Monthly Operating Support System (OSS) Report of Mobile Services

Bhutan InfoComm and Media Authority

Royal Government of Bhutan

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Contents

1. Background

The Authority collects the monthly system generated Mobile Operating Support System (OSS) report from the Telecom Operators and does reviews on the average Mobile Quality of Service (QoS). Based on the system generated Mobile OSS reports, the Authority decides the locations of physical verification or a drive test and carries out the Mobile QoS drive test to monitor and report the QoS regularly. The Mobile OSS report contains the mobile QoS for both voice and data services which are based on and measured through the various parameters of key performance indicators (KPI) of Mobile services of the 20 dzongkhags.

These OSS reports contain both operator's averaged Operation Support system (OSS) reports for the month of September 2021.

2. Findings

The results and findings of OSS system generated reports submitted by both the telecom operators are presented below:

(i) B-Mobile OSS

BTL monthly OSS report of September 2021									
SI. No.	Location of Core Areas	CS drop rate (%)	PS drop rate (%)		CS success rate (%)	PS success rate (%)		DL user throughput (Mbps)	
		3G	3G	4G	3G	3G	4G	3G	4G
1	Thimphu	0.14	0.76	0.59	99.83	98.56	99.94	2.01	9.58
2	Paro	0.10	0.70	0.45	99.89	98.73	99.96	1.81	11.55
3	Haa	0.12	1.43	0.51	99.73	98.26	99.90	1.86	19.14
4	Wangdi	0.18	1.23	1.08	99.85	98.17	99.91	1.65	8.43
5	Gasa	0.10	1.72	0.60	99.93	99.03	99.93	1.83	31.10
6	Punakha	0.10	1.18	0.55	99.86	98.79	99.95	1.42	8.56
7	Chukha	0.15	0.85	0.76	99.82	98.45	99.93	2.73	17.95
8	Samtse	0.14	1.24	1.00	99.86	98.60	99.88	1.64	14.11
9	Sarpang	0.15	1.14	0.74	99.61	97.25	99.93	1.84	9.28

10	Dagana	0.09	1.53	0.78	99.91	98.23	99.88	1.93	19.34
11	Zhemgang	0.15	1.69	0.61	99.86	98.01	99.93	2.01	24.36
12	Tsirang	0.20	1.45	0.59	99.82	98.79	99.94	2.19	16.24
13	Trongsa	0.83	1.38	0.72	99.73	97.80	99.92	1.68	16.59
14	Bumthang	0.14	0.96	0.39	99.76	98.89	99.95	1.72	18.43
15	SJongkhar	0.17	1.01	0.84	99.82	98.17	99.91	1.81	12.15
16	Pgytsel	0.11	0.95	0.59	99.89	98.37	99.95	1.64	13.86
17	Trashigang	0.35	1.61	0.59	98.39	96.90	99.94	1.62	17.82
18	Tyangtse	0.13	0.76	0.73	99.83	99.08	99.92	2.45	11.55
19	Mongar	0.26	1.88	0.62	99.87	98.26	99.94	2.10	15.00
20	Lhuntse	0.12	1.01	0.67	99.88	98.25	99.94	1.63	20.29

(ii) Tashi Cell OSS

TICL monthly OSS report for September 2021									
SI. NO.	Region	CS drop rate (%)	PS drop rate (%)		CS RAB success rate (%)	PS RABsuccess rate (%)		DL user throughput (Mbps)	
		3G	3G	4G	3G	3G	4G	3G	4G
1	Bumthang	0.30	0.50	0.35	98.19	99.02	99.87	2.08	19.97
2	Chukha	0.18	0.48	0.36	98.36	98.83	99.82	2.05	16.77
3	Dagana	0.28	0.64	0.44	98.34	99.00	99.80	2.14	16.13
4	Gasa	0.39	0.70	0.30	98.38	98.82	99.87	1.76	12.93
5	Haa	0.31	0.63	0.29	98.26	98.92	99.87	1.92	22.28
6	Lhuntse	0.41	0.84	0.43	98.24	99.12	99.59	1.53	19.05
7	Mongar	0.34	0.78	0.43	98.29	98.99	99.73	1.65	16.79
8	Paro	0.39	0.57	0.26	98.28	98.91	99.86	1.83	17.43
9	Pemagatshel	0.35	0.74	0.41	98.19	98.99	99.66	1.63	16.50
10	Punakha	0.28	0.61	0.42	98.31	98.70	99.82	1.77	15.71
11	Samtse	0.23	0.71	0.49	98.24	98.58	99.81	1.61	13.94
12	Sarpang	0.25	0.77	0.25	98.14	98.27	99.72	1.62	14.95

13	SJongkhar	0.31	0.68	0.59	98.31	99.01	99.72	1.99	17.56
14	Thimphu	0.22	0.36	0.37	98.35	98.88	99.88	2.35	15.88
15	Trashigang	0.25	1.31	0.46	98.03	98.88	99.80	1.98	20.80
16	Trongsa	0.33	0.67	0.17	98.28	99.02	99.76	1.75	19.33
18	Trashiyangtse	0.20	0.52	0.17	98.27	99.16	99.70	1.78	20.54
17	Tsirang	0.38	0.91	0.30	98.23	98.25	99.75	1.37	16.56
19	Wangdi	0.29	0.74	0.31	98.30	98.92	99.85	1.80	18.11
20	Zhemgang	0.28	0.73	0.52	98.29	99.05	99.70	1.67	20.35

3. Analysis

a. The average download data throughputs (3G and 4G) for TICL are meeting the standard in all Dzongkhags.

b. The average download data throughputs of 4G for BTL are meeting the standard in all Dzongkhags.

c. The average download data throughputs of BTL (3G) is also meeting the standard except for Punakha Dzongkhag which is below the benchmark.

d. For both the operators, there were no issues of circuit switch (CS) drop rate as well as for packet switch (PS) drop rate for all dzongkhags.

e. Meanwhile, wherever the 3G sites are co-located with the 4G sites, the QoS issues of 3G are taken care of by the presence of 4G services.

4. Recommendation/Follow up

It was found that the operators have improved the previous OSS (July and August 2021) which is evident from September OSS reports. However, it was recommended that the OSS report of each BTS for Zhemgang and Lhuentse has to be checked rather than their Dzongkhag average. Besides, it is also recommended that the team visit the previous places of issues for KPI drive test.