

Report On QoS Parameters Related to Network Congestion of CMSPs

In a multi operator environment, an efficient and adequate interconnection between various operators is of utmost importance. In the previous “Regulation on QOS of Basic and Cellular Mobile Telephone Services, 2000”, there were no explicit parameters to measure and monitor the congestion in either the radio network of the CMSPs or at their “Point of Interconnect “ with other operators.

With the exponential increase in the number of subscribers in last two years and the number of operators in each service area, the issue of efficient and adequate interconnection between operators has become very important. Though TRAI has been monitoring the provision of interconnection between various operators, however, considering its effect on Quality of service, TRAI specified additional parameters i.e. “ POI Congestion” and “Blocked call Rate” in its revised QoS Regulation issued in July 2005. The operators are required to submit the data regarding this parameter on monthly basis.

The benchmarks for these parameters are :

POI Congestion: < 0.5%

Blocked Call Rate:

(i) SDCCH Congestion < 1%

(ii) TCH Congestion <2%

The network congestion report of all CMSPs for the month of August is placed below along with a comparison of the previous six months. **The report is only for those parameters and places where the prescribed benchmark is not met.**

From the perusal of the report, the following observation emerges:

1. In a number of big and small cities, the level of congestion between the networks of private operators and the BSNL network is far more than this benchmark and the number of such places are increasing. This is mainly due to delay in augmentation of inter network junctions. The TRAI has also, issued a direction on 7th June 2005, to all the service providers to provide Interconnection on the request of the interconnection seeker within 90 days of the applicable payments made by the interconnection seeker.

2. In the month of July 2005, there were about 86 places having congestion level more than 10% i.e. twenty times worse than the benchmark. In August 2005, the number of such places has increased to 153 including M/s Tata Teleservices.

3. In some of the major cities viz. Patna, Agra and Lucknow, the level of congestion between the POIs of private CMSPs and BSNL TAXs continues to be very high since last few months.

4. BSNL, in a number of service areas, is having congestion in its radio network. Against the benchmark of < 2% for the TCH Congestion, the performance has further deteriorated in all the service areas. The figures are ranging from 3 % to 16 % in the service areas of AP, Assam, Bihar, Chennai, Haryana, HP, J&K, Kerala, MP, Orissa, Rajasthan, Tamilnadu , UP(E) and UP(W).

5. In case of Reliance Telecom Ltd. also, The Radio Network Congestion has further deteriorated in the service areas of MP, Bihar, Orissa Assam and NE when compared with the previous months figures. The figures in these service areas are ranging from 4.90% to 9.50%.

6. The high network congestion and blocked call rate is on account of:

- a) Inadequate Junctions between two networks,
- b) Less number of Base Stations and,
- c) Inadequate Spectrum.

This has led to the phenomenon of poor quality of service and consequently subscriber suffers as follows:

- a) Frequent blocking of calls,
- b) Frequent call drops and,
- c) Poor voice quality.

The network congestion report of all CMSPs for the month of August 2005 is placed at TRAI website (www.traai.gov.in) along with a comparison with the previous seven months.

Comparative POIs Congestion Report of M/s Bharti Tele-ventures Limited for the months of April - Aug, 2005					
Name of Circle and POIs	Benchmarks 0.5%				
	April	May	June	July	Aug
Assam					
POI with Other CMTO					
Reliance Telecom			69.00	89.65	77.23
POI with BSNL (Level 2 TAX)					
BSNL-STD/Local-Guwahati-Home Subs			0.00	NA	21.00
BSNL-STD/Local-Guwahati-Inroamers			0.00	40.40	15.08
Bihar					
POI with other CMTO					
Tata				1.70	7.39
POI with Other UASL Operators					
RELIANCE_WLL	0.00	0.62	0.03	0.80	3.55
Tata FIX				1.10	17.47
POI with BSNL (Level 1 TAX)					
Patna level	14.47	28.03	23.76	35.40	51.10
Rajender Nagar					15.89
POI with BSNL (Level 2 TAX)					
Gaya	0.01	0.03	1.90	5.20	12.83
Bhagalpur			0.00	5.20	2.53
Chapra			0.29	30.50	35.83
Dharbhanga			18.30	36.10	46.62
POI with ILDO					
Reliance ILD				0.00	17.00
Chennai					
POI with other operators					
Aircel	8.46	25.59	4.33	18.00	15.00
Hutch	0.00	5.00	2.06	0.00	4.20
POI with BSNL (Level 1 TAX)					
Flower Bazaar TAX	4.31	0.00	4.37	5.00	10.00
Inter Circle Direct POI					
Aircel TN - Outgoing				5.00	2.00
Gujarat					
POI with BSNL Level 1 TAX					
Bhadra level - ahd	16.04	0.92	13.57	24.68	42.83
Gulbai tekra _ahd	6.30	14.16	30.00	37.26	28.86

POI with BSNL Level 2 TAX					
Gulbai tekra_ahd	0.52	9.25	28.11	29.22	27.32
Surat	10.81	1.83	2.95	7.02	7.43
Palanpur	1.99	94.76	96.11	95.72	94.81
Mehasana	89.44	87.10	89.01	85.19	84.76
Bhavanagar	73.64	91.81	86.44	59.68	79.14
BHUJ	12.56	36.12	2.33	0.93	33.63
JUNAGADH	0.00	34.94	44.46	39.40	33.27
RAJKOT	1.06	34.63	26.74	28.26	23.72
SURENDRANAGAR	24.43	74.78	85.43	82.17	65.36
Himachal Pradesh					
POI with BSNL Level 1 TAX					
SHIMLA	0.00	0.00	0.00		7.00
Shimla CellOne			0.60	1.20	8.80
POI with BSNL Level 2 TAX					
DHARAMSHALA	1.90	11.15	22.30	5.30	13.30
HAMIRPUR	17.60	34.46	23.50	28.00	22.20
J & K					
JAMMU level 1TAX	86.39	88.37	83.20	81.60	84.90
Karnataka					
Bharti NLDO	0.00	0.00	0.00	0.00	2.35
POI with BSNL Level 2 TAX					
TUMKUR	69.98	25.45	2.43	23.86	15.37
MANDYA	12.17	0.00	3.87	6.71	3.39
HASSAN	38.00	40.36	8.09	34.12	35.67
SHIMOGA	0.64	3.86	0.15	2.95	10.04
BIDAR	2.50	9.93	2.45	1.05	4.58
BELGAUM	4.50	7.36	0.67	8.34	5.08
BIJAPUR	2.00	16.00	4.05	6.36	16.34
KARWAR	36.00	53.00	0.17	1.91	2.50
Kerala					
POI with other operators					
Riliance	0.00	0.00	0.00	10.00	10.00
Escotel	10.00	26.92	12.80	11.00	11.00
POI with BSNL Level 2 TAX					

Alleppy	0.00	7.33	4.74	0.00	3.80
Maharashtra					
POI with other CMTO					
Bharti - Cellone	32.28	31.86	44.83	19.07	41.25
POI with BSNL Level 2 TAX					
<i>Jalgaon</i>	2.32	1.36	0.00	18.98	18.98
Aurangabad	2.22	2.74	4.07	0.00	5.63
<i>Nanded</i>	4.56	4.56	5.12	3.17	36.18
Nagar	7.03	6.36	0.57	6.26	4.17
Dhule	3.21	4.01	1.01	4.54	13.10
Solapur	2.45	2.58	2.01	4.10	70.88
GOA	4.76	5.36	3.83	3.83	30.05
Sangli	3.89	6.38	1.12	0.00	6.01
Latur	0.00	0.00	0.00	0.00	63.25
Akola	0.04	0.38	1.38	8.45	10.28
Amravati	9.87	8.89	44.63	44.63	31.06
Yawatmal	8.65	8.01	9.01	5.55	3.55
Savantwadi	0.05	0.04	0.14	5.65	3.83
Ratnagiri	9.98	8.97	8.97	5.65	3.53
Osmanabad	10.87	11.87	54.34	0.10	59.15
Mumabai					
POI with other CMTO					
Bharti - Dolphin	1.20	0.00	0.80	2.00	5.00
POI with MTNL Tandem					
Cumballa level 3	0.41	0.00	0.80	2.00	2.00
Vile Parle level 6	0.88	0.00	0.20	0.00	2.00
NE					
BSNL-STD/Local-Shillong-Home Subs OG			0.00	79.34	17.00
Orissa					
Cuttack L-1 TAX	2.37	2.05	2.05	0.00	10.81
Balasore L-2 TAX	4.92	2.39	2.39	2.39	2.39
Punjab					
POI with BSNL Level 1 TAX					
JALANDHAR (MTS Nagar)			5.03	3.69	5.63
Rajasthan					
POI with BSNL Level 1 TAX					
Jaipur	8.41	23.36	20.93	30.86	30.86
POI with BSNL Level 2 TAX					
Alwar	1.25	35.13	27.25	47.60	35.20
Bharatpur		0.04	15.39	45.32	41.98
Bhilwara	0.29	1.44	1.62	11.52	8.40
Bundi	1.13	22.58	13.54	14.25	17.93
Cittorgarh	0.85	0.88	0.00	0.32	3.33
Jhalawar	1.51	41.21	30.01	33.11	90.52
Jhunjhunu	0.86	73.10	62.45	62.15	26.77
Kota	0.95	10.13	23.70	20.09	74.93

Sirohi	1.60	68.03	63.50	62.24	60.26
Tonk	1.54	0.71	1.54	0.34	12.62
Udaipur	1.48	8.41	7.09	6.50	27.65
Tamilnadu					
POI with other operators					
Reliance	0.00	0.00	0.00	0.00	12.00
POI with BSNL Level 2 TAX					
Coimbatore	11.16	11.42	10.31	15.00	15.00
Dharmapuri	32.00	41.21	30.90	40.00	40.00
Ooty	24.00	33.73	24.80	38.00	41.00
Inter Circle Direct POI					
HUTCH Chennai - Outgoing					14.00
UP - E					
POI with FWPO/FWTO					
Bharti- Reliance	0.00	0.00	0.00	0.00	38.50
POI with BSNL Level 1 TAX					
IndraNagar	43.00	36.00	27.50	51.20	35.00
IndraNagar AXE	56.00	40.00	0.50	53.20	50.00
Keshar Bagh	60.00	60.00	54.50	71.80	66.00
POI with BSNL Level 2 TAX					
Barabanki	33.00	42.00	38.90	51.20	49.00
Deoria	0.00	0.00	0.00	0.80	7.00
Mirzapur	0.00	1.40	14.90	22.20	20.00
PratapGarh		0.00	0.00		10.00
AzamGarh		0.00	0.10	3.60	13.00
POI with other OILDO					
BSNL ILDO-Incoming	0.00	0.00	0.30	0.20	2.00
UP - W					
Haldwani Level 2 TAX	90.00	91.00	89.20	73.80	86.30
BSNL Level 1TAX	52.04	25.30	45.30	56.90	46.80

POI Congestion Report of M/s Hutch for the month of Jan - August, 2005

Sr. No.	Name of POIs	Traffic Failed for all POIs <0.5%							
		Jan	Feb	March	April	May	June	July	August
I	Andhara Pradesh								
1	Hutch_Idea	0.00%	0.00%	0.00%	0.10%	14.5	29.63%	19.17%	45.44%
II	Punjab								
	POI with BSNL								
1	JALANDHAR	0.14%	10.42%	0.00%	0.00%	10.29%	25.63%	82.00%	86.00%
III	Rajasthan								
	POI with BSNL								
1	Pali	4.00%	6.48%	6.48%	11.00%	29.60%	31.58%	12.56%	19.70%
2	Sri Ganganagar	0.56%	2.49%	1.50%	1.00%	0.65%	1.05%	8.45%	11.36%
3	Alwar	1.44%	4.98%	6.75%	3.00%	3.00%	4.12%	4.13%	4.04%
4	Sirohi	10.08%	1.20%	0.86%	2.00%	6.07%	7.71%	4.83%	3.82%
5	Nagaur	0.92%	0.99%	12.00%	12.00%	41.00%	53.00%	53.23%	14.86%
6	Sw Madhopur	10.08%	33.29%	37.12%	59.00%	0.00%	60.00%	63.00%	12.00%
7	Bharatpur (Added in Feb 05)	-	0.00%	8.12%	19.00%	99.00%	52.00%	41.00%	1.67%
8	Sikar	34.00%	23.00%	36.00%	46.00%	93.00%	93.00%	36.00%	42.06%
IV	UP East								
	POI with BSNL								
1	Lucknow	21.00%	24.00%	14.00%	87.00%	50.00%	13.00%	19.00%	26.00%
2	Jaunpur	70.00%	63.00%	38.00%	93.00%	98.00%	90.00%	57.00%	0.00%
3	Shahjahanpur	0.00%	0.00%	0.00%	15.00%	20.00%	10.00%	3.00%	0.00%
4	Faizabad	0.00%	0.00%	0.00%	6.00%	15.00%	35.00%	3.00%	9.00%
5	Orai_out	0.00%	0.00%	0.00%	16.00%	16.00%	24.00%	24.00%	42.00%
6	Sitapur	0.00%	0.00%	0.00%	10.00%	10.00%	15.00%	3.00%	8.00%
V	West Bengal (ROB)								
	POI with BSNL								
1	BERHAMPUR TAX	10.62%	36.00%	44.00%	13.00%	19.00%	50.00%	25.00%	24.00%
2	ASANSOL TAX	53.00%	52.00%	51.00%	18.00%	52.00%	55.00%	55.00%	55.00%
3	BANKURA TAX	0.00%	0.00%	0.00%	0.00%	5.00%	2.00%	1.00%	0.00%
4	KHRAGPORE TAX	45.00%	50.00%	10.00%	6.00%	40.00%	57.00%	57.00%	51.00%

= Service Providers not meeting the benchmarks

NA = Data not available

POI Congestion Report of M/s Idea (Jan - August, 2005)

Sr. No.	Name of POIs	Benchmarks (<0.5%)							
		January	February	March	April	May	June	July	August
1	Madhya Pradesh								
(i)	Idea - BSNL								
	Bhopal	21.30	23.40	22.10	2.50	5.10	4.50	6.60	5.00
	Khargone	20.10	27.20	29.20	27.40	26.60	29.30	28.40	31.60
	Khandwa	3.40	7.00	7.40	7.00	7.60	17.30	13.60	12.70
	Raigarh	19.30	26.80	25.70	24.20	19.30	NA	20.50	28.90
	Narsingpur	1.20	1.00	1.00	0.90	1.00	3.40	2.60	3.90
	Shahdol	3.90	7.50	13.40	16.20	16.90	18.90	19.10	25.80
2	Andhra Pradesh								
	(i) BSNL								
	KURNOOL	9.14	20.75	9.50	22.05	31.27	27.83	30.07	35.31
	MAHABOONNAGAR	33.27	42.22	44.09	39.58	39.75	35.70	31.85	29.73
	NALGONDA	0.73	5.88	9.20	5.44	6.44	6.09	4.91	7.28
	CUDDAPAH	0.00	1.45	6.07	6.87	11.55	20.33	4.24	4.11
	SRIKAKULAM	2.42	4.82	3.51	2.67	5.33	3.50	1.86	1.80
	(ii).Idea - Hutch								
	HUTCH HYD	0.00	10.87	3.45	0.69	18.83	3.61	18.67	36.89
	(iii) Idea - Reliance								
	RELIANCE FXD VJA MSC04	0.00	0.00	0.29	0.82	0.90	16.19	50.05	56.86
	(iv) NLD / ILD Operators								
	RELIANCE NLD ILD FIXED	0.00	0.00	0.00	0.00	13.78	30.13	23.58	39.70
3	Maharashtra								
(i)	Idea - BSNL								
	Jalna	65.90	72.57	71.69	68.00	61.90	63.10	55.70	32.10
	Nagpur	2.10	4.00	15.83	6.30	0.52	7.33	2.40	1.80
	Ratnagiri	13.10	11.10	18.52	16.95	14.20	16.03	11.60	7.30
4	Gujarat								
(i)	Idea - BSNL								
	ANAND	1.18	5.83	3.34	4.75	11.45	7.94	2.40	1.38
	AMRELI	11.28	27.35	11.24	3.63	5.80	5.52	5.25	5.90
5	Kerala								
	BSNL NLD		50.60	11.72	0.00	2.84	3.02	60.39	44.52
6	UP(W)								
(i)	Idea - BSNL								
	Mainpuri	29.25	71.12	44.71	4.60	0.00	3.01	2.87	11.15
	Bijnaur	15.36	74.73	72.26	73.66	73.72	74.85	72.17	64.02
	Pilibhit	18.38	6.13	40.51	21.42	28.30	25.67	25.45	9.63
	Agra	12.84	61.74	55.29	59.79	30.15	40.86	48.37	55.65

**POIs Congestion Report of M/s Reliance Telecom Limited for the months of
Jan - August, 2005**

Sr. No.	Circle	Benchmarks <0.5%							
		POI Name	JAN	FEB	MAR	APR	MAY	JUN	JUL
i	Madhya Pradesh								
	POI with BSNL								
1	BHOPAL	2.93%	3.00%	3.18%	4.21%	16.09%	16.59%	17.28%	19.13%
2	KHANDWA	2.71%	3.03%	0.33%	0.73%	2.02%	1.41%	0.67%	0.53%
3	KHARGONE	0.09%	0.00%	3.23%	1.02%	1.07%	1.56%	1.61%	1.79%
4	CHINDWARA	0.00%	0.00%	1.94%	0.96%	0.45%	1.74%	1.79%	1.87%
5	VIDISA	0.15%	0.00%	0.00%	0.59%	0.18%	1.93%	1.98%	1.71%
6	DURG	3.25%	8.01%	9.74%	11.63%	6.30%	7.17%	4.46%	5.25%
ii	Bihar								
	POI with BSNL								
1	PATNA	12.76%	23.37%	18.21%	12.40%	13.22%	14.99%	4.54%	8.13%
2	GAYA	12.32%	19.14%	19.50%	14.24%	15.04%	18.02%	18.53%	19.37%
3	MUZAFFARPUR	3.54%	12.19%	12.20%	13.96%	14.90%	15.31%	10.77%	1.66%
4	BHAGALPUR	3.27%	9.96%	11.99%	13.88%	13.09%	16.74%	18.74%	19.87%
6	DARBHANGA	10.16%	10.76%	12.86%	12.88%	13.69%	5.45%	0.00%	4.57%
7	SAHARSA	3.56%	11.56%	14.08%	12.49%	13.54%	12.10%	14.10%	19.11%
8	MOTIHARI	3.93%	11.61%	12.25%	13.41%	15.87%	6.13%	5.38%	12.81%
9	MUNGER	4.13%	12.19%	12.87%	12.53%	11.24%	17.52%	18.75%	21.05%
10	JAMSHEDPUR	3.92%	11.88%	6.35%	12.67%	13.55%	13.84%	19.00%	21.54%
11	DHANBAD	7.40%	10.32%	9.35%	10.11%	16.75%	15.05%	17.00%	19.51%
12	HAZARIBAGH	8.36%	10.21%	7.20%	11.30%	13.67%	14.98%	19.00%	21.56%
iii	West Bengal								
	POI with BSNL								
1	COOCHBEHAR	0.00%	1.31%	1.57%	15.23%	16.59%	14.56%	1.08%	1.07%
2	RAIGANJ	0.00%	0.70%	0.75%	1.40%	1.90%	3.78%	2.97%	2.66%
3	ASANSOL	0.00%	3.93%	3.09%	11.46%	3.52%	4.15%	8.87%	16.27%
iv	Himachal Pradesh								
	POI with BSNL								
1	SHIMLA	5.14%	9.77%	10.90%	12.15%	18.30%	17.80%	20.07%	25.75%
2	SOLAN	0.00%	0.00%	0.00%	0.51%	1.38%	0.71%	2.30%	2.83%
3	DHARAMSHALA	8.48%	12.62%	12.12%	12.59%	11.00%	17.26%	18.97%	21.78%
4	KULLU	0.78%	0.00%	1.69%	5.91%	11.61%	9.28%	5.64%	2.72%
5	HAMIRPUR	5.27%	9.35%	9.73%	12.78%	14.28%	13.50%	14.27%	18.26%
v	Assam								
	POI with BSNL								
1	GUWAHATI	2.27%	2.84%	2.35%	1.72%	5.02%	9.60%	10.61%	22.00%

POIs congestion Report of M/s Reliance Infocom Limited for the months of Jan - July, 2005

	Service area and POIs	Benchmarks <0.5%							
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
i	Andhra Pradesh								
	POI with BSNL								
	CUDDAPAH	0.00%	3.65%	0.00%	3.65%	0.33%	1.08%	1.41%	0.00%
ii	Bihar								
	POI with BSNL								
	Patna		31.15%	30.23%	31.15%	36.55%	48.05%	61.57%	69.90%
	Gaya								11.47%
iii	Haryana								
	POI with BSNL								
	AMBALA	16.41%	30.77%	27.35%	30.77%	1.55%	2.34%	3.29%	0.00%
iv	Karnataka								
	POI with BSNL								
	BELGAUM	0.00%	7.63%	3.03%	7.63%	1.35%	2.10%	2.54%	19.59%
v	Maharashtra								
	POI with BSNL								
	AMRAVATI	7.48%	27.59%	8.35%	27.59%	46.03%	56.86%	26.46%	32.82%
	JALNA	19.91%	40.16%	38.90%	40.16%	42.17%	45.96%	38.81%	47.53%
	RATNAGIRI	2.80%	11.20%	19.83%	11.20%	5.54%	8.04%	5.78%	15.49%
vi	Orissa								
	POI with BSNL								
	Cuttack	0.00%	4.20%	10.30%	4.20%	34.92%	31.26%	29.67%	46.26%
vii	Rajasthan								
	POI with BSNL								
	ALWAR	0.00%	31.11%	37.72%	31.11%	41.09%	27.83%	28.63%	35.29%
	CHITTORGARH	9.83%	37.45%	40.00%	37.45%	29.67%	28.43%	7.87%	13.45%
	JAIPUR	0.00%	14.80%	59.07%	14.80%	12.61%	25.36%	24.43%	15.04%
viii	UP - E								
	POI with BSNL								
	AZAMGARH		17.02%	7.77%	17.02%	37.86%	64.76%	71.69%	79.19%
	Lucknow L1 TAX Indira Nagar		51.82%	49.98%	51.82%	31.69%	8.78%	44.60%	58.75%
	LUCKNOW L1 TAX Kiserbagh		6.45%	14.29%	6.45%	15.47%	14.33%	54.20%	58.73%
ix	UP -W								
	POI with BSNL								
	AGRA	8.59%	20.86%	26.27%	20.86%	23.06%	27.37%	30.23%	0.02%
	NAINITAL	13.81%	9.05%	18.93%	9.05%	30.14%	39.86%	10.58%	15.69%
	Etah								3.73%
x	West Bengal								
	POI with BSNL								
	Asansol	0.00%	0.00%	2.14%	0.00%	0.95%	0.13%	5.85%	11.63%

Comparative Statement of M/s Reliance Telecom for the months of
Jan, April - August, 2005

Months	Circles	Parameters to be Monitored	
		SDCCH Congestion (%) <.1%	TCH Congestion (%) <2%
	I Madhya Pradesh		
January		0.80%	3.11%
April		0.38%	3.20%
May		0.62%	4.50%
June		0.69%	5.50%
July		0.75%	7.10%
August		0.45%	8.00%
	II Bihar		
January		1.25%	4.46%
April		1.50%	4.50%
May		1.60%	5.75%
June		2.00%	7.00%
July		0.80%	8.11%
August		1.50%	9.50%
	III Orissa		
January		0.00%	2.10%
April		0.12%	2.50%
May		0.16%	3.11%
June		0.80%	5.00%
July		0.13%	5.95%
August		0.22%	6.00%
	IV West Bengal		
January		7.21%	2.98%
April		0.95%	3.00%
May		1.05%	3.50%
June		1.50%	5.00%
July		1.50%	6.20%
August		1.50%	7.50%
	V Himachal Pradesh		
January		0.81%	1.97%
April		0.91%	1.87%

May		0.91%	1.70%
June		0.69%	1.30%
July		0.32%	1.70%
August		0.25%	1.70%
VI	Assam		
January		0.68%	2.20%
April		0.73%	2.60%
May		0.74%	2.80%
June		0.75%	4.50%
July		0.98%	4.43%
August		0.95%	4.90%
VII	NorthEast		
January		0.03%	0.41%
April		0.72%	1.89%
May		0.90%	2.00%
June		0.91%	4.84%
July		0.90%	6.00%
August		0.90%	7.00%

POIs Congestion Reports of M/s Tata Teleservices for the months of July - August, 2005			
Circle	Name of POIs	Benchmark <0.5%	
		July	August
1. Delhi	POI with BSNL		
	Faridabad_Tandem	0.18	1.15
	Ghaziabad_TAX	0.02	4.32
2. Gujarat	POI with BSNL		
	Sanand	0.00	1.00
	Gandhinagar	2.00	3.00
	Valsad	3.00	2.00
	Bilimora	4.00	5.00
	Porbandar	4.00	5.00
	Limbdi	1.00	3.00
	Morbi	1.00	1.00
	Veraval	4.00	3.00
	Jetpur	1.00	3.00
	Navsari	2.00	2.00
	TAX	9.00	1.00
	Bhuj Tax	1.00	1.00
3. Rajasthan	POI with BSNL		
	Jaipur_Fix	1.00	1.00
	Jaipur_Fix	80.00	79.00
4. Karnataka	POI with BSNL		
	Anekal Tandem	1.30	2.00
	Mallavalli	0.00	4.00
	Davangere Tandem	27.90	11.00
	Bidar TAX	14.30	52.50
5. Haryana	POI with BSNL		
	SONIPAT TANDEM	10.70	44.50
	YAMUNANAGAR TANDEM	81.70	59.30
	AMBALA TAX(Fixed NLD)	87.80	100.00
	AMBALA TAX(Mobile NLD)	11.45	32.80
	KARNAL TAX(Fixed NLD)	0.00	9.90
	SONIPAT TAX(Fixed NLD)	0.00	37.20
6. Punjab	POI with BSNL		
	Chandigarh Sec. 17 Tandem	7.10	4.70
	Ferozpur Tandem	16.80	40.79
	Nawanshar Tandem	18.81	70.13
	Patiala Tandem	6.36	6.46
	Rajpura Tandem	0.00	9.05
	Amritsar TAX	0.00	5.96
	Chandigarh TAX	43.27	75.93
	Jalandhar TAX	0.00	17.23
	Ferozpur TAX	0.18	6.31
	Patiala TAX	3.36	56.82
7. Bihar	POI with BSNL		
	AARAH	76.25	65.70
	AIRTEL	24.32	20.70

	JAMSHEDPUR	76.34	71.80
	PATNA	81.37	87.50
	VSNL_KOLKATA	19.37	14.30
	VSNL_PATNA	66.49	63.80
8. UP - WEST	POI with BSNL		
	Agra Local (Fix)	27.70	14.70
	Dehradun Local (Fix)	4.10	45.20
	Dehradun Tax (Fix)	0.00	17.10
	Moradabad Tax (Fix)	42.40	88.60
	Meerut Tax (Fix)	77.80	94.50
	Btsol Nld (Fix)	0.00	2.60
9. Andhra Pradesh			
	Airtel	0.00	15.30
	POI with BSNL		
	Sangareddy	2.00	3.00
	Mahaboobnagar	9.00	10.00
	Nandigama	0.00	7.00
	Srikalkulam	0.00	4.00
10. Chennai	POI with BSNL		
	Anna Road Tandem(fix)	9.64	5.67
	KK Nagar Tandem(fix)	0.37	0.58
11. Tamilnadu			
	POI with other operators		
	HUTCH CHENNAI	1.34	2.08
	Aircell Coimbatore(mob)	0.00	2.23
	Reliance Coimbatore(mob)	0.00	2.98
	POI with BSNL		
	Chengulpet_Farend	10.63	9.12
	Kanchipuram_Farend	9.81	10.11
	Virudunagar_Farend	0.00	2.55
	Dharmapuri_TAX	0.00	0.62
	Virudunagar_TAX	0.00	0.81
	Virudunagar_TAX(mob)	0.00	0.54
12. UP - East	POI with BSNL		
	LUCKNOW	4.17	4.17
	LUCKNOW	19.63	19.63
	VARANASI	72.39	72.39
13. Madhya Pradesh & Chhattisgarh			
	POI with BSNL		
	Indore_TAX	5.00	23.20
	Jabalpur_TAX	45.00	46.00
	Raipur_TAX	32.00	0.63
	Bilaspur_L2 TAX	17.00	39.70

POI Congestion Report of M/s Spice Communications (Jan - August, 2005)

Sr. No.	Name of POIs	Benchmarks <0.5%			
		May	June	July	August
1	Punjab				
	POI with BSNL				
1	Hoshiarpur	0.00%	0.00%	2.94%	3.48%
2	Jalandhar	4.15%	6.33%	10.58%	11.21%
3	Kotkapura	2.82%	0.00%	3.50%	2.56%
4	Amritsar	0.00%	0.00%	1.50%	1.93%
5	Bhatinda	0.00%	0.00%	3.17%	2.27%
6	Chadigarh	0.00%	0.00%	0.70%	0.60%
7	Ludhiana	2.82%	0.00%	3.41%	3.36%
8	Pathankot	1.11%	0.01%	2.18%	3.15%
9	Patiala	0.00%	0.00%	2.99%	2.10%
10	Ropar	0.00%	0.00%	2.23%	1.03%
11	Sangroor	0.00%	0.00%	3.04%	2.79%
	POI with other Operators				
12	HFCL_Basic	0.00%	0.00%	3.37%	1.90%
13	BTSOL_NLD	0.10%	0.00%	3.18%	1.52%
14	VSNL_ILD	0.00%	0.00%	3.81%	4.86%

POI Congestion Report of M/s Aircel Cellular Limited (July - August, 2005)			
Sr. No.	Name of POIs	Benchmark <0.5%	
		July	August
	Chennai		
	POI with BSNL		
1	BSNL Local	11.00%	27.30%
2	BSNL NLD	91.00%	82.00%
	POI with other operators		
3	Airtel Local	77.00%	74.00%
4	Hutch Local	63.00%	70.00%
5	ROTN BPL	25.60%	20.00%
6	ROTN TATA	73.00%	73.00%

**Comparative Network Congestion Report of M/s BSNL for
the month of May- August, 2005**

Sr. No.	Service area and POI	Parameters to be Monitored	
		1	2
		SDCCH Congestion <1%	TCH Congestion <2%
1	Andhara Pradesh		
May		1.10%	10.60%
June		0.50%	9.20%
July		0.30%	7.30%
August		0.39%	8.56%
2	Assam		
May		4.60%	13.00%
June		4.20%	18.50%
July		4.60%	5.00%
August		4.02%	9.58%
3	Bihar		
May		3.10%	9.80%
June		3.90%	12.40%
July		3.50%	12.10%
August		2.95%	12.07%
4	Chennai		
May		0.20%	3.50%
June		0.20%	3.90%
July		0.30%	3.60%
August		0.13%	3.23%
5	Gujarat		
May		0.40%	2.00%
June		0.50%	1.80%
July		0.50%	1.60%
August		0.45%	1.65%
6	Haryana		
May		5.90%	11.60%
June		7.40%	13.70%
July		7.90%	15.10%
August		9.54%	16.61%
7	Himachal Pradesh		
May		5.20%	9.20%

June		4.80%	7.50%
July		4.60%	7.30%
August		4.30%	6.90%
8	J & K		
May		3.50%	9.20%
June		1.80%	6.90%
July		1.90%	5.60%
August		1.00%	9.00%
9	Kerala		
May		1.50%	1.90%
June		0.30%	7.70%
July		0.30%	7.10%
August		0.38%	10.30%
10	Karnataka		
May		0.70%	3.30%
June		0.80%	4.90%
July		0.60%	4.50%
August		0.61%	2.38%
11	Kolkata		
May		0.20%	1.10%
June		0.10%	1.90%
July		0.40%	1.70%
August		1.03%	1.50%
12	Maharashtra		
May		4.10%	2.70%
June		0.50%	1.90%
July		6.10%	4.90%
August		3.09%	2.26%
13	Madhya Pradesh		
May		3.60%	9.30%
June		2.90%	10.50%
July		2.20%	9.00%
August		2.94%	7.26%
14	NE		
May		0.50%	1.80%
June		0.50%	1.50%
July		0.50%	1.40%
August		0.48%	1.30%
15	Orissa		
May		3.70%	11.30%

June		3.90%	10.50%
July		4.30%	15.30%
August		4.04%	8.73%
16	Punjab		
May		0.50%	1.60%
June		0.50%	1.30%
July		0.50%	1.60%
August		0.30%	2.10%
17	Rajasthan		
May		1.80%	11.40%
June		1.50%	10.10%
July		1.20%	11.00%
August		1.95%	9.20%
18	Tamilnadu		
May		1.20%	9.10%
June		1.20%	9.30%
July		1.20%	9.30%
August		1.19%	9.10%
19	UP - E		
May		5.00%	2.00%
June		5.00%	2.00%
July		5.00%	3.00%
August		5.00%	3.00%
20	UP - W		
May		8.00%	15.00%
June		4.80%	14.90%
July		7.20%	14.00%
August		8.40%	16.60%
21	West Bengal		
May		0.50%	1.10%
June		0.40%	1.60%
July		0.60%	1.50%
August		0.60%	1.70%

