Monthly Operating Support System (OSS) Report of Mobile Services

Bhutan InfoComm and Media Authority

Royal Government of Bhutan

July 2021

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 July 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

B-Mobile monthly OSS for the month of July 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	0.15	0.80	0.67	99.74	98.62	99.94	1.97	9.12
2	Paro	0.17	0.76	0.45	99.67	98.48	99.96	1.82	11.60
3	Haa	0.14	1.45	0.56	99.67	98.59	99.91	1.47	18.37
4	Wangdi	0.11	1.30	1.02	99.78	97.90	99.92	1.69	9.08
5	Gasa	0.07	1.61	0.69	99.88	98.96	99.92	1.66	30.03
6	Punakha	0.25	1.24	0.58	99.75	99.03	99.95	1.29	9.08
7	Chukha	0.18	1.04	0.93	99.71	98.42	99.93	2.54	14.12
8	Samtse	0.08	1.38	1.22	99.80	98.58	99.88	1.51	12.41
9	Sarpang	0.17	1.40	0.79	99.00	96.37	99.93	1.86	8.11

10	Dagana	0.06	1.31	0.81	99.72	98.40	99.90	1.37	20.22
11	Zhemgang	0.18	1.70	0.74	99.62	97.71	99.90	0.80	21.81
12	Tsirang	0.23	1.55	0.64	99.67	98.66	99.94	2.52	15.81
13	Trongsa	0.35	1.36	0.86	99.53	98.18	99.90	1.50	19.28
14	Bumthang	0.15	1.18	0.49	99.53	98.90	99.94	1.56	20.85
15	S/Jongkhar	0.19	1.13	0.78	99.62	98.18	99.92	1.61	12.62
16	Pgytsel	0.10	1.00	0.60	99.68	98.74	99.95	1.47	13.27
17	Trashigang	0.33	1.49	0.60	97.73	95.64	99.92	1.65	19.01
18	T/Yangtse	0.15	0.98	0.94	99.66	99.12	99.89	2.14	9.46
19	Mongar	0.19	1.57	0.74	99.70	98.24	99.94	2.03	14.18
20	Lhuntse	0.15	0.96	0.66	99.67	98.21	99.93	0.96	20.04

(ii) Tashi Cell OSS

Tashi Cell monthly OSS for the month of July 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	0.23	0.71	0.34	99.06	99.64	99.87	2.12	17.47
2	Chukha	0.12	0.70	0.55	99.33	99.42	99.78	2.06	14.34
3	Dagana	0.37	1.05	0.41	99.15	99.66	99.77	2.01	14.44
4	Gasa	0.52	2.17	0.34	99.46	99.76	99.86	1.36	12.33
5	Haa	0.42	1.16	0.25	98.94	99.22	99.86	1.84	19.28
6	Lhuntse	0.34	1.35	0.25	99.24	99.76	99.48	1.53	17.69
7	Mongar	0.31	1.39	0.35	99.32	99.69	99.73	1.59	15.23
8	Paro	0.39	0.64	0.27	99.29	99.71	99.87	1.89	15.72
9	Pemagatshel	0.34	0.96	0.26	99.29	99.72	99.63	1.54	14.28
10	Punakha	0.25	0.81	0.25	99.27	99.66	99.81	1.95	14.72
11	Samtse	0.23	1.20	0.47	99.09	99.10	99.75	1.32	10.69
12	Sarpang	0.29	1.23	0.22	99.05	99.10	99.71	1.58	12.99
13	Sjongkhar	0.21	1.01	0.46	99.30	99.69	99.75	2.15	16.19
14	Thimphu	0.27	0.69	0.37	99.27	99.72	99.88	2.31	16.07
15	Trashigang	0.37	1.67	0.39	99.32	99.64	99.61	1.67	20.13

16	Trongsa	0.19	3.38	0.16	99.32	99.76	99.80	1.63	14.74
18	Trashi yangtse	0.16	1.17	0.15	99.28	99.71	99.70	1.77	18.40
17	Tsirang	0.53	1.91	0.28	98.89	98.25	99.66	1.32	13.14
19	Wangdi	0.31	1.05	0.27	99.20	99.56	99.85	1.77	14.83
20	Zhemgang	0.25	1.00	0.36	99.30	99.74	98.86	1.67	17.41

3. Analysis

a. There were no QoS issues of BTL's circuit switch (CS) drop rate as well as for packet switch (PS) drop rate for all dzongkhags.

b. The average download data throughputs of BTL (4G) is meeting the standards in all dzongkhags whereas for 3G the throughputs are below the standards in Punakha, Haa, Dagana, Zhemgang, Pema Gatshel and Lhuentse dzongkhags.

c. TICL's circuit switch (CS) drop rate is meeting the standard for all dzongkhags but packet switch (PS) for Gasa and Trongsa are not meeting the standards.

d. The average download data throughputs (4G) for TICL is meeting the standard in all dzongkhags whereas the 3G data throughputs in Gasa, Samtse and Tsirang are below the standards.

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

The 3G sites are co-located with the 4G sites. And since there were no issues on the average download throughput on the 4G services, the 4G services will take care of the issues wherever the 3G sites are collocated with the 4G sites. For places like Haa, Zhemgang, Pemagatshel, Punakha, Lhuentse and Tsirang to be included in KPI monitoring (drive test) for the upcoming plan.