showing any significant improvement or showing deterioration in the QoS performances. Details are annexed at Annex 5.2.

5.4 Internet Service: -

The annex 5.3 indicates the Quality of Service achieved by Top 20 ISPs. It is observed that most of the ISPs are able to meet the benchmarks, barring one or two cases. The observations on QOS Benchmarks is on the following parameters:

- ☞☞ Service Activation Time
- ☞☞ Time to Access
- ☞☞ Probability of Accessing the ISP Node
- ☞☞ ISP Node unavailability
- ☞☞ Grade of Service
- ☞☞ Mean Time to Restore (MTTR)

Chapter Six

Telecom Investment Framework in India

6.1 Investment Policy Framework in India: -

The Indian Telecom sector witnessed of significant Growth in the last few years. Telecom sector is one of the fastest growing sectors of the service sector in India and being an infrastructure industry it has high capital investment requirement. Since this sector has shown impressive growth, therefore, it present a viable investment opportunities to both domestic and foreign investors. The Foreign Direct Investments have played a pivotal role in the Telecom sector.

6.2 The salient features of various foreign Investment guidelines in country are as under: -

6.2.1. Foreign Direct Investment of up to 100 % permitted for the following:

- ✍✍ Manufacturing of telecom equipment
- ✍✍ Internet service (without international gateways)
- ✍✍ Infrastructure providers (Category I)
- ✍✍ E-mail service
- ✍✍ Voice mail service
- ✍✍ Call Centers and IT enabled services

6.2.2. Foreign Direct Investment of up to 74 % permitted for the following:

- ✍✍ Internet service (with international gateways)
- ✍✍ Infrastructure providers (Category II)
- ✍✍ Radio paging services

6.2.3. Foreign Direct Investment of up to 49 % permitted for the following:

- ✍✍ National long distance service
- ✍✍ International Long Distance Service
- ✍✍ Basic telephone service
- ✍✍ Cellular mobile service
- ✍✍ Global Mobile Personal Communication
- ✍✍ Other value added services

6.3 Concessions & Fiscal Incentives: -

6.3.1. Automatic approval for technology fee up to US\$ 2 million, royalty up to 5 percent for domestic sales and 8 percent for exports in telecom manufacturing (higher amount through specific approvals)

6.3.2. Full repatriability of dividend income and capital invested in the telecom sector

6.3.3. Other fiscal incentives and concessions for the telecom sector:

- ✍✍ Amortization of license fee
- ✍✍ Tax holiday for 10 year
- ✍✍ Rebate on subscription to shares/debentures
- ✍✍ Scope for tax exemption on financing through venture capital
- ✍✍ Import duty rates reduced for various telecom equipment including mobile phones from 20% to 5%
- ✍✍ Telecom Service Sector allowed the benefit of carry forward of losses on Mergers.
- ✍✍ Exemption from excise duty on cellular phones and its components, pagers, radio trunking terminals and parts.
- ✍✍ Reduced Central Sales Tax of 2%

6.4 Foreign Direct Investment: -

The year-wise inflow of FDI in Telecom Sector is shown in Table 6.1. The quantum of FDI in Fixed Telephone service, Cellular Service, Radio Paging, VSAT etc. is depicted in Table 6.2. The country-wise inflow of FDI is shown at Table 6.3.

6.5 Overall Sector Revenue: -The overall revenue for the telecom sector for all the operators for the year 2002-03 was Rs.45672 crores as per audited balance sheets. (refer Table 6.4). BSNL and MTNL together account for almost 68% of the total revenue i.e. Rs. 31100 crores. Among the private operators Bharti group had a turnover of Rs.3172 crores i.e. around 7% of total sector revenue. VSNL had a turnover of Rs. 4538 crores, i.e. around 10% of total sector revenue.

Table 1.1

Subscriber Base of Fixed Services

S. No.	BSO	Area of Operation	March'03	March'04
1	BSNL	All India (except Delhi & Mumbai)	35,907,691	36,112,093
2	MTNL	Delhi & Mumbai	4,633,665	4,367,264
3	Bharti Group	MP, Delhi, Haryana, TN, Karnataka	370,973	636,725
4	Tata Teleservices	Maharashtra, AP, TN, Karnataka, Gujrat, Delhi	449,924	1,003,585
5	HFCL Infotel	Punjab	79,502	125,331
6	Shyan Telelink	Rajasthan	49,138	92,392
7	Reliance Infocom	18 Circles	160	503,353
	Grand Total		41,491,053	42,840,743

Source: Operators

Table 1.2

Equipped Switching Capacity

S. No	Service Providers	Area of Operation	Equipped Capacity as on 31.03.03	Equipped * Capacity as on 31.03.04
1	BSNL	All India	45,031,557	46,336,818
2	MTNL	Delhi & Mumbai	5,852,639	6,552,539
3	Bharti	MP, Delhi, Haryana, TN, Karnataka	558,834	800,140
4	HFCL	Punjab	192,660	207,660
5	Tata	Maharastra, AP, TN, Karnataka, Gujarat, Delhi	820,984	1,873,620
6	Reliance **	18 Circles	300,000	7,451,832
7	Shyam	Rajasthan	70,000	140,000
		TOTAL	52,826,670	63,362,609

Source: Operators

* For the year 2003-04, Equipped Capacity includes Fixed WLL(F) as well as WLL(M) switch capacities.

** Reliance figures as on March 2003 for Gujarat Circle only. Figure as on March'04 is for 18 circles

Table 1.3

Details of Public Call Offices (PCO)

S.No	Service Providers	Area of Operation	PCOs as on 31.03.03	PCOs as on 31.03.04
1	BSNL	All India	1,195,678	1,519,686
2	MTNL	Delhi & Mumbai	204,433	239,654
3	Bharti	MP, Delhi, Haryana, TN, Karnataka	42,706	73,869
4	HFCL	Punjab	15,032	22,263
5	Tata	Maharashtra, AP, TN, Karnataka, Gujrat, Delhi	31,768	51,822
6	Reliance	18 Circles	-	2,537
7	Shyam	Rajasthan	3,747	14,347
	TOTAL		1,493,364	1,924,178

Source: Operators

Table 1.4

Details of Village Public Telephones (VPT)

S.No	Service Providers	Area of Operation	VPTs as on 31.3.03	VPTs as on 31.3.04
1	BSNL	All India	503,420	509,491
2	MTNL	Delhi & Mumbai	191	191
3	Bharti **	MP, Delhi, Haryana, TN, Karnataka	348	607
4	HFCL	Punjab	831	789
5	Tata	Maharashtra, AP, TN, Karnataka, Gujrat, Delhi	3,333	4,061
6	Reliance	18 Circles	3,988	4,114
7	Shyam	Rajasthan	1,016	3,010
	TOTAL		513,127	522,263

* Source - Operators

** For Bharti Figure for Sept'03 is taken as unchanged for Mar'04

Table 2.1

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

	Mar'03	Mar'04	%age share for Mar'04
Reliance	5.41	72.65	21.6
Bharti	30.17	65.04	19.3
BSNL	22.98	55.36	16.4
Hutchison	21.63	51.48	15.3
Idea	12.80	27.33	8.1
BPL	11.31	18.83	5.6
Spice	6.40	12.08	3.6
Escotel	5.87	9.89	2.9
Tata	1.47	6.25	1.9
MTNL	3.47	4.63	1.4
Hexacom	1.32	2.57	0.8
Shyam	0.33	0.27	0.1
HFCL	0.32	0.29	0.1
Others (Aircel, RPG etc.)	6.43	10.26	2.9
Total Sub. Base	130	336.91	100

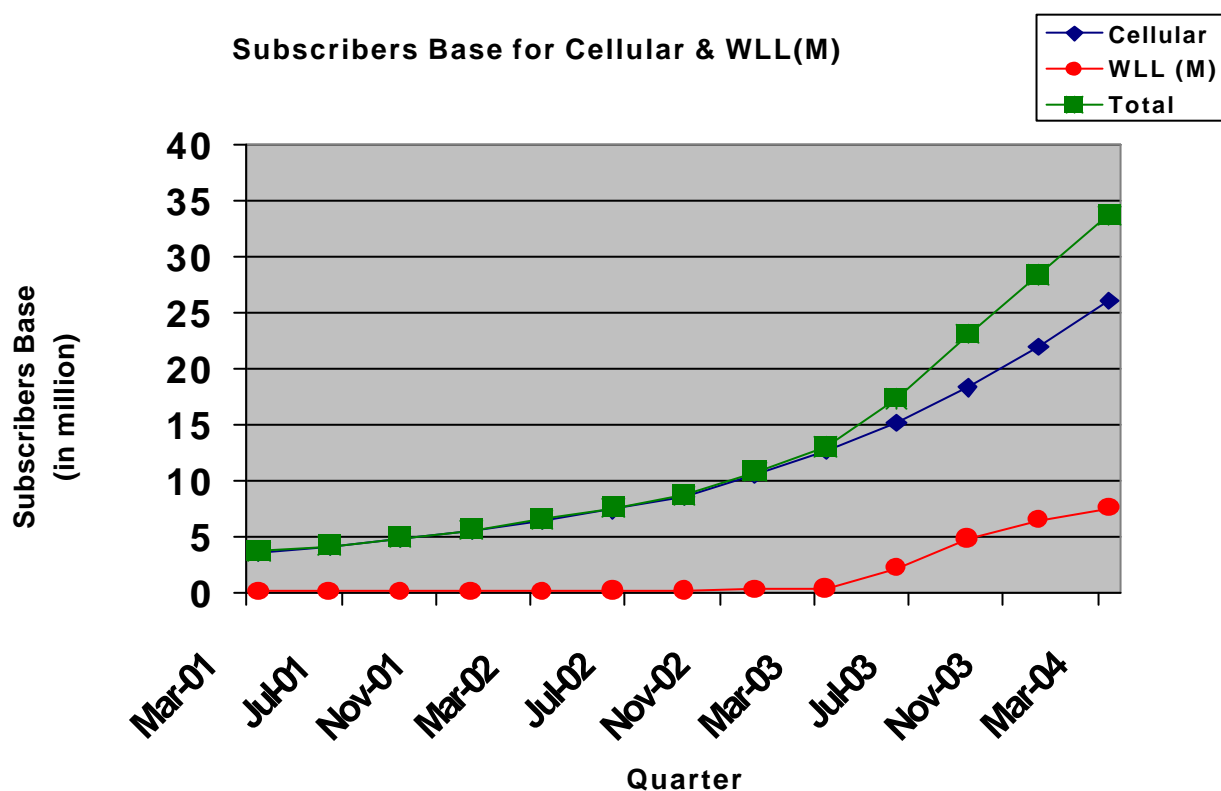


Table 2.2

Market Share of Mobile (Cellular + WLL (M)) Service Providers

i) Subscriber Base of Cellular Mobile Service

S.No.	Cellular Group	Market Share	No. of Subscribers (Mar'04)
1.	Bharti Grp	24.9 %	65.04 lakh
2.	BSNL	20.1 %	52.54 lakh
3.	Hutchison Grp	19.7 %	51.48 lakh
4.	IDEA Grp	10.4 %	27.33lakh
5.	BPL Grp	7.2 %	18.83 lakh
6.	Others (Hexacom and Aircel Group)	4.9%	12.83 lakh
7.	Spice Grp	4.6 %	12.08 lakh
8.	Escotel Grp	3.8%	9.89 lakh
9.	Reliance Grp	3.0 %	7.90 lakh
10.	MTNL	1.4 %	3.60 lakh
Total		100%	261.54 lakh

ii) Subscriber Base of WLL (M) Service

S.No.	CDMA Operators	No. of Subscribers	Market Share (%) (Mar'04)
1	Reliance Infocomm	64,74,349	85.84
2	Tata Teleservices	6,25,267	8.29
3	BSNL	2,82,336	3.74
4	MTNL	1,02,739	1.36
5	HFCL	29,908	0.40
6	Shyam Telelink	27,632	0.37
	Total	75,42,231	100%

Growth Pattern of Cellular Subscriber Base

(i) **Cellular Subscriber base**

(Subscribers in Lakhs)

Category	Mar'03	Mar'04	% share for Mar'04
Metros	44.4	79.41	30.4
A' Circle	43.65	97.08	37.1
B' Circle	33.75	74.02	28.3
C' Circle	5.08	11.12	4.2
All India	126.88	261.54	100

(ii) **Growth Rate of Cellular Subscribers**

Category	Growth Rate for Mar'03-Mar'04
Metros	78.85%
A' Circle	122.41%
B' Circle	119.32%
C' Circle	118.90%
All India	106.13%

Table 3.1

Subscribers Base of Internet Services

S.No.	Name of ISP	Category	Area of operation	Total subscribers as on 31st March, 2004
1	Bharat Sanchar Nigam Ltd.	A	All India	1128172
2	MTNL	B	Delhi & Mumbai	769434
3	Sify Ltd.	A	All India	658192
4	VSNL	A	All India	600509
5	Dishnet DSL Ltd.	A	All India	264631
6	Data Infosys Ltd.	A	All India	198993
7	TATA Internet Services Ltd.	A	All India	179224
8	Reliance Communications Infrastructure Limited	A	All India	174038
9	Bharti Broadband Network Ltd.	A	All India	73872
10	HCL Infinet Ltd.	A	All India	55242
11	Data Access India Ltd.	A	All India	40769
12	Trak Online Net India Pvt.Ltd	A	All India	31210
13	BG Broadband India Pvt. Ltd.	A	Gujarat, Mumbai	30367
14	Sab Infotech Ltd.	B	Punjab, Karnal, Dharmashalla	29839
15	Icenet.net Limited	B	Gujarat	28937
16	Shyam Internet Services Pvt. Ltd.	A	All India	24335
17	Tata Teleservices (Maharashtra) Ltd. (Hughes Telecom)	A	All India	20483
18	Hathway Cable & Datacom Pvt. Ltd.	A	All India	19447
19	Fascel Ltd.	B	Gujarat	18001
20	Rolta India Limited	B	Mumbai	12783
21	WWW Communications Ltd.	B	Delhi	11988
22	Emmsons Infotech Ltd.	B	Punjab	10200
23	HFCL Infotel Ltd.	B	Punjab Telecom Circle	8534
24	Asianet Satellite Communications Ltd.	B	Kerala	7703
25	S.S. Netcom Pvt. Ltd.	B	North East Circle	6759
26	BSES Telecom Ltd.	B	Mumbai	6752
27	City Online Services Ltd.	B	Andhra Pradesh & Karnataka	6525
28	Wilnet Communications Pvt. Ltd.	B	Gujarat	6073
29	Primus Telecommunication India Ltd.	A	All India	5940
30	Southern Online Services Ltd.	B	Andhra Pradesh	5063
31	RPG Infotech Ltd. (Sprint RPG India)	A	All India	5047
32	VasNet Communications Pvt Ltd.	C	Dakshina Kannada	5008
33	In2Cable.Com(India) Ltd	A	All India	4433
34	Exoress Comm. Pvt. Ltd.	B	Kolkata, WB	4381
35	Seven Star Dot Com	B	Khar(w), Jogeshwari (w)	4297
36	Space Online (P) Ltd.	B	Gujarat	3803
37	GTL Ltd.	A	All India	3245
38	Jindal Online.com Ltd.	B	Gujrat	3177
39	Narmada Cyberzone Pvt. Ltd.	B	Gujarat	2910
40	E comm opportunities Pvt. Ltd.	B	Gujarat	2905

41	Forum Infotech (P) Ltd.	C	Srinagar	2882
42	Blazenet Ltd.	B	Gujarat	2774
43	Data-Link Impex Pvt. Ltd.	B	Gujarat	2709
44	Sixth Sense Informatics Pvt. Ltd.	B	Mumbai	2550
45	West Bengal Electronics Industry Development Corporation Ltd.	B	Calcutta	2475
46	iPath India Pvt. Ltd.	C	Ernakulam SSA	2275
47	Navin.com (I) Pvt. Ltd.	A	All India	2257
48	Netlinx Ltd.	B	Andhra Pradesh	2124
49	Primenet Global Ltd.	A	All India	2056
50	Digital 2 Virtual SP Pvt. Ltd.	C	Vadodara, Kheda	2021
51	Spectra Net Ltd.	A	All India	1941
52	Anknet Informations Pvt. Ltd.	B	Mumbai	1741
53	Kelnet Communication	C	Trivandrum	1715
54	Tawie.com Pvt. Ltd.	C	Jammu SSA	1676
55	Pioneer Online Pvt. Ltd.	B	Andhra Pradesh	1609
56	Pacific Internet India Pvt. Ltd.	A	Mumbai, Bangalore, Pune	1601
57	Trikon electronics Pvt. Ltd.	B	Mumbai	1433
58	Descon Ltd.	B&C	Kolkata, WB	1416
59	Rida Communications Pvt. Ltd.	C	Aligarh	1291
60	Hughes Escorts Communications Ltd.	A	All India	1286
61	Swiftmail Communications Ltd.	A	All India	1256
62	Mylai Karpagambal Information Systems (P) Ltd.	B	Chennai	1251
63	HCL Comnet Systems & Services Ltd.	A	All India	1227
64	Online Media Solutions Ltd.	A	All India	1201
65	Weikfield Mnemonix Infonetworks Pvt. Ltd.	B	Pune	1150
66	Siti Cable Network Ltd. (Zee Interactive Multimedia Ltd.)	A	All India	1113
67	Ortel Communication Ltd	C	Bhubaneswar, Cuttack	987
68	Comsat Max Ltd.	A	All India	982
69	Micky Online Pvt. Ltd.	C	Moradabad, Nainital	960
70	Patriot Automation	A	All India	956
71	Spectrum Softech Solutions Pvt. Ltd.	C	Ernakulam SSA	929
72	Bhasinsoft India Ltd.	B	Karnataka	922
73	Jain Infonet Ltd.	B	Rajasthan	916
74	Hathway Bhawani Cable & Datacom	B	Mumbai	856
75	ERNET India	A	All India	780
76	IOL Broadband Ltd (India Online Network Ltd.)	B	Mumbai	721
77	Bohra Pratisthan Pvt. Ltd.	C	Udaipur SSA	675
78	Sujan Engineering Pvt. Ltd.	C	Vadodra	667
79	Speed Online.net Pvt. Ltd.	C	Rajkot	655
80	Opto network Pvt. Ltd.	C	SSA Ghaziabad	624
81	Broadlane Networks Pvt. Ltd.	C	Maharashtra	617
82	Kappa Infotech Pvt Ltd.	C	Kota SSA	594
83	Growth Compusoft Exports Ltd.	B	Gujarat	581
84	Atria Convergence Tech. Pvt. Ltd.		Karnataka	581
85	Chanchalaa Electronics Pvt. Ltd.	C	Ranchi SSA	531
86	Millenium Telecom Ltd.	A	All India	512

87	Viraj Telecom Ltd.	B	Karnataka	502
88	Antriksh Technologies Pvt. Ltd.	C	Jammu SSA	489
89	Value Healthcare Ltd.	B	Mumbai	476
90	Spacecom Broadlane Networks Ltd.	B	Delhi	476
91	Bhaskar Multinet Pvt. Ltd.	C	Jaipur	465
92	Quest Consultancy Pvt. Ltd.	C	Valsad SSA	454
93	Jumpp India Pvt. Ltd.	A	All India	441
94	Lee & Nee Softwares (Exports) Ltd.	C	Bhubaneshwar	423
95	Starnet Online Services Ltd.	C	Visakhapatnam	418
96	Delaila Industry Pvt. Ltd.	C	Srinagar	416
97	Silicon Mountain (I) Ltd.	B	Mah	409
98	CJ Online Private Ltd.	C	Ghaziabad	402
99	MyNet Services India Pvt. Ltd.	C	Salem (SSA) Tamil Nadu	395
100	Websurf Pvt. Ltd.	C	Kalyan SSA	393
101	Gateway Systems (I) pvt. Ltd.	A	All India	353
102	Mac Info Pvt. Ltd.	B	Hyderabad	340
103	Myguru Online	B	Andhra P.	329
104	Rajasthan Telematic Ltd.	B	Rajasthan	325
105	Digital Nagpur Online Pvt. Ltd.	C	Nagpur	315
106	Guj Info Petro Ltd.	A	All India	311
107	Excel Media Pvt. Ltd.	B	Andhra P	308
108	Virtual Continuity Electronics Pvt. Ltd.	C	Ranchi SSA	300
109	ISP Solutions India Pvt. Ltd.	C	Coimbatore SSA	296
110	Bareilly Communications Pvt. Ltd.	C	Bareilly	290
111	Sanchar Telenetwork Pvt. Ltd.	C	Bhavnagar	283
112	n-Logue Communications (P) Ltd.	A	All India	245
113	Diksha Cyber City (P) Ltd.	C	Sri Ganganagar SSA	235
114	Planet Internet Satellite (VVN) Pvt. Ltd.	C	Nadiad Telecom Dist	221
115	Emtici Engineering Ltd.	C	Khera SSA	207
116	CJM Consultancy Services Pvt. Ltd.	B	Delhi	182
117	Swastik Netvision Telecom Pvt. Ltd	B	Gujrat	175
118	NetMagic Solutions(P) Ltd.	B	Mumbai	167
119	Dialnet Communications Ltd.	B	Delhi	159
120	Surevin Internet Services Ltd.	C	Ghaziabad U.P.	157
121	Trans Virtual Pvt. Ltd.	C	Guwahati SSA	150
122	Assured Web Technologies	C	Bhopal	143
123	Srishti Open systems (P) Ltd.	C	Trivandrum	142
124	Aksh Broadband Ltd.	C	Jaipur	140
125	Chandra net Pvt. Ltd.	B	Gujrat	140
126	Trident Netcom sd. Pvt. Ltd.	A	All India	136
127	North east Online Services (P) Ltd.	C	Guwahati SSA	126
128	A-Team Information Technology Ltd.	C	Erode	125
129	DelDSL Internet Pvt. Ltd.	B&C	Delhi, Gurgaon, Banglore, Ghaziabad	124
130	Manipal Ecommerce Ltd. (Manipal Control Data Electronic Commerce Ltd.)	B	Karnataka	111
131	Q Tel Comtech Ltd.	C	Gurgaon	109
132	Bhupati Hotels Pvt. Ltd.	C	Visakhapatnam	107
133	Estel Communications Pvt. Ltd.	A	All India	105

134	Czars Oleoresin Pvt. Ltd.	C	Gulbarga District	90
135	Broad Range App. Integrated Networks Solutions Pvt. Ltd.	C	Bokaro SSA	88
136	Amber online Sevices Ltd.	B	Andhra Pradesh, circle	86
137	Centre for Development of Advanced Computing, C-DAC (Electronics Research and Development Centre of India (ER&DC))	C	Ghaziabad SSA	76
138	Master Chip	C	Nizamabad	72
139	Tata Power Company Ltd.	A	All India	66
140	Shreedhar Infosys Ltd.	C	Varanasi SSA	61
141	L&T Netcom Ltd.	A	All India	60
142	Micromap Satcom Pvt. Ltd.	C	Lukhnow	60
143	Direct Internet Ltd.		0 Delhi, Ghaziabad &Gurgaon	56
144	Reach Networks India Pvt. Ltd.	A	All India	50
145	Access Online Pvt. Ltd.	B	Mumbai	49
146	Karuturi Networks Ltd.	B	Karnataka	46
147	Arun Girija Communications pvt. Ltd.	C	PATNA	42
148	i2i Enterprise Ltd.	A	All India	36
149	Indian Quotation Systems Pvt. Ltd. (IQSPL)	B	Mumbai	32
150	Gujrat Narmada Valley Fertilizer Co. Ltd. (GNFC)	A	All over India	21
151	Patel Infosoft Pvt. Ltd.	C	Valsad SSA	21
152	Sree Sree Infotainment Pvt. Ltd.	C	Vizag	20
153	Paya Computer Services (P) Ltd.	C	Dhanbad	19
154	Essel Shyam Comm. Ltd.	A	All India	18
155	MX Solutions	B	Kerala	17
156	Kushagra Telecom Pvt. Ltd	C	Ghaziabad,SSA	15
157	Icenetworks (P) Ltd.	B	Bangalore	15
158	PBC Ventures Ltd.	B	Delhi	14
159	Nomus Internet Systems Pvt. Ltd.	B	Andhra Pradesh	14
160	Astra Infonets Pvt. Ltd.	B	Hyderabad	12
161	Railtel Corporation of India Ltd.	A	All India	12
162	Uttar Pradesh Network Pvt. Ltd.	B	Uttar Pradesh	10
163	West Bengal Network Pvt. Ltd.	B	West Bengal	10
164	World tel TamilNadu Pvt. Ltd.	B	Tamilnadu circle excluding Chennai & Chennai	10
165	Beacon Broadband Networks Pvt. Ltd.	C	Durg SSA	10
166	Software Technology park of India (STPI)	A	All India	8
167	Applogic Broadband Sys. Ltd.	B	Hyderabad	8
168	Samkhya Networks (P) Ltd.	C	Gurgaon	8
169	Cyquator Technologies Ltd.	A	All India	7
170	Bihar Network Pvt. Ltd.	B	Bihar	5
171	Giga Solutions Pvt. Ltd.	B	Maharashtra	5
172	Haryana Cybernet Pvt. Ltd.	B	Haryana	5
173	Infomagic Services Pvt. Ltd.	B	Mumbai	5
174	Kerala communication Network Pvt. Ltd.	B	Kerala	5
175	MP Network Pvt. Ltd.	B	Madhya Pradesh	5
176	Orissa Network Pvt. Ltd.	B	Orissa	5
177	Punjab Cybernet pvt. Ltd.	B	Punjab	5
178	Tandem Infotech Pvt. Ltd.	C	Trivandrum	5

179	Godrej Infotech Ltd.	B	Mumbai	4
180	Surana Telecom Ltd.	B	Andhra Pradesh	3
181	Compucom (I) Pvt. Ltd.	C	Jaipur	3
182	Worldwide com Pvt. Ltd.	C	Saharanpur	3
183	CMC Ltd.	A	All India	2
184	Bharat Connect Ltd	B	Delhi	2
185	Bharti AquanetLtd	A	All India	2
186	iServ India Solutions Pvt. Ltd.	A	Delhi, Kerela and UP	1
187	Reliance Engineering Associates Pvt. Ltd. (Broadband Solutions)	A	All India	1
188	E Conzct Solutions	C	Udaipur SSA	1
189	Apna Telelink Pvt. Ltd.	C	Jalandhar	0
				4549618

Table 4.1

Subscribers Base of PMRTS

Sr. No.	Name of the Service Providers	March, 2002	March, 2003	March, 2004
1	Aryadoot Transport Pvt Limited	705	830	930
2	Jet-Aiu Skyline Transport Pvt Ltd.	338	447	377
3	Container Movement (Bombay) Transport Pvt Ltd.	266	237	239
4	Arya Offshore Services Pvt Ltd.	1701	1699	1772
5	Hapag Llyod (German Express Shipping Agency (India) Pvt Ltd.	732	556	817
6	United Liner Agencies of India (Pvt) Ltd	1950	2220	1854
7	Procall Limited	7093	7472	7361
8	The Arvind Mills Ltd.	6038	6006	6181
9	ITI LTD.	129	202	Not reported
10	Iconet Communication Pvt. Ltd	62	62	Not reported
11	Smartalk Pvt Limited	2792	1442	1165
12	Quick Call	3100	3095	3590
13	Bhilwara Telenet Services Pvt Limited	2429	1540	787
14	Mobilkom India Limited	0	219	83
	Total Subscriber base	27479	26027	25474
	Growth in %age		-5.28%	-3.35%

Table 4.2

Subscriber Base of VSAT

Sr. No.	Name of the Service Provider	Subscriber Base		
		March, 2002	March, 2003	March, 2004
1	Hughes	3147	4992	8395
2	HCL Comnet	2051	3022	8376
3	Comsat Max	1998	3493	4210
4	Bharti BT	1974	3047	3829
5	Essel Shyam	186	1997	2040
6	Tata Services		58	367
7	Telstra Vishesh	188	134	159
8	RPG Satellite Communications Pvt. Ltd.	121	103	79
9	HFCL	58	67	67
10	ITI	39	53	53
11	GNFC		22	26
	Total Subscriber base	9762	16988	27601
	Growth in %age		74.02%	62.47%

Table 4.3

Subscriber Base of Radio Paging

Sr. No	Name of the Service Providers	March, 2002	March, 2003	Sept, 2003
1.	DSS Mobile Comm Ltd	126947	72133	Not Reported
2	Page Point Services (India) Limited	118121	61898	38906
3	Microwave Communications Ltd (Pagelink)	209957	48147	33540
4	RPG Paging Services Limited	55595	37982	Not Reported
5	Modi Korea Telecommunications Ltd.	Not Reported	17685	Not Reported
6	Matrix Paging	26247	17378	14063
7	ABC Communications	15398	11512	6494
8	Telesistem(I)	14635	11754	5086
9	Easy Call	11497	7824	4480
10	Netherlands India Communications Ltd.	Not Reported	2952	Not Reported
	Total no. of Subscriber base	578397	289265	102569
	%age of Growth		-49.98%	-64.54%

Table 6.1

**Foreign Direct Investment (FDI) in Telecom Sector
(August'91 to March'2004)**

Year	FDI Inflow (Rs in Million)
1993	20.60
1994	140.20
1995	2067.40
1996	7648.30
1997	12451.90
1998	17756.40
1999	2126.70
2000	2885.80
2001	39709.00
2002	10815.00
2003	3014.00
2004	874.20
Total	99509.50

(Source: dotindia.com)

FDI IN TELECOM SECTOR YEARWISE

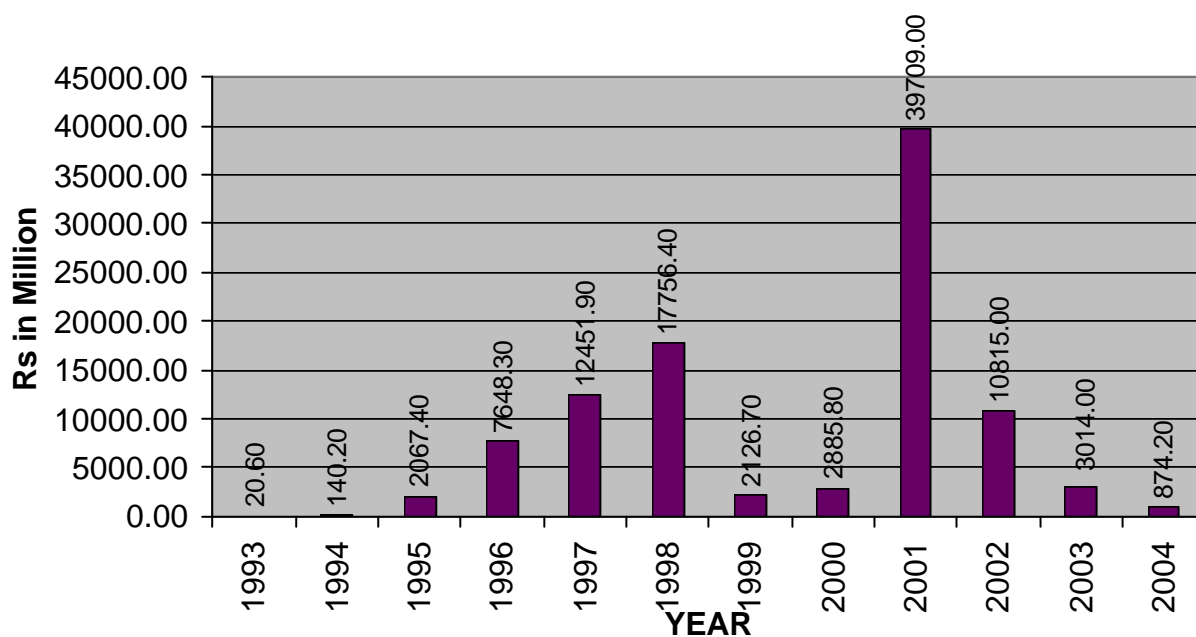


Table 6.2

Service-wise/Item wise inflow of Foreign Direct Investment (FDI) in Telecom sector

Sector Wise actual Inflow of FDI in Telecom Sector			
(August '91 to March '2004)			
(Rs in Million)			
S.No.	SERVICE/ITEM	FDI	%
1	Basic Telephone Service	3937	3.96%
2	Cellular Mobile Telephone Service	26646	26.78%
3	Radio Paging Service	910	0.91%
4	E-Mail Service	688	0.69%
5	VSAT Service	281	0.28%
6	Cable TV Network+Internet	1704	1.71%
7	Satellite Telephone Service	481	0.48%
8	Radio Trunking Service	71	0.07%
9	Manufacturing & Consultancy	15784	15.86%
10	Holding Companies	48420	48.66%
11	Other Value Added Services	227	0.23%
12	Automatic Route	361	0.36%
	TOTAL	99509	

(Source: dotindia.com)

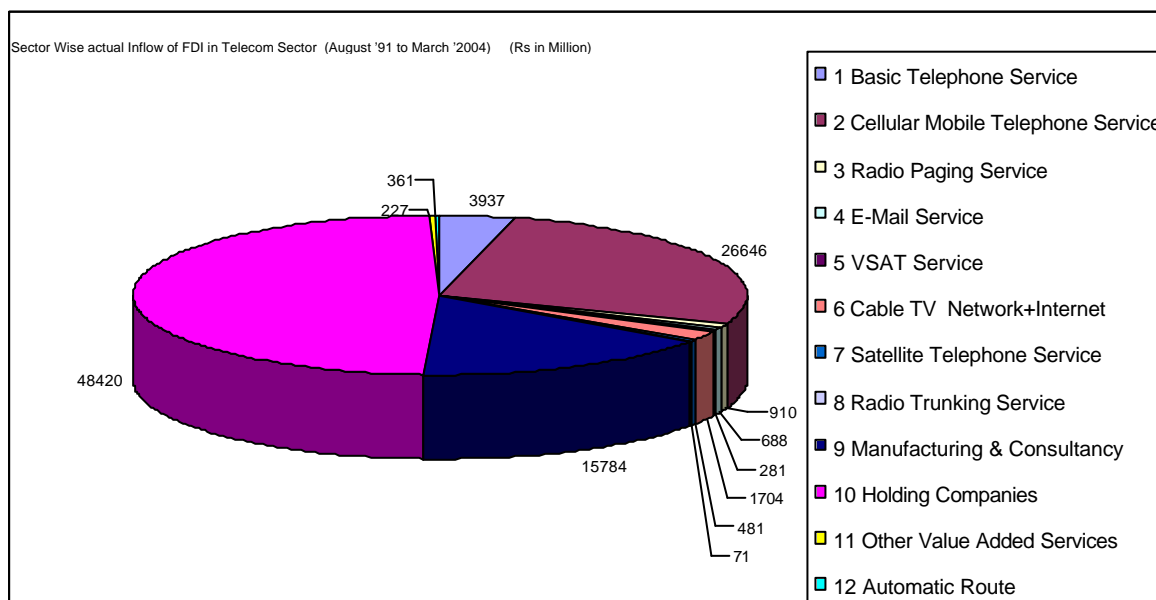


Table 6.3

**Country Wise Inflow of FDI in Telecom Sector in India
(August '91 to March '2004)**

<i>(Rs in Million)</i>			
S.No	Country	FDI	%
1	Argentina	0.01	0.00%
2	Australia	700.9	0.70%
3	Austria	9.5	0.01%
4	Bahrain	8	0.01%
5	Bahamas	13.78	0.01%
6	Bermuda	64.85	0.07%
7	Canada	411.6	0.41%
8	China	0.1	0.00%
9	Denmark	72.5	0.07%
10	Finland	355.8	0.36%
11	France	1009.37	1.01%
12	Germany	12.7	0.01%
13	Hong Kong	901.26	0.91%
14	Israel	800	0.80%
15	Japan	539.8	0.54%
16	Kuwait	0.5	0.00%
17	Luxembourg	101.6	0.10%
18	Malaysia	599.9	0.60%
19	Mauritius	71998.01	72.35%
20	Netherlands	3157.57	3.17%
21	NRI	889	0.89%
22	Philippines	73.5	0.07%
23	Singapore	55.86	0.06%
24	South Korea	198.5	0.20%
25	Sweden	1531.9	1.54%
26	Switzerland	4.7	0.00%
27	Spain	0.74	0.00%
28	Thailand	2211.6	2.22%
29	UK	8875.89	8.92%
30	USA	4904.76	4.93%
31	Srilanka	4.73	0.00%
	TOTAL	99508.93	100.00%

Source: dotindia.com

Table 6.4

**Operational Revenue of Telecom Operators (Basic, Mobile, NLD and ILD) for the
F/Y 2002- 03**

S. No	Name of Company	Service Provided	Amount (Rs in crore)	Market share %
1	BSNL	Basic	25293.15	55.38%
2	MTNL	Basic	5806.53	12.71%
3	VSNL	NLD/ILD	4538.55	9.94%
4	Data Access (I) Ltd	ILD	601.35	1.32%
5	Bharti Infotel Ltd	Basic /NLD/ILD	1102.5	2.41%
6	TataTeleservices (Maharashtra)	Basic	359.59	0.79%
7	TataTeleservices	Basic	261.89	0.57%
8	HFCL	Basic	89.48	0.20%
9	Shyam Telelink Ltd	Basic	58.87	0.13%
10	AIRCEL LIMITED	Mobile	222.4	0.49%
11	AIRCEL Digilink India Ltd.	Mobile	125.58	0.27%
12	Bharti cellular Ltd.	Mobile	1398.22	3.06%
13	Bharti Mobile Ltd.	Mobile	671.77	1.47%
14	BPL Mobile Communications Ltd.	Mobile	442.58	0.97%
15	BPL Mobile Cellular Ltd.	Mobile	412.48	0.90%
16	BTA Cellcom Ltd (RPG Cellcom Ltd.)	Mobile	88.86	0.19%
17	Escotel Mobile Communication Ltd.	Mobile	321.91	0.70%
18	Fascel Ltd.	Mobile	363.51	0.80%
19	Hexacom India Ltd.	Mobile	115.34	0.25%
20	Hutchison Essar Telecom Ltd.	Mobile	533.44	1.17%
21	Hutchison Max Telecom Pvt Ltd.	Mobile	766.89	1.68%
22	Hutchison Telecom East Ltd (Usha Martin Telecom)	Mobile	204.3	0.45%
23	IDEA Cellular Ltd.	Mobile	851.46	1.86%
24	Reliance Telecom	Mobile	356.41	0.78%
25	RPG Cellular Services Ltd.	Mobile	186.05	0.41%
26	Spice communications Ltd	Mobile	499.13	1.09%
	Total Revenue		45672.24	100.00%

Sources: Audited Balance sheets for 2002-03

Details of Basic Service Licenses issued to private operators

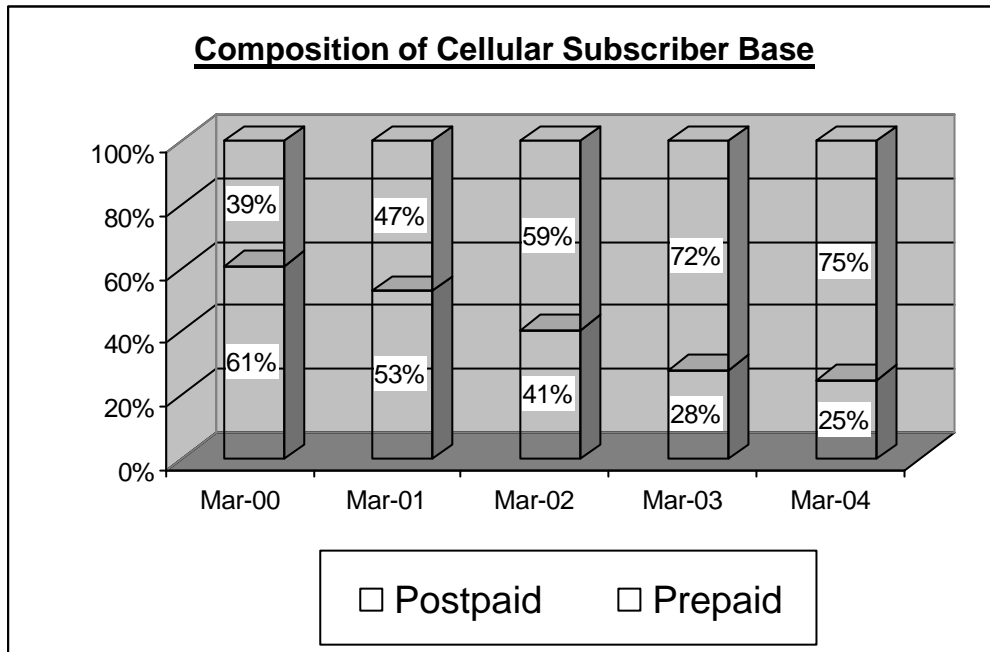
Service Provider	Service Area	DoT. Letter. Reference No.	License No.	Date
Bharti	M P		17-12/95-BS-II	28.02.97
HFCL	Punjab	10-10-2003-BS-II / Vo-II	17-15/95-BSII/Punjab	07.11.97
Tata	Maharashtra including Mumbai	10-10-2003-BS-II	17-11/95-BS-II	30.09.97
Shyam	Rajasthan	10-10-2003-BS-II / Vo-II	17-16/95-BS-II/Rajasthan	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 / Vo-II	18-113/2001-BS-II	20.07.2001
Reliance	Delhi	10-10-2003-BS-II / Vo-II	18-32/2001-BS-II	20.07.2001
Reliance	Gujarat	10-10-2003-BS-II / Vo-II	17-6/95-BS-II	18.03.97
Reliance	Haryana	10-10-2003-BS-II / Vo-II	18-30/2001-BS-II	20.07.2001
Reliance	HP	10-10-2003-BS-II / Vo-II	18-116/2001-BS-II	20.07.2001
Reliance	Karnataka	10-10-2003-BS-II / Vo-II	18-35/2001-BS-II	20.07.2001
Reliance	Kerala	10-10-2003-BS-II / Vo-II	18-38/2001-BS-II	20.07.2001
Reliance	MP	10-10-2003-BS-II / Vo-II	18-32/2001-BS-II	20.07.2001
Reliance	Maharashtra	10-10-2003-BS-II / Vo-II	18-36/2001-BS-II	20.07.2001
Reliance	Orissa	10-10-2003-BS-II / Vo-II	18-112/2001-BS-II	20.07.2001
Reliance	Punjab	10-10-2003-BS-II / Vo-II	18-31/2001-BS-II	20.07.2001
Reliance	Rajasthan	10-10-2003-BS-II / Vo-II	18-115/2001-BS-II	20.07.2001
Reliance	Tamilnadu	10-10-2003-BS-II / Vo-II	18-29/2001-BS-II	20.07.2001
Reliance	UP(East)	10-10-2003-BS-II / Vo-II	18-34/2001-BS-II	20.07.2001
Reliance	UP(West)	10-10-2003-BS-II / Vo-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 Rate of Cellular Mobile subscribers
(SUBSCRIBERS IN LAKHS)**



Growth pattern of Cellular ServiceRate of growth in postpaid & prepaid subscribers

Financial Year	Growth rate of postpaid subscribers	Growth rate of prepaid subscribers
FY 2000	NA	NA
FY 2001	40%	96%
FY 2002	57%	157%
FY 2003	14%	98%
FY 2004	124%	168%

Trends in ARPU and Usage Pattern (MOU) in Cellular Services

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

Financial Year	Postpaid		Prepaid		Blended *	
	ARPU	% change	ARPU	% change	ARPU	% change
FY 2000	1560	NA	822	NA	1319	NA
FY 2001	1501	-4%	597	-27%	1113	-16%
FY 2002	1335	-11%	484	-19%	884	-21%
FY 2003	1176	-12%	346	-28%	634	-28%
FY 2004	1056	-10%	288	-17%	469	-26%

Note: data for FY 2000 covers period from May 99 to March '00

* Weighted average of post-paid and pre-paid

b) MOU (per subscriber per month) in Cellular Service [incoming + outgoing]

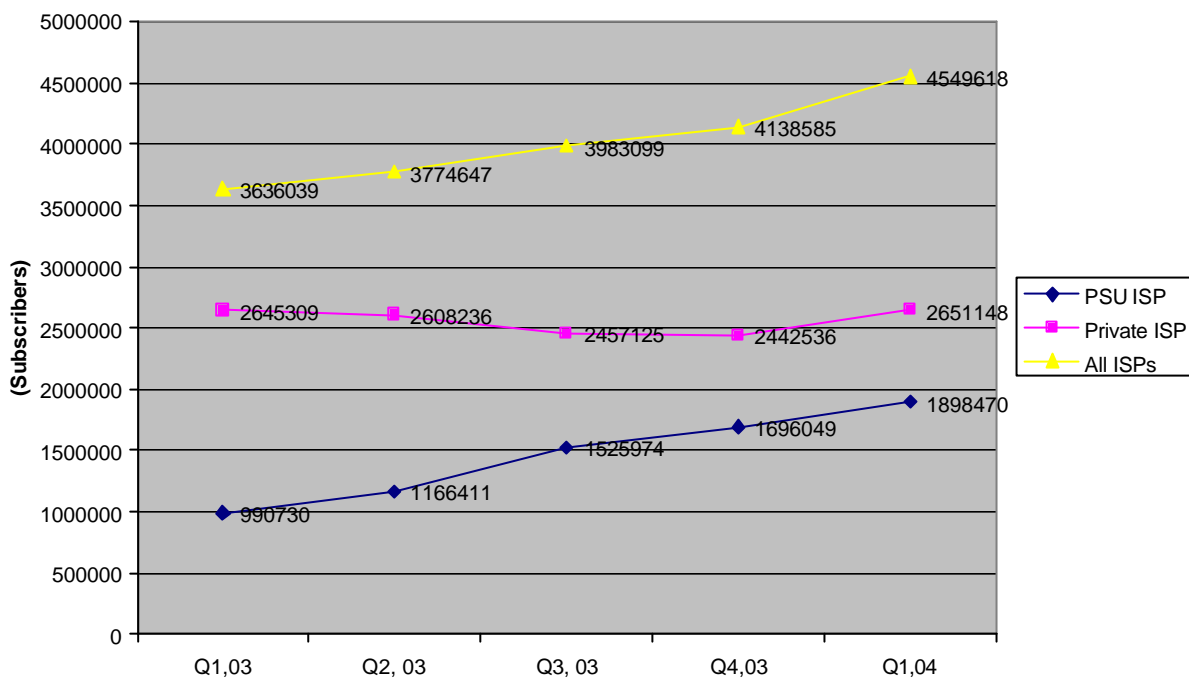
Financial Year	Postpaid		Prepaid		Blended *	
	MOU per sub.	% change	MOU per sub.	% change	MOU per sub.	% change
FY 2000	238	NA	112	NA	197	NA
FY 2001	312	31%	106	-6%	223	13%
FY 2002	363	17%	89	-16%	218	-2%
FY 2003	460	27%	99	11%	225	3%
FY 2004	590	28%	208	110%	302	34%

Note: data for FY 2000 covers period from May 99 to March '00

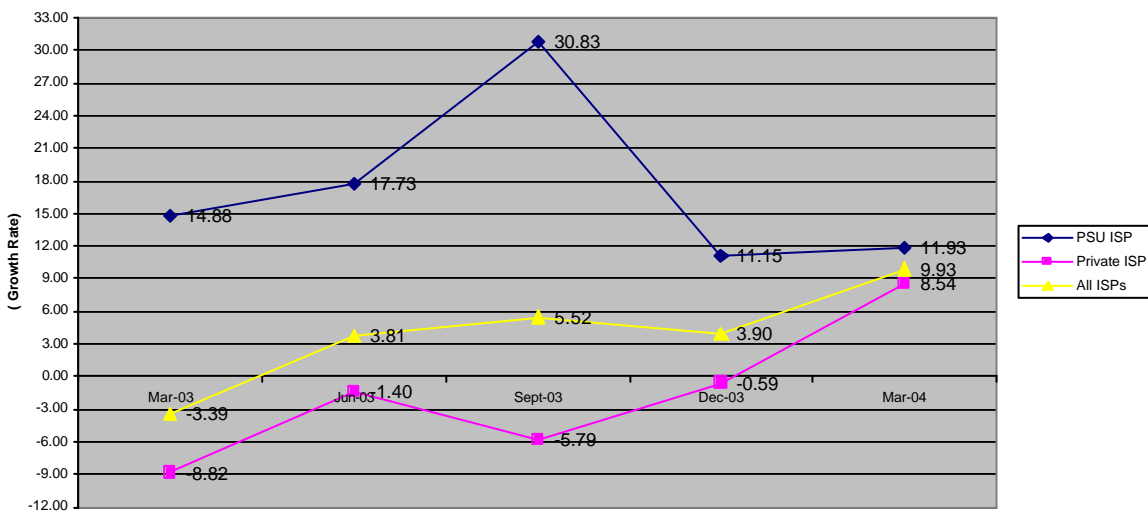
* Weighted average of post-paid and pre-paid

Growth Pattern of Internet Subscribers

Growth Trends - Nos.



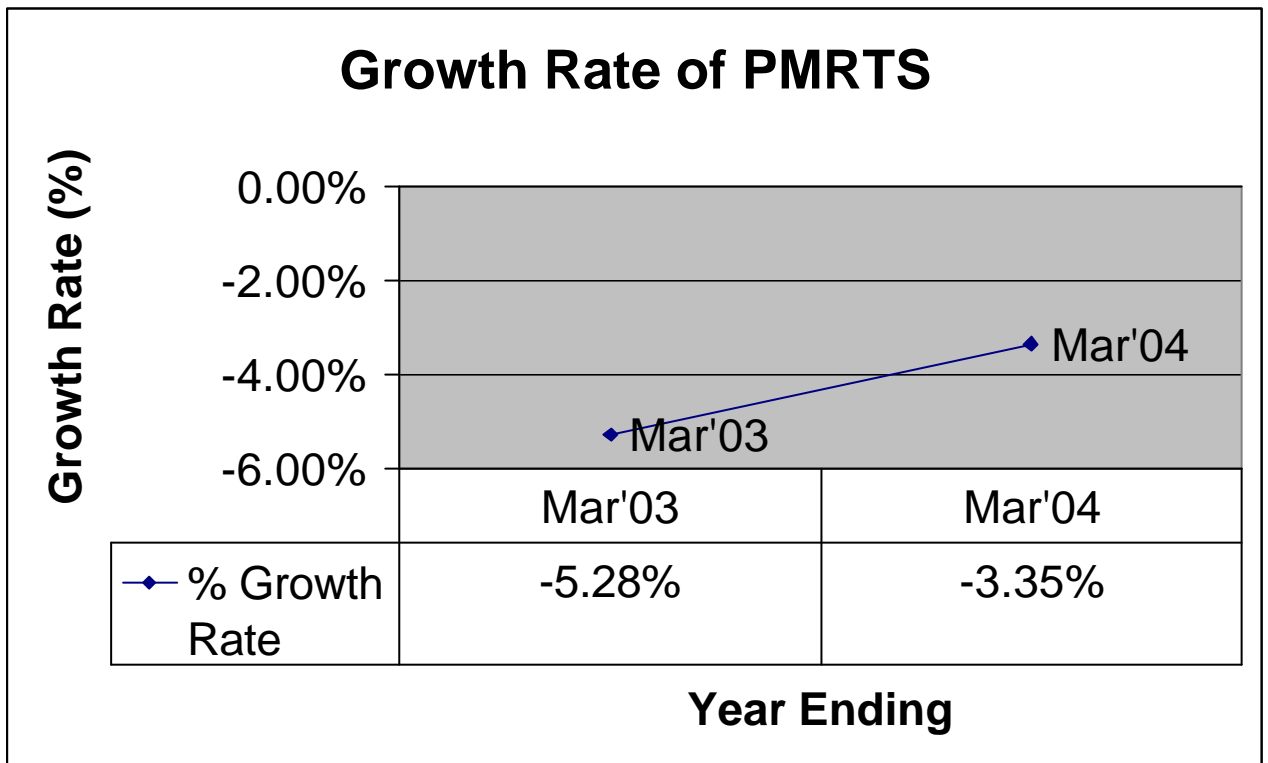
Growth Trends - Rate



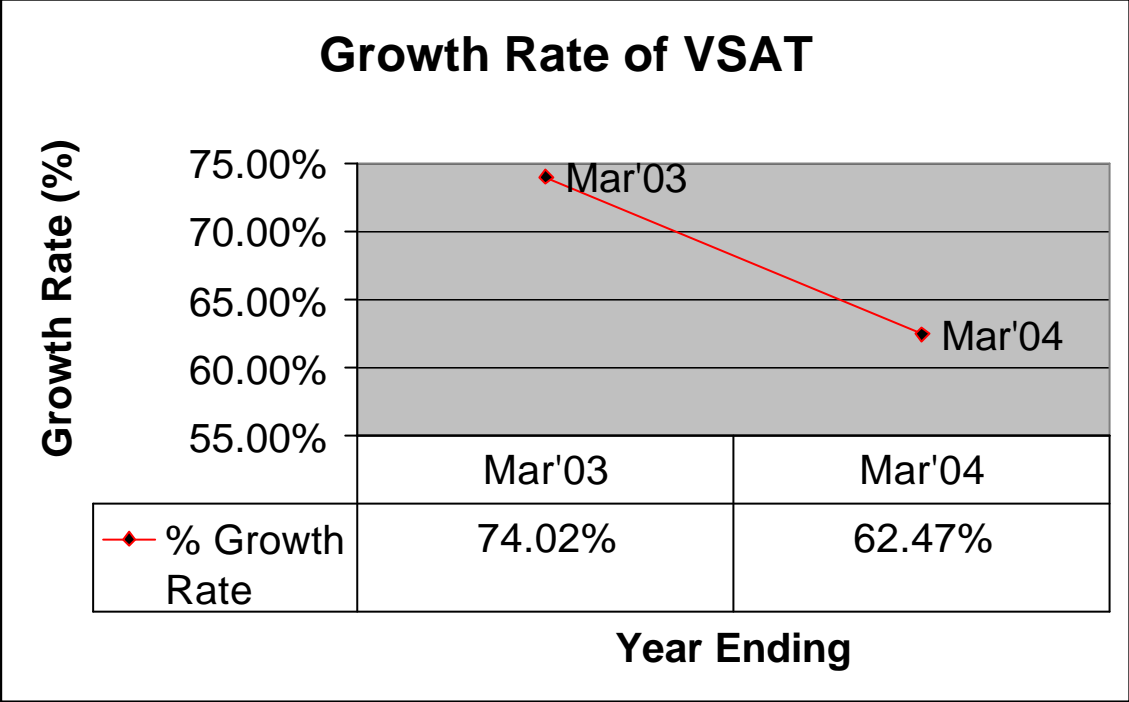
List of Internet Service Providers, offering Internet Telephony

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

Comparative Statements of Quality of Service Parameters of Basic Service Providers for the year 2002 – 2003				
Sr. No.	Parameters	Benchmarks	%age of the Operators meeting the Benchmarks	
			Mar'02 – Mar'03	Mar'03 – Mar'04
1	New connections after registration of demand	100% in 7 Days	63.98%	80.06%
2	Fault incidences per 100/sub/mth	<3	14.61%	47.62%
3	Fault repair by next working day	>90%(Month I)	46.33%	73.38%
		>90%(Month II)	49.02%	71.78%
		>90%(Month III)	52.84%	73.42%
4	Mean Time to Repair (MTTR)	<8 hrs.	32.63%	59.45%
5	Grade of service (calls per thousand)	2/1000	94.25%	85.61%
6	Call completion rate in local network	>65%	8.89%	29.74%
7	Metering & billing credibility-% of bills disputed	<0.1%	82.14%	57.83%
8	Operator Assisted Trunk calls (% answered within time norm)	Urgent Calls <1 hr	27.40%	43.42%
		Ordinary Calls <2 hrs.	31.66%	42.22%
9	Customer care service			
	Shift	95% of the requests <3 Days	7.80%	37.77%
	Closures	<24 hrs.	78.60%	85.11%
	Additional facility	<24 hrs.	81.07%	83.01%
10	Percentage of repeat faults	<1% (Month I)	20.47%	41.15%
		<1% (Month II)	19.24%	38.66%
		<1% (Month III)	19.15%	39.82%

Quality of Service Performance for Cellular Mobile Services

Comparative Statements of Quality of Service Parameters of Cellular Mobile Service Providers for the year 2002 – 2003					
Parameters			Benchmarks	%age of the Operators meeting the Benchmarks	
				Mar'02 – Mar'03	Mar'03 – Mar'04
Fault Incidence & Repair	I	No. of faults (per 100 subscribers)	<1	88.49%	84.87%
	II	Faults cleared within 24 hrs	100%	67.02%	62.14%
	III	Accumulated down time of community isolation	<24 hrs	68.73%	81.22%
Network Performance	I	Call Success Rate (within licencees own network)	>99%	66.79%	58.15%
	II	Service Access Delay	9 to 20 sec	99.14%	100.00%
	III	Call Drop Rate	<3%	96.50%	94.96%
	IV	% of connection with good voice quality	<95%	93.14%	84.83%
Billing Complaints	I	Complaints per 100 bills issued	<.1%	58.24%	66.11%
	II	% of complaints resolved within 4 weeks	100%	88.69%	85.55%
	III	Period of all refunds/ payment due to customers from the date of resolution of complaints as in (ii) above	<4 weeks	82.48%	91.32%

Quality of Service Performance for Internet Services

Report on Quality of Service Parameters of Internet Service Providers for FE 2004									
S. No.	Name of the Service Provider	Service Activation time	Time to Access	Access Portability in 1 st attempt	Access Portability in 2 nd attempt	Access Portability in 3 rd attempt	ISP Node unavail ability	Grade of Service (QoS)	Mean time to Restore of faults resulting as per subscriber complaints
	TRAI Benchmarks	6 hrs	30 sec	80	90	99	30 min	0.01	3 days
1	BSNL	0-24 hrs *	32 sec	90%	98%	100%	Nil	0.01	1.5 hrs
2	MTNL	Instant	30 Sec	99.67%	99.99%	Nil	NA	0.01	5 mints
3	Sify Ltd.	3 min	30 Sec	90%	95%	99%	20 min	0.005	4 hrs
4	VSNL	Within limit	Within limit	Within limit	Within limit	Within limit	Nil	Better than 1%	12 mint
5	TATA Internet Services Ltd.	5 min	30 sec	90%	95%	99%	0.01%	0.01	40 mints
6	Dishnet DSL Ltd.	Online	25 Sec	96%	99%	100%	Nil	0.01	4.33 Hrs
7	Data Infosys Ltd.	4 min	27 Sec	90%	95%	99%	30 mint	0.01	15 m,ints
8	Bharti Broadband Network Ltd.	Online	22 sec	99%	100%	NA	20 min	0.01	2 hrs
9	HCL Infinet Ltd.	3 min	30 Sec	99%	99.20%	99.50%	18 min	0.005	17 hrs
10	Data Access India Ltd.	Online	30 sec	98%	99%	99.50%	0 min	No Blolcked calls	NA
11	Trak Online Net India Pvt. Ltd.	5.5 hrs	31 sec	83%	97%	100%	Nil	0.03	1.5 hrs
12	Icenet.net Limited	2 hrs	20 sec	85%	95%	100%	Nil	0.01	NA
13	(GLIDE) Sab Infotech Ltd.	6 hrs	30sec	90%	95%	100%	30 sec	0.01	hrs
14	Shyam Internet Services	30 min	30 Sec	98%	99%	100%	30 min	1%	2 hrs
15	Iqara Broadband	2 min	20 sec	95%	97%	99%	Nil	Not provided by BSNL	36 hrs
16	Tata Tele services (MH)	0 sec	25 sec	97.90%	100%	Not Applicable	0 min	0.001	1 hrs
17	Fascel Ltd. **	NA	NA	NA	NA	NA	NA	NA	NA
18	Hathway Cable & Datacom **	NA	NA	NA	NA	NA	NA	NA	NA
19	Rolta India Ltd.	15 sec	27 sec	85.20%	91.40%	99.10%	0	0.001	4.30 mint
20	HFCL Infotel ltd	2.5 Min	20 Sec	98.10%	99%	100%	0	0.01%	7.99 hrs
	Not meet the benchmarks								

NA = Not applicable

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

** are not providing Internet Access on Dial Up. Internet Access on Mobile is provided via WAP / Cable setup.