

LAMPIRAN

A. Data LogFile Asli

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	
TimeStamp	Longitude	Latitude	Speed	Operator	Operator ID	CellName	CellID	LAC	Network	Network Layer	Qual	SINR	CGI	UTERSSI	ABRCH	DL_Drop	UL_Drop	PSC	Altitude	Height	Accuracy	Location	State	PING	PING	PING	PING	PING	PING	PING	PING	PING	PING	PING
2	2026.06.18.15.33.38	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-94	-14	9	-	-51	500	-1	-1	289	30	30	1	0														
3	2026.06.18.15.33.40	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-91	-11	4	-	-51	500	-1	-1	289	30	30	1	0														
4	2026.06.18.15.33.40	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-91	-11	4	-	-51	500	-1	-1	289	30	30	1	0														
5	2026.06.18.15.33.41	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-91	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
6	2026.06.18.15.33.42	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-91	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
7	2026.06.18.15.33.43	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-91	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
8	2026.06.18.15.33.43	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-97	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
9	2026.06.18.15.33.44	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-97	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
10	2026.06.18.15.33.45	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-97	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
11	2026.06.18.15.33.45	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-97	-12	0	-	-51	500	-1	-1	289	30	30	1	0														
12	2026.06.18.15.33.46	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-102	-12	3	-	-51	500	-1	-1	6538	289	30	30	1	0													
13	2026.06.18.15.33.47	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-102	-12	3	-	-51	500	-1	-1	7275	289	30	30	1	0													
14	2026.06.18.15.33.48	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-102	-12	0	-	-51	500	-1	-1	0	289	30	30	1	0													
15	2026.06.18.15.33.49	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-102	-12	0	-	-51	500	-1	-1	11922	289	30	30	1	0													
16	2026.06.18.15.33.50	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-103	-12	-1	-	-51	500	-1	-1	5194	289	30	30	1	0													
17	2026.06.18.15.33.51	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-103	-12	-1	-	-51	500	-1	-1	5156	289	30	30	1	0													
18	2026.06.18.15.33.52	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-103	-11	4	-	-51	500	-1	-1	0	289	30	30	1	0													
19	2026.06.18.15.33.53	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-103	-11	4	-	-51	500	-1	-1	7024	289	30	30	1	0													
20	2026.06.18.15.33.54	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-99	-11	1	-	-51	500	-1	-1	5885	289	30	30	1	0													
21	2026.06.18.15.33.55	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-99	-11	1	-	-51	500	-1	-1	500	284	-1	289	30	30	1	0											
22	2026.06.18.15.33.55	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-99	-11	1	-	-51	500	-1	-1	0	289	30	30	1	0													
23	2026.06.18.15.33.55	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-99	-11	1	-	-51	500	-1	-1	0	289	30	30	1	0													
24	2026.06.18.15.33.56	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-101	-11	1	-	-51	500	-1	-1	0	289	30	30	1	0													
25	2026.06.18.15.33.57	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-101	-11	0	-	-51	500	-1	-1	0	289	30	30	1	0													
26	2026.06.18.15.33.58	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-101	-11	0	-	-51	500	-1	-1	0	289	30	30	1	0													
27	2026.06.18.15.33.58	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-105	-14	-1	-	-51	500	-1	-1	619	-1	289	30	30	1	0												
28	2026.06.18.15.33.59	101.3956	1.576717	0	TELKOMSEL	5.103016	44	-105	-14	-1	-	-51	500	-1	-1	0	289	30	30	1	0													
29	2026.06.18.15.34.00	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-105	-14	-1	-	-51	500	-1	-1	0	289	30	30	1	0													
30	2026.06.18.15.34.00	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-102	-13	-1	-	-51	500	-1	-1	5881	-1	289	30	30	1	0												
31	2026.06.18.15.34.01	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-102	-13	-1	-	-51	500	-1	-1	908	-1	289	30	30	1	0												
32	2026.06.18.15.34.02	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-98	-12	3	-	-51	500	-1	-1	435	-1	289	30	30	1	0												
33	2026.06.18.15.34.02	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-98	-12	3	-	-51	500	-1	-1	435	-1	289	29	29	2	0												
34	2026.06.18.15.34.03	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-98	-12	3	-	-51	500	-1	-1	0	289	29	29	2	0													
35	2026.06.18.15.34.04	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-100	-13	8	-	-51	500	-1	-1	963	-1	289	29	29	2	0												
36	2026.06.18.15.34.05	101.3957	1.576734	13	TELKOMSEL	5.103016	44	-100	-13	8	-	-51	500	-1	-1	491	-1	289	29	29	2	0												
37	2026.06.18.15.34.05	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-100	-13	8	-	-51	500	-1	-1	491	-1	289	28	28	2	0												
38	2026.06.18.15.34.06	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-95	-12	12	-	-51	500	-1	-1	344	-1	289	28	28	2	0												
39	2026.06.18.15.34.07	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-93	-12	12	-	-51	500	-1	-1	0	289	28	28	2	0													
40	2026.06.18.15.34.08	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-96	-8	12	-	-51	500	-1	-1	685	-1	289	28	28	2	0												
41	2026.06.18.15.34.09	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-96	-8	12	-	-51	500	-1	-1	594	-1	289	28	28	2	0												
42	2026.06.18.15.34.10	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-94	-9	9	-	-51	500	-1	-1	335	-1	289	28	28	2	0												
43	2026.06.18.15.34.11	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-94	-9	9	-	-51	500	-1	-1	0	289	28	28	2	0													
44	2026.06.18.15.34.11	101.3958	1.576761	10	TELKOMSEL	5.103016	44	-94	-9	9	-	-51	500	-1	-1	0	289	28	28	2	0													

(Sebagian dari data keseluruhan)

B. Data Olah

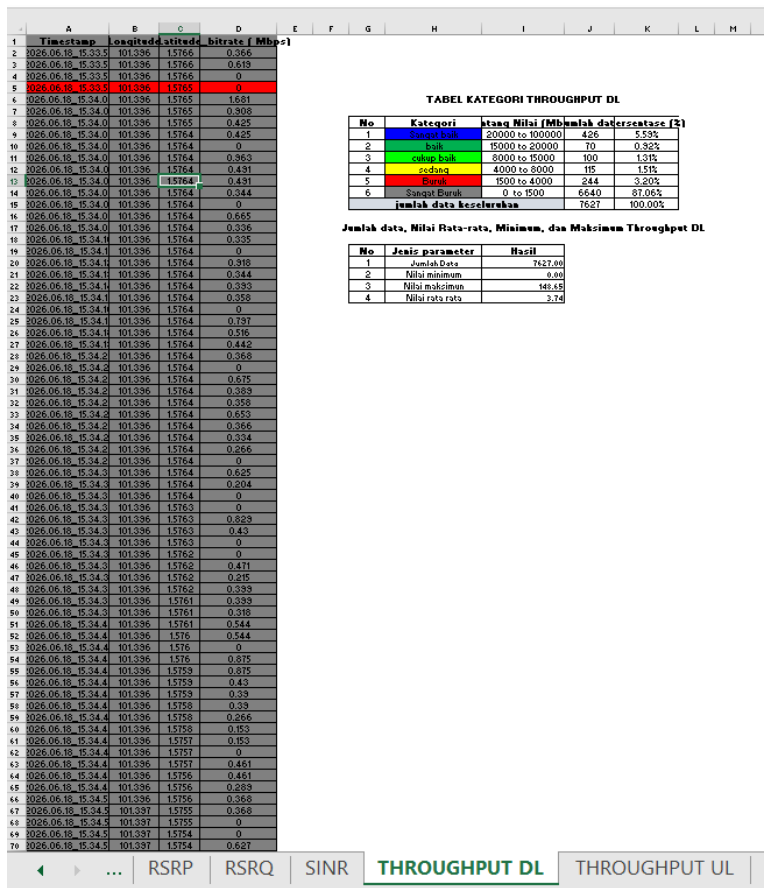
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
TimeStamp	Longitude	Latitude	RSRP											
2	2026.06.18.15.33.38	101.3956	1.5767	-34										
3	2026.06.18.15.33.40	101.3956	1.5767	-31										
4	2026.06.18.15.33.40	101.3956	1.5767	-31										
5	2026.06.18.15.33.41	101.3956	1.5767	-31										
6	2026.06.18.15.33.42	101.3956	1.5767	-31										
7	2026.06.18.15.33.43	101.3956	1.5767	-31										
8	2026.06.18.15.33.43	101.3956	1.5767	-37										
9	2026.06.18.15.33.44	101.3956	1.5767	-37										
10	2026.06.18.15.33.45	101.3956	1.5767	-37										
11	2026.06.18.15.33.45	101.3956	1.5767	-37										
12	2026.06.18.15.33.46	101.3956	1.5767	-37										
13	2026.06.18.15.33.47	101.3956	1.5767	-37										
14	2026.06.18.15.33.48	101.												

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Timestamp	Longitude	Latitude	RSR									
2	2026.06.18 15.33.36	101.395592	1.576717	-14									
3	2026.06.18 15.33.40	101.395592	1.576717	-11									
4	2026.06.18 15.33.40	101.395592	1.576717	-11									
5	2026.06.18 15.33.41	101.395592	1.576717	-12									
6	2026.06.18 15.33.42	101.395592	1.576717	-12									
7	2026.06.18 15.33.43	101.395592	1.576717	-12									
8	2026.06.18 15.33.43	101.395592	1.576717	-12									
9	2026.06.18 15.33.44	101.395592	1.576717	-12									
10	2026.06.18 15.33.45	101.395592	1.576717	-12									
11	2026.06.18 15.33.45	101.395592	1.576717	-12									
12	2026.06.18 15.33.46	101.395592	1.576717	-12									
13	2026.06.18 15.33.47	101.395592	1.576717	-12									
14	2026.06.18 15.33.48	101.395592	1.576717	-12									
15	2026.06.18 15.33.48	101.395592	1.576717	-12									
16	2026.06.18 15.33.50	101.395592	1.576717	-12									
17	2026.06.18 15.33.51	101.395592	1.576717	-12									
18	2026.06.18 15.33.52	101.395592	1.576717	-11									
19	2026.06.18 15.33.53	101.395592	1.576717	-11									
20	2026.06.18 15.33.54	101.395592	1.576717	-11									
21	2026.06.18 15.33.55	101.395592	1.576717	-11									
22	2026.06.18 15.33.55	101.395592	1.576717	-11									
23	2026.06.18 15.33.55	101.395616	1.576616	-11									
24	2026.06.18 15.33.56	101.395616	1.576616	-11									
25	2026.06.18 15.33.57	101.395616	1.576616	-11									
26	2026.06.18 15.33.58	101.395616	1.576616	-11									
27	2026.06.18 15.33.58	101.395616	1.576616	-14									
28	2026.06.18 15.33.59	101.395616	1.576616	-14									
29	2026.06.18 15.33.59	101.39568	1.576534	-14									
30	2026.06.18 15.34.00	101.39568	1.576534	-13									
31	2026.06.18 15.34.01	101.39568	1.576534	-13									
32	2026.06.18 15.34.02	101.39568	1.576534	-12									
33	2026.06.18 15.34.02	101.395742	1.576441	-12									
34	2026.06.18 15.34.03	101.395742	1.576441	-12									
35	2026.06.18 15.34.04	101.395742	1.576441	-13									
36	2026.06.18 15.34.05	101.395742	1.576441	-13									
37	2026.06.18 15.34.05	101.395786	1.576361	-13									
38	2026.06.18 15.34.06	101.395786	1.576361	-12									
39	2026.06.18 15.34.07	101.395786	1.576361	-12									
40	2026.06.18 15.34.08	101.395786	1.576361	-8									
41	2026.06.18 15.34.09	101.395786	1.576361	-8									
42	2026.06.18 15.34.10	101.395786	1.576361	-9									
43	2026.06.18 15.34.11	101.395786	1.576361	-9									
44	2026.06.18 15.34.13	101.395786	1.576361	-8									
← ... RSRP RSRQ SINR THROUGHPUT DL THROUGHPUT UL +													

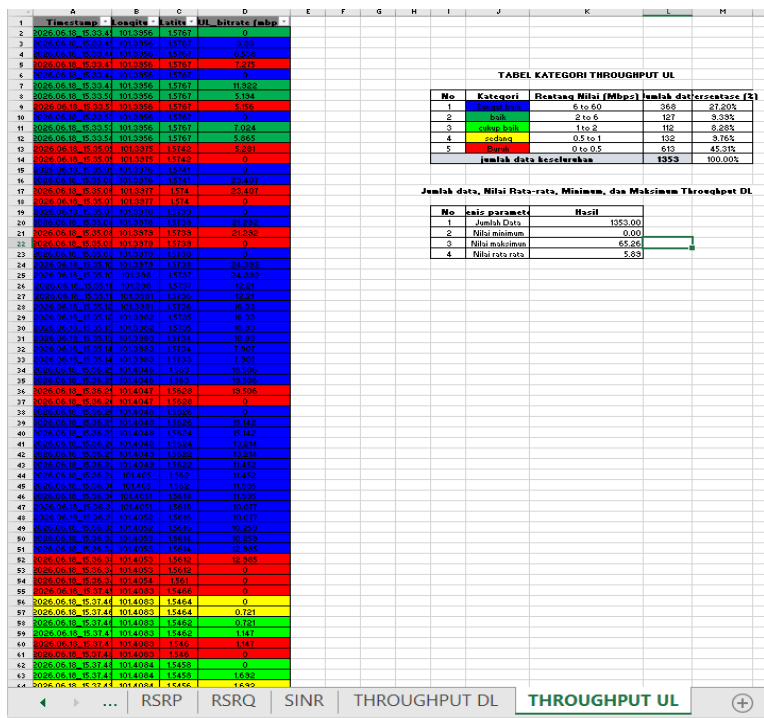
(Sebagian dari data keseluruhan)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Timestamp	Longitude	Latitude	SNR											
2	026.06.18 15.33.3	101.3956	1.5767	9											
3	026.06.18 15.33.4	101.3956	1.5767	4											
4	026.06.18 15.33.4	101.3956	1.5767	0											
5	026.06.18 15.33.4	101.3956	1.5767	0											
6	026.06.18 15.33.4	101.3956	1.5767	0											
7	026.06.18 15.33.4	101.3956	1.5767	0											
8	026.06.18 15.33.4	101.3956	1.5767	0											
9	026.06.18 15.33.4	101.3956	1.5767	0											
10	026.06.18 15.33.4	101.3956	1.5767	0											
11	026.06.18 15.33.4	101.3956	1.5767	0											
12	026.06.18 15.33.4	101.3956	1.5767	3											
13	026.06.18 15.33.4	101.3956	1.5767	3											
14	026.06.18 15.33.4	101.3956	1.5767	0											
15	026.06.18 15.33.5	101.3956	1.5767	0											
16	026.06.18 15.33.5	101.3956	1.5767	-1											
17	026.06.18 15.33.5	101.3956	1.5767	-1											
18	026.06.18 15.33.5	101.3956	1.5767	4											
19	026.06.18 15.33.5	101.3956	1.5767	4											
20	026.06.18 15.33.5	101.3956	1.5767	1											
21	026.06.18 15.33.5	101.3956	1.5767	1											
22	026.06.18 15.33.5	101.3956	1.5767	1											
23	026.06.18 15.33.5	101.3956	1.5766	1											
24	026.06.18 15.33.5	101.3956	1.5766	0											
25	026.06.18 15.33.5	101.3956	1.5766	0											
26	026.06.18 15.33.5	101.3956	1.5766	0											
27	026.06.18 15.33.5	101.3956	1.5766	-1											
28	026.06.18 15.33.5	101.3956	1.5766	-1											
29	026.06.18 15.33.5	101.3957	1.5765	-1											
30	026.06.18 15.34.0	101.3957	1.5765	-1											
31	026.06.18 15.34.0	101.3957	1.5765	-1											
32	026.06.18 15.34.0	101.3957	1.5765	3											
33	026.06.18 15.34.0	101.3957	1.5764	3											
34	026.06.18 15.34.0	101.3957	1.5764	3											
35	026.06.18 15.34.0	101.3957	1.5764	8											
36	026.06.18 15.34.0	101.3957	1.5764	8											
37	026.06.18 15.34.0	101.3958	1.5764	8											
38	026.06.18 15.34.0	101.3958	1.5764	12											
39	026.06.18 15.34.0	101.3958	1.5764	12											
40	026.06.18 15.34.0	101.3958	1.5764	12											
41	026.06.18 15.34.0	101.3958	1.5764	12											
42	026.06.18 15.34.1	101.3958	1.5764	9											
43	026.06.18 15.34.1	101.3958	1.5764	9											
44	026.06.18 15.34.1	101.3958	1.5764	12											
45	026.06.18 15.34.1	101.3958	1.5764	12											
46	026.06.18 15.34.1	101.3958	1.5764	10											
47	026.06.18 15.34.1	101.3958	1.5764	10											
48	026.06.18 15.34.1	101.3958	1.5764	13											
49	026.06.18 15.34.1	101.3958	1.5764	10											
50	026.06.18 15.34.1	101.3958	1.5764	10											
51	026.06.18 15.34.1	101.3958	1.5764	10											
52	026.06.18 15.34.2	101.3958	1.5764	12											
53	026.06.18 15.34.2	101.3958	1.5764	12											
54	026.06.18 15.34.2	101.3958	1.5764	12											
← ... RSRP RSRQ SINR THROUGHPUT DL THROUGHPUT UL +															

(Sebagian dari data keseluruhan)

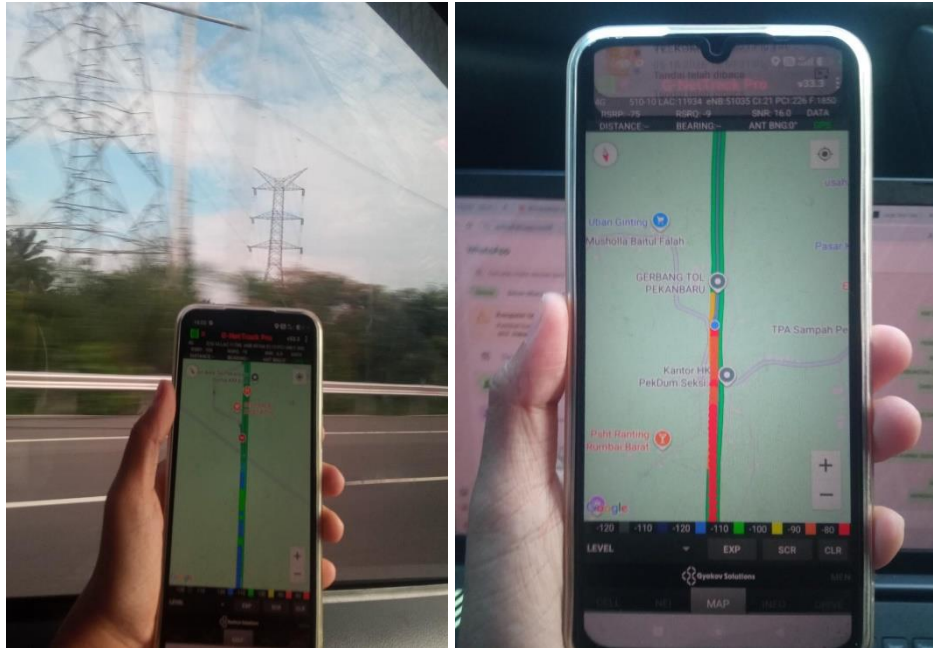


(Sebagian dari data keseluruhan)



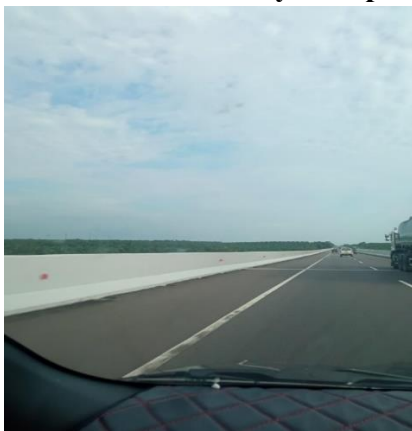
(Sebagian dari data keseluruhan)

C. Dokumentasi Pengambilan Data



(Dokumentasi Pengambilan data sepanjang Tol PKU-DMI)

D. Dokumentasi Penyebab penurunan Kualitas



(lokasi BTS yang jauh,)



(Pepohonan yg tinggi danperbukitan)



(Jembatan yang menghambat)

E. Beberapa Site yang Dekat Dengan Tol



(a)



(b)