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 February 2022.

2. Findings

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

(i) B-Mobile OSS

OSS KPI report of BTL for the month of Feburary,2022									
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	0.1	0.4	0.5	99.8	98.5	99.9	1.6	7.3
2	Paro	0.1	0.3	0.3	99.9	98.9	100.0	1.6	10.2
3	Haa	0.1	1.0	0.3	99.4	97.9	99.9	2.1	19.2
4	Wangdi	0.1	0.7	0.6	99.9	97.7	99.9	2.2	10.7
5	Gasa	0.1	1.4	0.4	99.9	98.9	100.0	1.6	22.0
6	Punakha	0.6	0.5	0.5	99.8	98.2	100.0	1.9	8.6
7	Chukha	0.3	0.4	0.7	99.7	98.5	99.9	2.2	14.4

8	Samtse	0.3	0.5	0.8	99.9	98.9	99.9	1.6	16.2
9	Sarpang	0.5	0.6	0.8	99.6	97.5	99.9	1.9	9.9
10	Dagana	0.2	1.2	0.8	99.9	96.8	99.9	1.6	17.8
11	Zhemgang	0.1	0.7	0.5	99.9	97.9	99.9	1.5	23.6
12	Tsirang	0.3	0.6	0.6	99.8	98.8	100.0	1.9	17.4
13	Trongsa	0.3	0.7	0.8	99.8	95.3	99.9	1.8	18.3
14	Bumthang	0.1	0.6	0.4	99.8	99.0	100.0	1.9	21.2
15	Sjongkhar	0.2	0.4	0.8	99.9	98.5	99.9	2.2	10.8
16	Pgytsel	0.1	0.5	0.7	99.9	98.6	100.0	1.5	17.2
17	Trashigang	0.4	1.1	0.7	99.7	98.2	99.9	2.0	19.1
18	Tyangtse	0.2	0.5	0.9	98.9	97.2	99.9	2.5	18.3
19	Mongar	0.1	0.6	0.7	99.9	98.4	99.9	2.2	21.1
20	Lhuntse	0.2	0.7	0.5	99.9	97.9	100.0	2.0	18.7

(ii) Tashi Cell OSS

TICL monthly OSS report for February 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	0.34	1.03	0.29	99.54	99.55	99.87	2.20	15.56
2	Chukha	0.12	0.85	0.35	99.93	99.11	99.76	1.79	10.57
3	Dagana	0.27	1.19	0.40	99.72	99.40	99.75	1.55	10.22
4	Gasa	1.32	1.96	0.15	99.58	99.45	99.71	1.69	8.10
5	Haa	0.98	1.69	0.27	98.69	98.52	99.86	1.77	15.95
6	Lhuntse	0.39	1.83	0.47	99.70	99.67	99.66	1.36	15.84
7	Mongar	0.25	1.59	0.36	99.77	99.57	99.75	1.51	12.11
8	Paro	0.26	0.68	0.22	99.91	99.62	99.87	1.90	13.75

9	Pemagat shel	0.28	1.00	0.29	99.93	99.66	99.55	1.38	11.17
10	Punakha	0.68	1.46	0.45	99.43	99.36	99.78	1.73	11.00
11	Samtse	0.48	1.78	0.53	99.48	98.87	99.76	1.36	9.21
12	Sarpang	0.44	1.57	0.23	99.51	98.99	99.58	1.56	9.89
13	Sjongkh ar	0.37	1.00	0.52	99.85	99.71	99.76	1.96	12.61
14	Thimph u	0.23	0.66	0.35	99.91	99.73	99.89	2.07	11.13
15	Trashiga ng	0.4	1.68	0.39	99.86	99.67	99.76	1.58	18.17
16	Trongsa	0.17	1.23	0.52	99.95	99.66	99.40	1.67	13.83
18	Trashi yangtse	0.22	1.75	0.15	99.56	99.31	99.64	1.55	13.51
17	Tsirang	0.93	1.72	0.31	98.94	97.85	99.61	1.26	7.87
19	Wangdi	0.82	1.75	0.35	99.23	98.82	99.81	0.12	12.97
20	Zhemga ng	0.22	1.36	0.37	99.94	99.62	99.56	1.37	14.21

3. Analysis

a. 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.

b. For 4G the averaged download throughput of both operators are meeting the standard whereas there are some Dzongkhags where the averaged download throughput for TICL (3G) is lower than the set standard (highlighted in red font).

c. 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

From the physical KPI drive test monitoring carried out in the month of January 2022 (Lockdown) in Thimphu core areas, it was found that KPI's of both the operators did not meet the minimum standards. Therefore both the telcos were imposed regulatory sanction.

Besides, the Telecom operators were also directed to submit the densification and expansion plans to improve the QoS.