

2nd NATIONWIDE BROADBAND QUALITY OF SERVICE SURVEY RESULTS

**“Create a Fair Regulatory Regime to Promote Investment,
Encourage Competition, Protect Consumer Interest &
Ensure High Quality ICT Services.”**

BROADBAND TECHNOLOGY

Broadband is not merely a communication technology; in-fact it is a significant economic stimulus for any country as changing dynamics of the world economy rely heavily on well connected economic resources of a country. Advanced content, high quality mediums, reliable infrastructure and well linked information repositories determine the future of country's economy by providing right information delivered through reliable and secure communication links at the right time.

QoS SAFEGUARD OF CONSUMER INTERESTS

In pursuance of PTA's role to safeguard of consumer interests and growth of quality broadband services, PTA carried out the second nationwide Broadband Quality of Service (QoS) Survey of all wireless and wireline service providers throughout the country. The survey was conducted during third and fourth quarter of 2011. It is worthwhile to note that QoS generally determines the standing and status of country's telecom services; therefore, special emphasis is exerted to keep the QoS of broadband companies at a satisfactory level. PTA has devised QoS standards/Key Performance Indicators (KPIs) in line with best international practices and in consultation with service providers. The post-survey analysis is carried out on the basis of scores against each KPI.

KEY PERFORMANCE INDICATORS

The major Broadband QoS KPIs are Service Availability, Download and Upload bandwidth Speed, Round-Trip Time (RTT) and Retain-ability. Broadband Service Availability indicates the number of times we are able to successfully access the broadband services. The bandwidth speed is the measure of how much data a subscriber can receive or send to the maximum. RTT is the time taken for the data packet to reach a particular destination and return. Retain-ability is measure of how much time a connection remained connected during the period of 60 minutes.

QoS PARAMETERS GRADING

PTA grades each QoS parameter into Grade A, B, C, D and E based on the percentage of score obtained during the measurement. The grading of QoS parameters are:-

SERVICE AVAILABILITY

Broadband Service Availability indicates the number of times we are able to successfully access the broadband services. Grade A applies to 95 %, Grade B to greater than 80 % but less than 95 %, Grade C greater than 70 % but less than 80 %, Grade D greater than 50 % but less than 70 % and Grade E less than 50 %.

Bandwidth

If download and upload speed remains greater than 75 % of the advertised speed experienced for 70 percent of the time, it is categorized as Grade A, Grade B (greater than 60 % but less than 75 %), and Grade C (greater than 45 % but less than 60 %), Grade D (greater than 30 % but less than 45 %) and Grade E (less than 30 %).

Round Trip Time

The operator with round trip time of less than 70ms is placed in Grade A, between 70 and 80 ms Grade B, between 80 and 90 ms Grade C and between 90 and 100 ms or more is Grade D.

Retain-ability

Similarly retain-ability for 60 minutes without disconnection is considered as Grade A, greater than 45 minutes but less than 60 minutes is Grade B, between 30 to 45 minutes is Grade C, between 15 to 30 minutes is Grade D and less than 15 minutes is Grade E.

Based on the overall score obtained in KPIs, an operator is placed into Category A (greater than 90 %), Category B (greater than 80 % but less than 90 %) and Category C (greater than 70 % but less than 80 %) to gauge the performance of different operators. The survey was carried out in Lahore, Karachi, Peshawar, Quetta, Rawalpindi/Islamabad and Muzaffarabad for two broadband services i.e. 512Kbps and 1Mbps.

512 KBPS BROADBAND PACKAGES

For 512Kbps broadband package of wireless broadband service providers, Wateen Telecom has been placed in **Category-A** in Lahore, Rawalpindi, Karachi and Quetta and **Category-B** in Peshawar. Similarly Wi-Tribe in Karachi and Rawalpindi/Islamabad, Qubee in Lahore and Rawalpindi and WorldCall in Lahore are placed in **Category-A**. Qubee and WorldCall in Karachi and Wi-Tribe in Lahore are placed at **Category-B**.

Similarly for 512Kbps broadband package of wireline broadband service providers, Cyber Net was placed in **Category-A** in Karachi, Rawalpindi/Islamabad and Quetta whereas in **Category-B** in Lahore and Peshawar. MicroNet (NayaTel) in **Category-A** in Rawalpindi/Islamabad.

1 MBPS BROADBAND PACKAGES

For 1Mbps broadband package of wireless broadband service providers, Wateen Telecom has been placed in **Category-A** in Lahore and Rawalpindi/Islamabad and **Category-B** in Karachi, Quetta and Peshawar. Similarly Qubee and WorldCall are in **Category-A** at Lahore and **Category-B** at Karachi and Wi-Tribe is in **Category-B** at Rawalpindi/Islamabad.

Similarly for 1Mbps broadband package of wireline broadband service providers, PTCL has been placed in **Category-A** in Lahore, Rawalpindi/Islamabad, Peshawar and Quetta and in **Category-B** in Karachi. LinkDotNet has obtained **Category-A** in Rawalpindi/Islamabad and Quetta and in Lahore in **Category-C**. Whereas, MicroNet has been placed in **Category-A** in Rawalpindi/Islamabad.

The Broadband QoS Survey 2011 detailed results of wireless and wireline service providers are:-

Wireless Broadband Service Providers CityWise Results Summary

City Name	512 KBPS BSPs Ranking					
	Category A (>= 90 % Marks)		Category B (>=80 % Marks)			
Karachi	Wateen	WiTribe		Qubee	Mobilink Infinity	WorldCall
Lahore	Wateem	WorldCall	Qubee	Wi-Tribe		
Rawalpindi	Wateen	Qubee	W-Tribe			
Peshawar				Wateen	WorldCall	
Quetta	Wateen					

City Name	1 MBPS BSPs Ranking					
	Category A (>= 90 % Marks)		Category B (>=80 % Marks)			Category C (>=70 % Marks)
Karachi			Wateen	Mobilink Infinity	WorldCall	Qubee
Lahore	WorldCall	Qubee	Wateen			
Rawalpindi	Wateen		W-Tribe			Qubee
Peshawar			Wateen			
Quetta			Wateen			

Overall Standing

Company	Category A	Category B	Category C	Total	1MB Tariff Ceiling (<=2500)
Wateen	6	4	0	10	1399
Qubee	3	2	1	6	425
WorldCall	2	3	0	5	2500
Wi-Tribe	2	2	0	4	1600
Mobilink Infinity	0	2	0	2	1400

Wireless Broadband Service Providers Survey Results

City	Company Name	512Kbps					1 MB				
		Service Availability	Service Retainability	Round Trip Time (msec)	Bandwidth (Kbps)		Service Availability	Service Retainability	Round Trip Time (msec)	Bandwidth (Kbps)	
					D/L	U/L				D/L	U/L
Karachi	Wateen	100	60	74	463	254	100	60	74	919	223
	Wi-Tribe	100	60	65	521	127	-				
	WorldCall USB	100	60	86	242	151	100	60	86	575	376
	Qubee	100	60	70	427	103	100	60	70	745	174
	Mobilink Infinity	100	60	74	403	114	100	60	74	842	193
Rawalpindi	Wateen	100	60	73.5	429.064	249.541	100	60	68.83	680	234
	Wi-Tribe	100	60	67.17	355.95	84.48	100	60	80.17	524	137
	Qubee	100	60	15.33	234.12	179.23	100	60	79.83	200	0
Lahore	Wateen	100	60	73.62	429.64	267.04	100	60	79.5	911.35	208.95
	Wi-Tribe	100	60	90.83	399.8	129.34	-				
	WorldCall USB	100	60	67.83	469.27	154.9	100	60	72	469.51	146.66
	Qubee	100	60	62.17	392.24	125.5	100	60	64	714.24	208.92
Peshawar	Wateen	100	60	78.83	262.28	147.14	100	60	65.35	461.02	250.83
	WorldCall USB	100	60	76.03	288.68	172.4	-				
Quetta	Wateen	100	60	56.5	458.67	259	100	60	61.5	790	259
PTCL EVDO (3.1MBPS) Results											
Karachi	PTCL EVDO (3.1Mbps)	-					100	60	69	1117	301
Rawalpindi							100	60	76.5	-	-
Lahore							100	60	63.5	1060.45	425.53
Quetta							100	60	147	414.5	159
Muzaffarabad							100	60	84.93	481.3	367

Wireline Broadband Service Providers City Wise Results Summary

City Name	512 KBPS BSPs Ranking					
	Category A (>= 90 % Marks)			Category B (>=80 % Marks)		Category C (>=70 % Marks)
Karachi	Connect Net	Satcomm	CyberNet	Fariya Net	Worldcall	Ebone
Lahore	Brain Net				Worldcall	Cyber Net
Rawalpindi	Micro Net		CyberNet			
Peshawar	Gol Net				CyberNet	
Quetta	CyberNet				Link dot Net	

City Name	1 MBPS BSPs Ranking			
	Category A (>= 90 % Marks)		Category B (>=80 % Marks)	Category C (>=70 % Marks)
Karachi	Satcomm	Worldcall	PTCL	
Lahore	PTCL DSL	Worldcall		Link dot Net
Rawalpindi	PTCL DSL	Micro Net	Link dot Net	
Peshawar	PTCL DSL	Link dot Net	Gol Net	
Quetta	PTCL DSL	Link dot Net		

Overall Standing

Company	Category A	Category B	Category C	Total	1MB Tariff Ceiling (<=2500)	Company	Category A	Category B	Category C	Total	1MB Tariff Ceiling (<=2500)
PTCL	4	1	0	5	1199	Satcomm	2	0	0	2	1199
WorldCall	3	1	0	4	1400	Fariya Net	1	0	0	1	800
Link Dot Net	3	1	1	5	1200	Gol Net	2	0	0	2	1500
MicroNet	2	0	0	2	1999	Brain Net	1	0	0	1	1111
Connect Net	1	0	0	1	500	Ebone	0	0	1	1	1200
Cyber Net	3	2	0	5	1150 (512Kbps)						

Wireline Braodband Service Providers Survey Results

City	Company Name	512Kbps					1 MB				
		Service Availability (%)	Service Retainability (min)	Round Trip Time (msec)	Bandwdith (Kbps)		Service Availability (%)	Service Retainability (min)	Round Trip Time (msec)	Bandwdith (Kbps)	
					D/L	U/L				D/L	U/L
Karachi	Cubex Net	100	60	8	479	352	100	45	8	924	426
	Connect Net	100	60	3	474	379					
	Satcomm	100	55	1	618	522	100	60	1	862	903
	Ebone	100	60		474	330	100	60		825	379
	Fiber Link	100	60	1	474	227	100	60	1	753	269
	Fariya Net	100	60	1	508	115					
	Cyber Net	100	60	41	363	425	100	60	41	810	386
	PTCL			-			95	60	56	507	198
	LinkDotNet			-			67	33	49	391	157
	Multinet	100	55	31	524	426	65	40	31	321	139
WorldCall DSL	100	60	19	477	436	100	60	19	892	391	
Rawalpindi	MicroNet	100	60	15.33	448.56	173.89	100	60	12.67	796	211
	Cyber Net	100	60	44.83	503.25	298.72	100	60	43.5	875	453
	PTCL			-			100	60	37.17	682	193
	LinkDotNet	-	-	-		-	100	60	44.5	882	199
Lahore	Nexlinx	65	60	42.83	410.33	338.79	77	60	45.5	743.45	182.93
	Brain Net	82	60	60	364.66	278.34	50	60	92.83	859.31	384.24
	Cyber Net	92	60	0	199.32	306.58			-		
	PTCL			-			100	60	24.83	696.87	260.74
	LinkDotNet			-			88	60	194.17	752.63	228.61
	Multinet	97	60	41.3	421.06	323.85	97	60	46.5	769.85	291.57
	WorldCall DSL	67	60	9.83	466.11	76.11	100	60	18.33	618.65	448.01
Peshawar	Comsats	100	60	32.17	419.24	438.18	100	60	28	1121.77	556.37
	GoL Net	100	60	35.065	438.65	747.7	100	60	35.5	789.5	844.4
	Cyber Net	100	60	76	193.5	258.65	100	60	37.3	613.77	530
	PTCL			-			100	60	26.1	671.21	440
	LinkDotNet			-			100	60	58.9	851	486.8
Quetta	Comsats	100	60	104.415	121.59	319.82	100	60	70.18	291	243
	Cyber Net	98	60	36.5	322	322	100	60	35	813	530.5
	PTCL	-	-	-			100	60	17	803	215
Muzaffarabad	LinkDotNet	100	60	76.5	461	127.67	100	60	47	863.33	227
	SCO	100	60	9.166	359.6	378.6	100	60	6.26	639	642