

BAB V

KESIMPULAN

1. Dari perhitungan matematis didapatkan hasil *Carrier to Interference* sebesar 2,5 dB dan 4,8 dB di daerah Karawang sehingga mengakibatkan terjadinya gangguan, sedangkan *standart* C/I yang diperbolehkan di PT. INDOSAT adalah sebesar 12 dB.
2. Dari *Planning Tool* dapat diketahui bahwa masalah interferensi ini terjadi akibat pemakaian kanal frekuensi sama (*Co -Channel Interference*) yaitu kanal frekuensi 3
3. Penyelesaian masalah interferensi yang diakibatkan oleh *cellsite* Serka Sukatani (sektor 1) sebagai *interferer* terhadap *cellsite* Karang Setia (sektor 1) yang sedang *servng* (svr) adalah dengan mengalokasikan kanal frekuensi baru pada *eellsite* Serka Sukatani (sektor 1) yaitu kanal frekuensi 33. Hal ini terbukti dengan naiknya *level* C/I ke indikator biru pada *Planning Tool*.
4. Penyelesaian masalah interferensi yang diakibatkan oleh *cellsite* Batu Jaya (sektor 1) sebagai *interferer* terhadap *cellsite* Sukatani Batujaya (sektor 1) yang sedang *servng* (svr) dengan cara yang sama, yaitu dengan mengalokasikan kanal frekuensi di *eellsite* Sukatani Batujaya (sektor 1) yaitu kanal frekuensi 1. Hal ini terbukti dengan naiknya nilai C/I yang ditandai dengan indikator biru pada *Planning Tool*.

DAFTAR PUSTAKA

1. Sunomo; "Pengantar Sistem Komunikasi Nirkabel"; Grasindo, Jakarta, 2004.
2. Lee, William C.Y.; "Mobile Sellular Telecommunication"; Mc Graw Hill, Singapore, 1995.
3. Gouzali, Syadam, Drs, BC, TT; " Teknologi Komunikasi", Alfabeta, Bandung, 2005.
4. Jenkins, Gareth, GSM *White Paper*, 18 Februari 2004
5.; GSM *Cell Planning Principles 1*; Ericsson.
6.; *Frequency Planning*, Nokia.
7.; GSM *Introduction*; PT. Indosat Tbk.

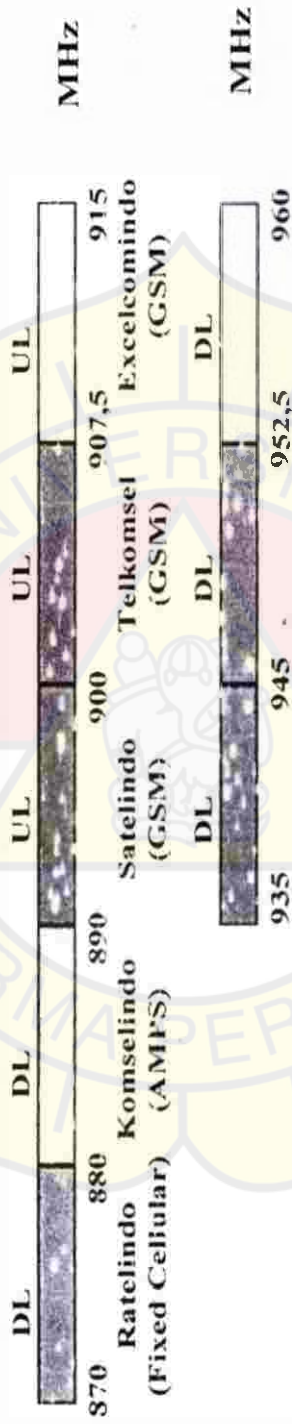
The logo of Universitas Darma Persada is a large, light yellow watermark in the background. It features a central shield with a red and white design, topped by a crown. The shield is surrounded by a circular border containing the text 'UNIVERSITAS' at the top and 'DARMA PERSADA' at the bottom. The entire logo is set against a white background.

LAMPIRAN 1
PEMBAGIAN ALOKASI FREKUENSI

BASIC CONSIDERATION

Frequency Band Satelindo GSM :


- Uplink (UL) : 890 - 900 MHz
- Downlink (DL) : 935 - 945 MHz
- 1 carrier : 200 kHz



D NUMBERING AND FREQUENCY OF GSM RADIO CHANNELS

ARFCN	Frequency MHz		ARFCN	Frequency MHz		ARFCN	Frequency MHz		ARFCN	Frequency MHz	
	TX	RX		TX	RX		TX	RX		TX	RX
1	935.2	890.2	32	941.4	896.4	63	947.6	902.6	94	953.8	908.8
2	935.4	890.4	33	941.6	896.6	64	947.8	902.8	95	954.0	909.0
3	935.6	890.6	34	941.8	896.8	65	948.0	903.0	96	954.2	909.2
4	935.8	890.8	35	942.0	897.0	66	948.2	903.2	97	954.4	909.4
5	936.0	891.0	36	942.2	897.2	67	948.4	903.4	98	954.6	909.6
6	936.2	891.2	37	942.4	897.4	68	948.6	903.6	99	954.8	909.8
7	936.4	891.4	38	942.6	897.6	69	948.8	903.8	100	955.0	910.0
8	936.6	891.6	39	942.8	897.8	70	949.0	904.0	101	955.2	910.2
9	936.8	891.8	40	943.0	898.0	71	949.2	904.2	102	955.4	910.4
10	937.0	892.0	41	943.2	898.2	72	949.4	904.4	103	955.6	910.6
11	937.2	892.2	42	943.4	898.4	73	949.6	904.6	104	955.8	910.8
12	937.4	892.4	43	943.6	898.6	74	949.8	904.8	105	956.0	911.0
13	937.6	892.6	44	943.8	898.8	75	950.0	905.0	106	956.2	911.2
14	937.8	892.8	45	944.0	899.0	76	950.2	905.2	107	956.4	911.4
15	938.0	893.0	46	944.2	899.2	77	950.4	905.4	108	956.6	911.6
16	938.2	893.2	47	944.4	899.4	78	950.6	905.6	109	956.8	911.8
17	938.4	893.4	48	944.6	899.6	79	950.8	905.8	110	957.0	912.0
18	938.6	893.6	49	944.8	899.8	80	951.0	906.0	111	957.2	912.2
19	938.8	893.8	50	945.0	900.0	81	951.2	906.2	112	957.4	912.4
20	939.0	894.0	51	945.2	900.2	82	951.4	906.4	113	957.6	912.6
21	939.2	894.2	52	945.4	900.4	83	951.6	906.6	114	957.8	912.8
22	939.4	894.4	53	945.6	900.6	84	951.8	906.8	115	958.0	913.0
23	939.6	894.6	54	945.8	900.8	85	952.0	907.0	116	958.2	913.2
24	939.8	894.8	55	946.0	901.0	86	952.2	907.2	117	958.4	913.4
25	940.0	895.0	56	946.2	901.2	87	952.4	907.4	118	958.6	913.6
26	940.2	895.2	57	946.4	901.4	88	952.6	907.6	119	958.8	913.8
27	940.4	895.4	58	946.6	901.6	89	952.8	907.8	120	959.0	914.0
28	940.6	895.6	59	946.8	901.8	90	953.0	908.0	121	959.2	914.2
29	940.8	895.8	60	947.0	902.0	91	953.2	908.2	122	959.4	914.4
30	941.0	896.0	61	947.2	902.2	92	953.4	908.4	123	959.6	914.6
31	941.2	896.2	62	947.4	902.4	93	953.6	908.6	124	959.8	914.8

ARFCN : absolute radio channel frequency number, TX : transmitting, RX : receiving

The logo of Universitas Darma Persada is a large, light yellow emblem with a scalloped border. It features a central shield with a red and white design, flanked by two stars. The text 'UNIVERSITAS' is arched across the top, and 'DARMA PERSADA' is arched across the bottom. In the center of the shield, there is a small figure of a person.

LAMPIRAN 2
DATA PARAMETER PERHITUNGAN

Site Database

File Edit View Tools Help

Filter: [Karawang]

Find: (None) Find

Antenna Configurations

Slot	Antenna	Azimuth	Height (m)	M T#	E T#	T T#
1	K730378NK730378	60	70.00	4	0.0	4.0

Antenna Properties

Antenna: K730378NK730378

Feeder Type: Unknown

Antenna Cor. Factor (dB): 0.00 Mechanical Downtilt (°):

Feeder Length (m): 81.00 Electrical Downtilt (°):

Height (m): 70.00 Total Downtilt (°):

Azimuth (°): 60 Antenna Identity: Shared Antenna

Antenna Location

Relative Longitude: 0.0000000 GRID

Absolute Latitude: 0.0000000 ULL

LL

30 90 31 << Commit All Restore All Global Edit

Site Database

File Edit View Tools Help

Filter: [Karawang1]

Find: (None) Find

General | Hopping | Carriers | Antenna/TFR | EGPRS | HSCSD/ECS | BCF | TDX

Antenna

Select the Antenna Configurations with which this Cell Layer will operate:

Slot1

Transmitter

PA Output: 43.00 (dBm) ERP (dBm): 59.91

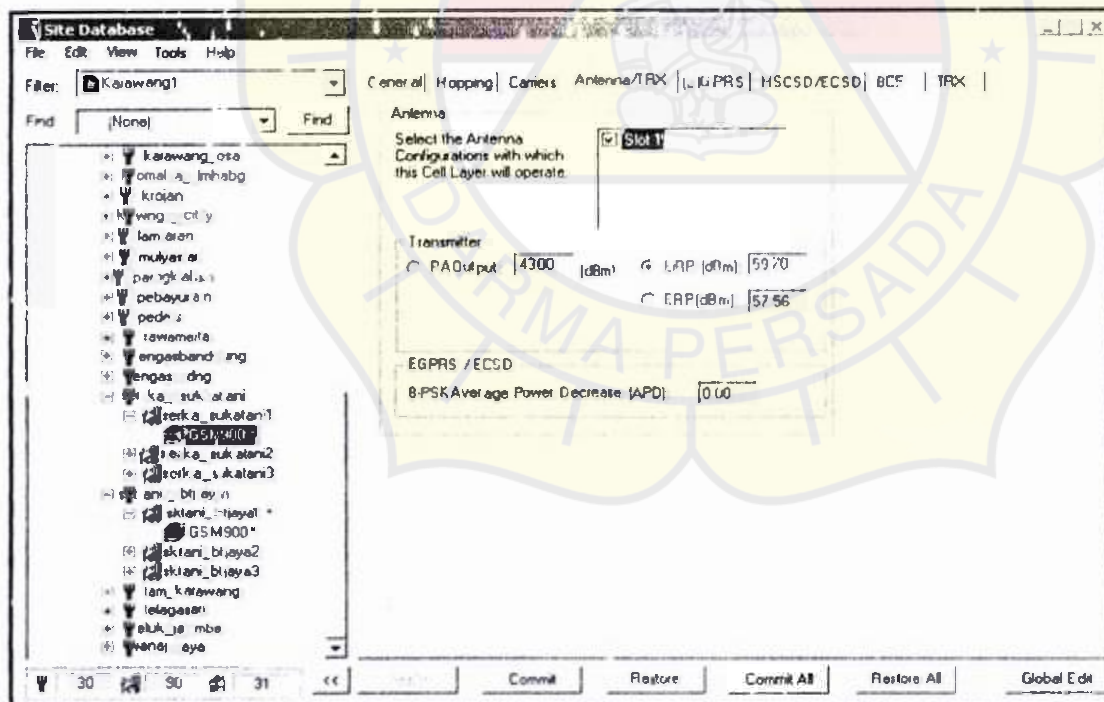
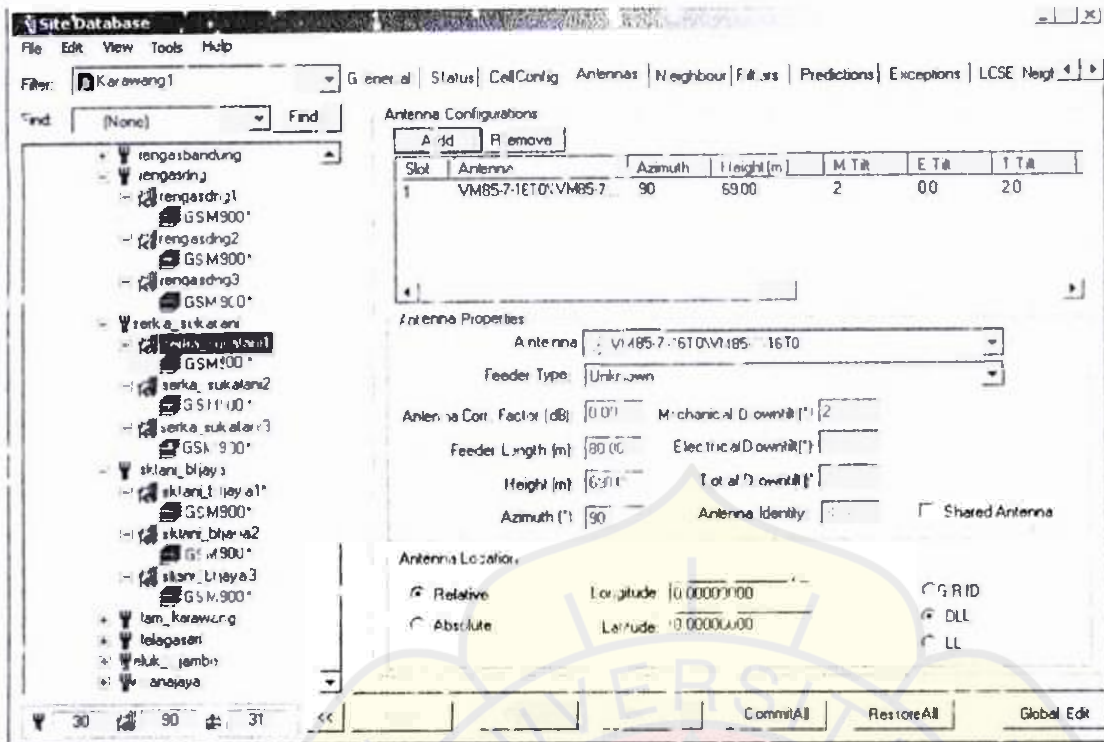
ERP1 (dBm): 57.85

EGPRS / ECSD

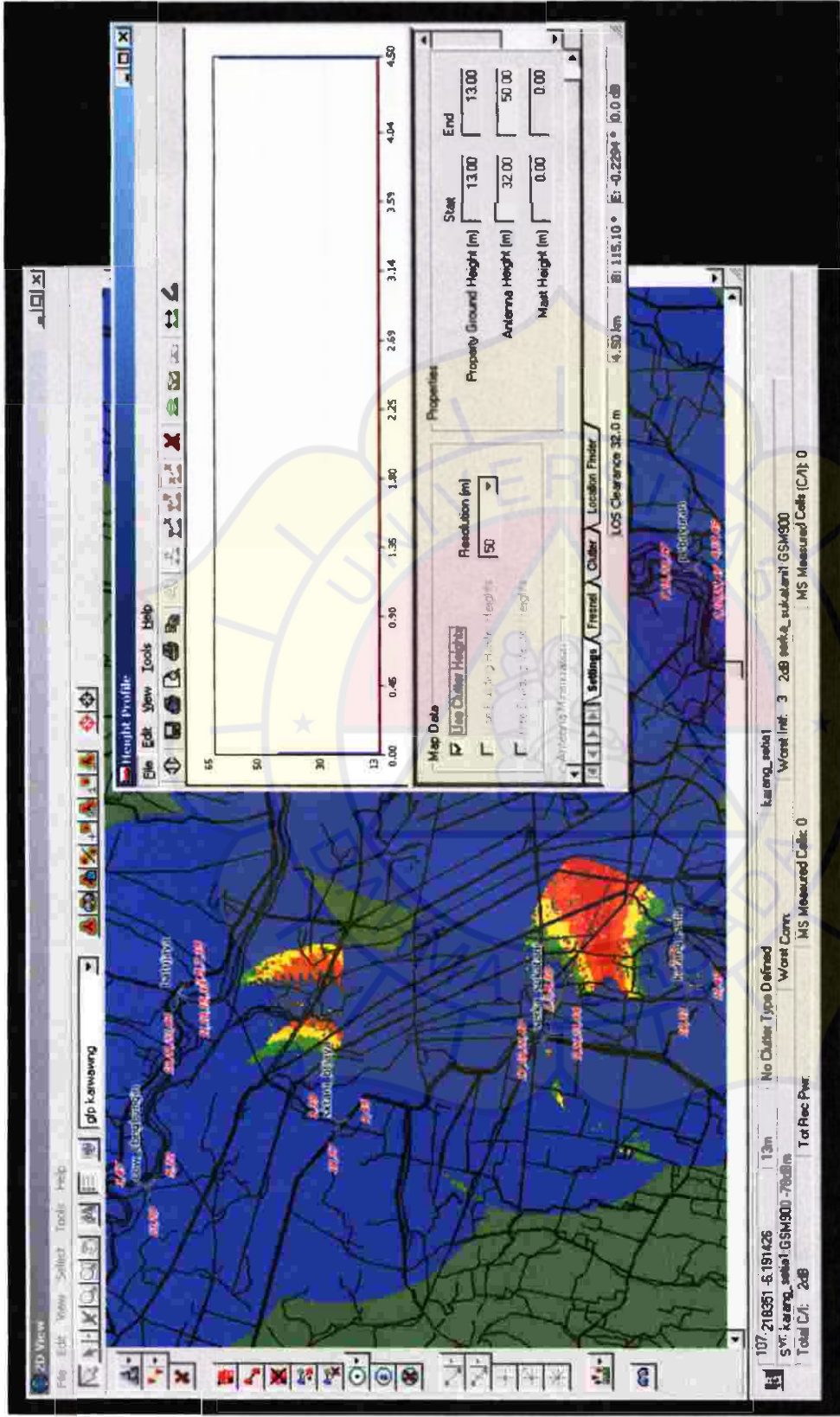
8-PSK Average Power Decrease (APD): 0.00

30 90 31 << Apply Commit Restore Commit All Restore All Global Edit

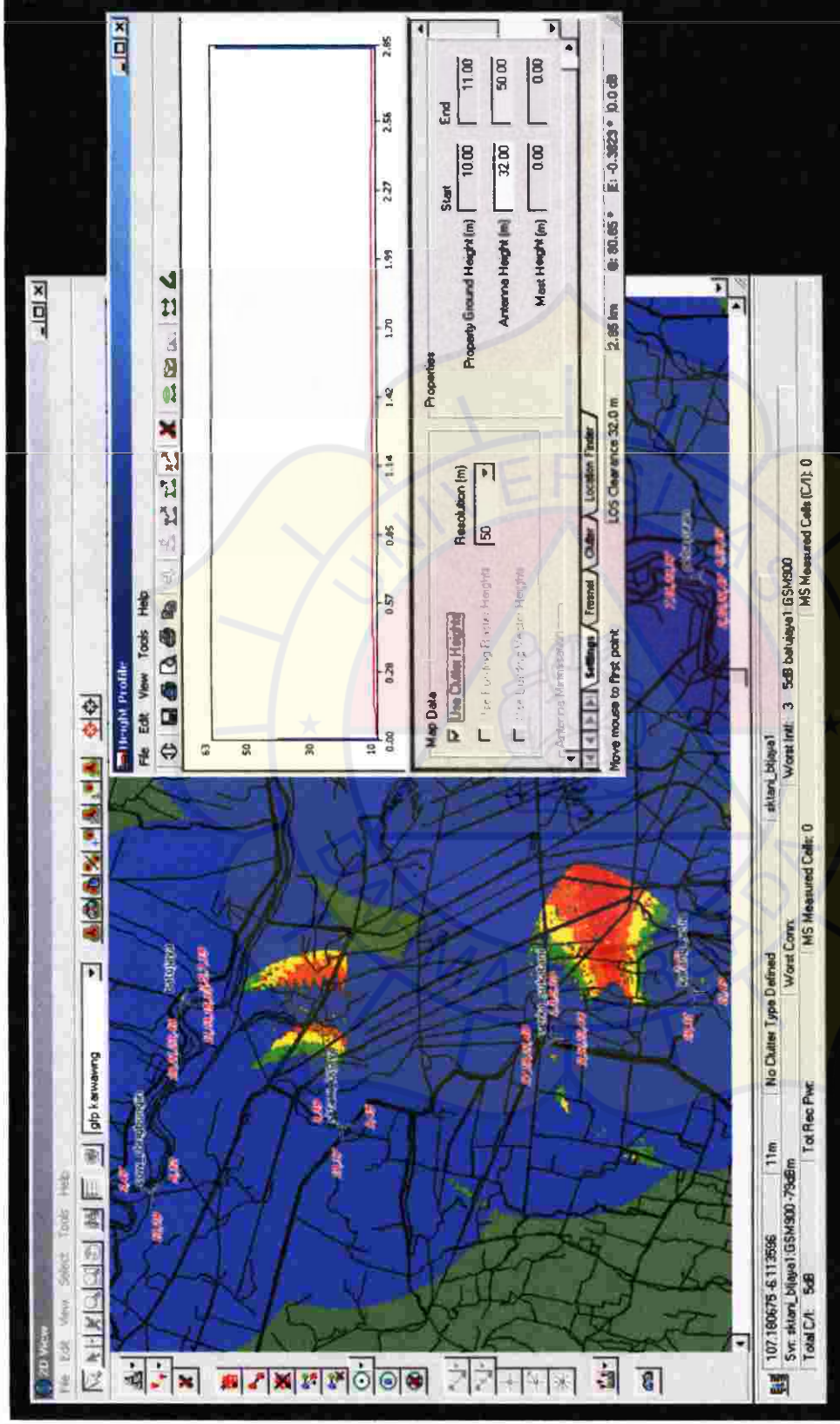
CARRIERS (KASUS 1)



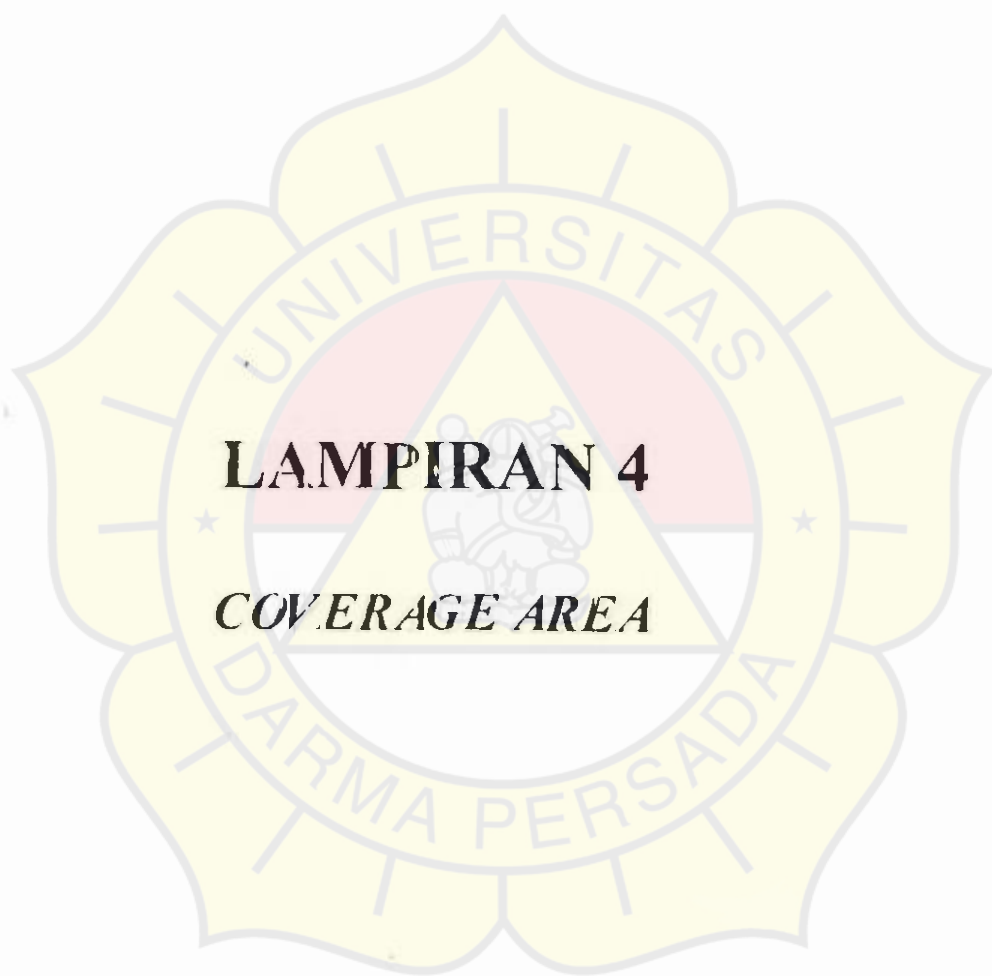
INTERFERER (KASUS 1)



INTERFERER (KASUS 1)

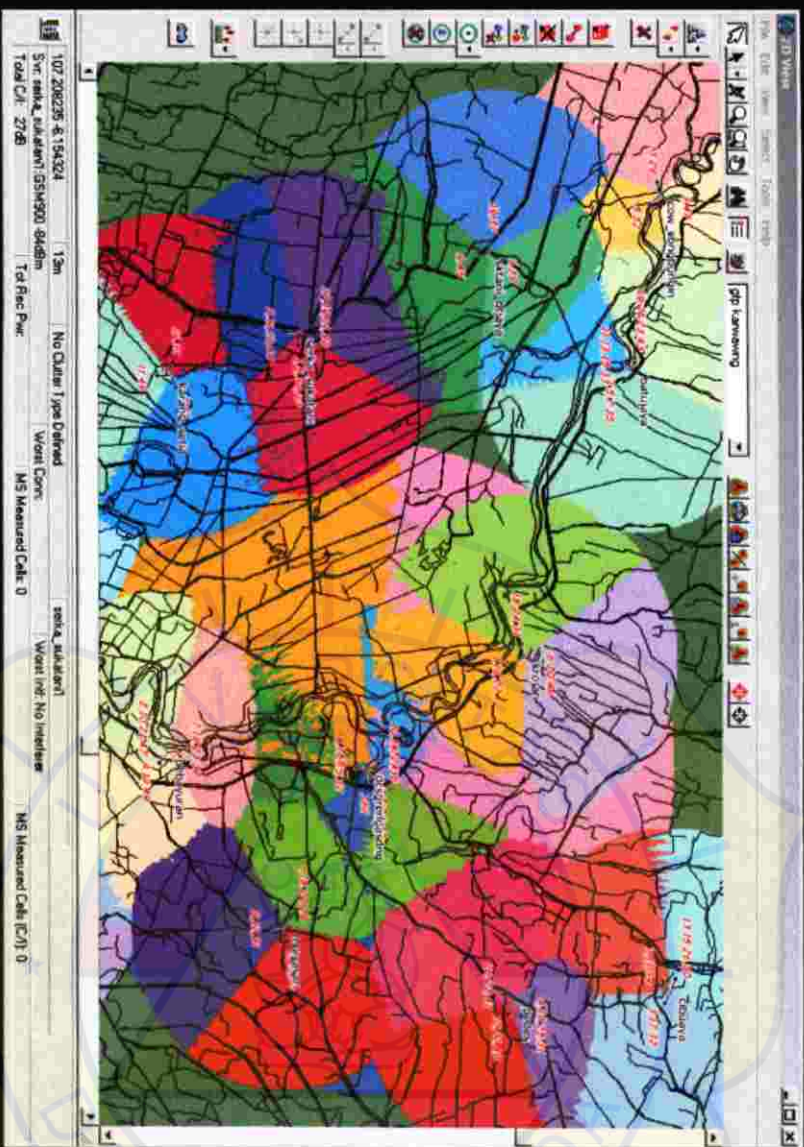


CARRIERS (KASUS 2)



LAMPIRAN 4

COVERAGE AREA



Map Information & Control

Layer: Grid | Legend | Data Types

- Standard Vectors
- Standard Polygons
 - Coastlines
 - Collector Road
 - Link Street
 - Local Road
 - Other Road
 - Railways
 - Riparian boundary
 - River of one line
 - River of two lines
- Text
- Height Data
- Clear Data
- Map Grid
- Traffic
- Neighbours/Exceptions
- Failure
- Cell Info
- Coverage
 - Best Server
 - Best Server (GPRS)
 - Best Server (EGPRS - GPRS)
 - Best Server (EGPRS - GSM)
 - No Best Server
 - MS Measured Cell
 - MS Measured Cell (C/I)
 - Worst Connection
 - Average Connection
 - Worst Interferer
 - Total Interference
 - Total Received Power
 - GPRS Data Rate
 - GPRS Data Rate
 - GPRS Data Rate
 - GPRS Service Area Data Rates
 - EGPRS Service Area Data Rates
 - EGPRS Service Area Data Rates
 - Ave Data Rate / result/GPRS
 - Ave Data Rate / result/EGPRS
 - Co/Adjacent Channel Assignment
 - Service Area (Block)
 - Service Area (Contour)

Preview

The logo of Universitas Darma Persada is a large, light yellow watermark in the background. It features a central shield with a red and white design, flanked by two stars. The shield is set within a circular frame with the text 'UNIVERSITAS' at the top and 'DARMA PERSADA' at the bottom. The entire logo is surrounded by a decorative, scalloped border.

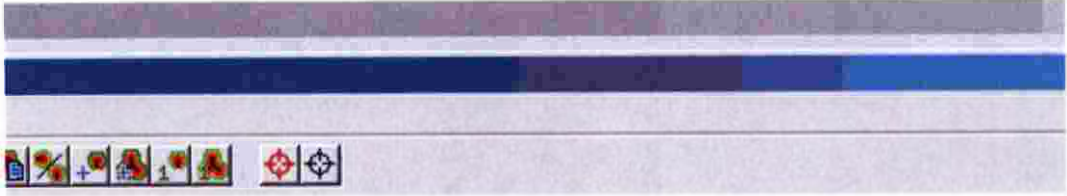
LAMPIRAN 5

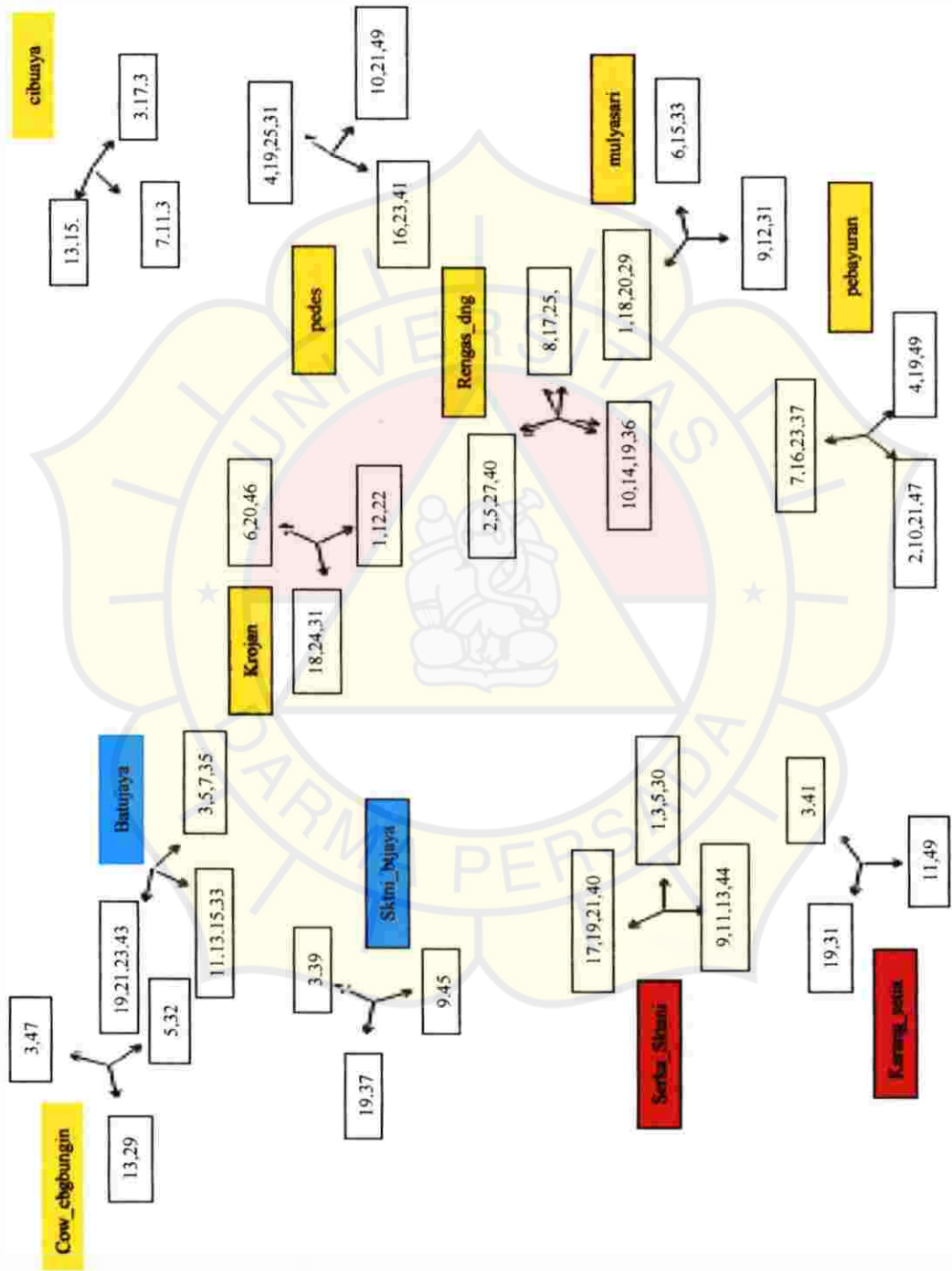
FREKUENSI *SITE* DAERAH KARAWANG

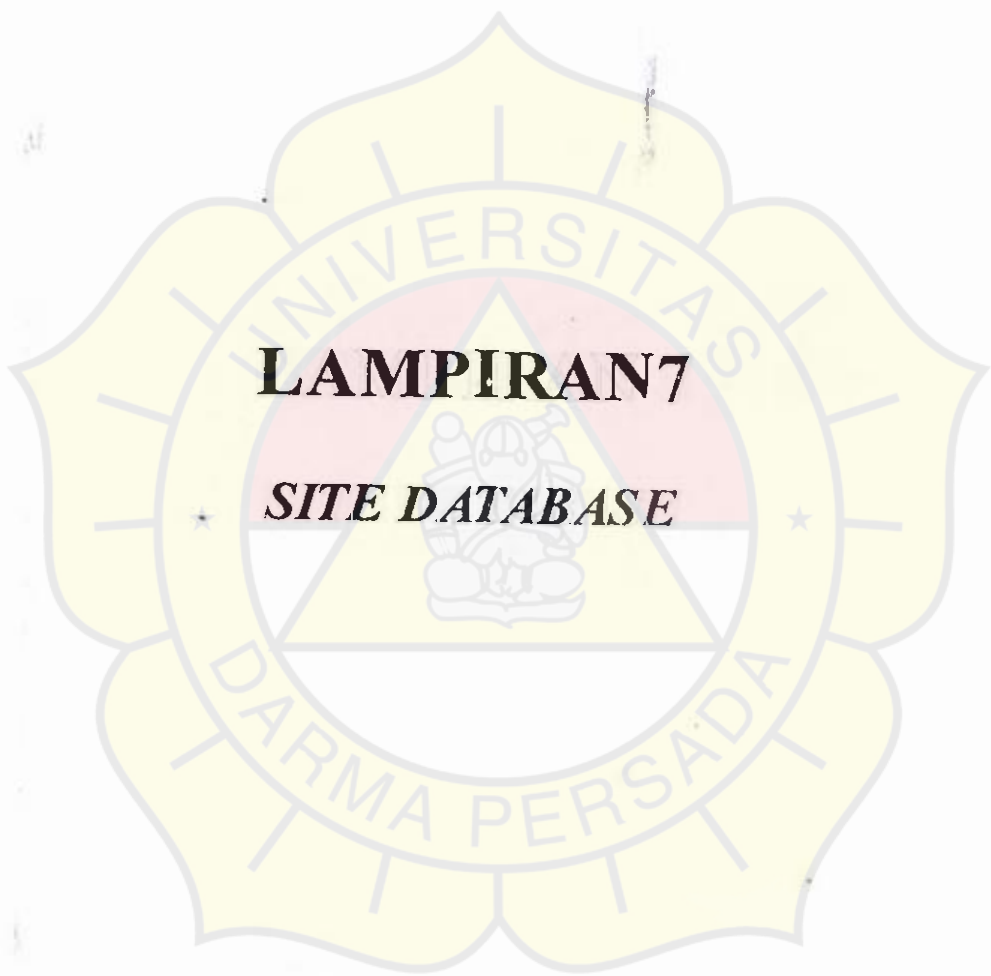
KARAWANG	878703	5672	24152	RENGASDNG2	8
KARAWANG	878703	5672	24152	RENGASDNG2	17
KARAWANG	878703	5672	24152	RENGASDNG2	25
KARAWANG	878703	5672	24153	RENGASDNG3	36
KARAWANG	878703	5672	24153	RENGASDNG3	14
KARAWANG	878703	5672	24153	RENGASDNG3	10
KARAWANG	878703	5672	24153	RENGASDNG3	19
KARAWANG	878703	5672	24121	PEDES1	4
KARAWANG	878703	5672	24121	PEDES1	31
KARAWANG	878703	5672	24121	PEDES1	19
KARAWANG	878703	5672	24121	PEDES1	25
KARAWANG	878703	5672	24122	PEDES2	49
KARAWANG	878703	5672	24122	PEDES2	10
KARAWANG	878703	5672	24122	PEDES2	21
KARAWANG	878703	5672	24123	PEDES3	16
KARAWANG	878703	5672	24123	PEDES3	41
KARAWANG	878703	5672	24123	PEDES3	23
KARAWANG	878703	5672	24091	MULYASARI1	33
KARAWANG	878703	5672	24091	MULYASARI1	6
KARAWANG	878703	5672	24091	MULYASARI1	15
KARAWANG	878703	5672	24092	MULYASARI2	31
KARAWANG	878703	5672	24092	MULYASARI2	12
KARAWANG	878703	5672	24092	MULYASARI2	9
KARAWANG	878703	5672	24093	MULYASARI3	29
KARAWANG	878703	5672	24093	MULYASARI3	18
KARAWANG	878703	5672	24093	MULYASARI3	20
KARAWANG	878703	5672	24093	MULYASARI3	1
KARAWANG	878703	5672	24111	PEBAYURAN1	49
KARAWANG	878703	5672	24111	PEBAYURAN1	4
KARAWANG	878703	5672	24111	PEBAYURAN1	19
KARAWANG	878703	5672	24112	PEBAYURAN2	10
KARAWANG	878703	5672	24112	PEBAYURAN2	21
KARAWANG	878703	5672	24112	PEBAYURAN2	47
KARAWANG	878703	5672	24112	PEBAYURAN2	2
KARAWANG	878703	5672	24113	PEBAYURAN3	37
KARAWANG	878703	5672	24113	PEBAYURAN3	16
KARAWANG	878703	5672	24113	PEBAYURAN3	23
KARAWANG	878703	5672	24113	PEBAYURAN3	7
KARAWANG	878703	5672	24021	CIBUAYA1	32
KARAWANG	878703	5672	24021	CIBUAYA1	3
KARAWANG	878703	5672	24021	CIBUAYA1	17
KARAWANG	878703	5672	24022	CIBUAYA2	34
KARAWANG	878703	5672	24022	CIBUAYA2	7
KARAWANG	878703	5672	24022	CIBUAYA2	11
KARAWANG	878703	5672	24023	CIBUAYA3	30
KARAWANG	878703	5672	24023	CIBUAYA3	13
KARAWANG	878703	5672	24023	CIBUAYA3	15
KARAWANG	878703	5672	24023	CIBUAYA3	26
KARAWANG	878703	5672	24231	KARANG_SETIA1	3
KARAWANG	878703	5672	24231	KARANG_SETIA1	41
KARAWANG	878703	5672	24232	KARANG_SETIA2	11
KARAWANG	878703	5672	24232	KARANG_SETIA2	49
KARAWANG	878703	5672	24233	KARANG_SETIA3	19
KARAWANG	878703	5672	24233	KARANG_SETIA3	31

The logo of Universitas Darma Persada is a large, light yellow flower-like emblem with eight petals. Inside the emblem, the words "UNIVERSITAS" and "DARMA PERSADA" are written in a circular path. In the center of the emblem is a red triangle containing a white shield with a figure holding a staff and a book.

LAMPIRAN 6
SALINAN *SITE* DAERAH KARAWANG

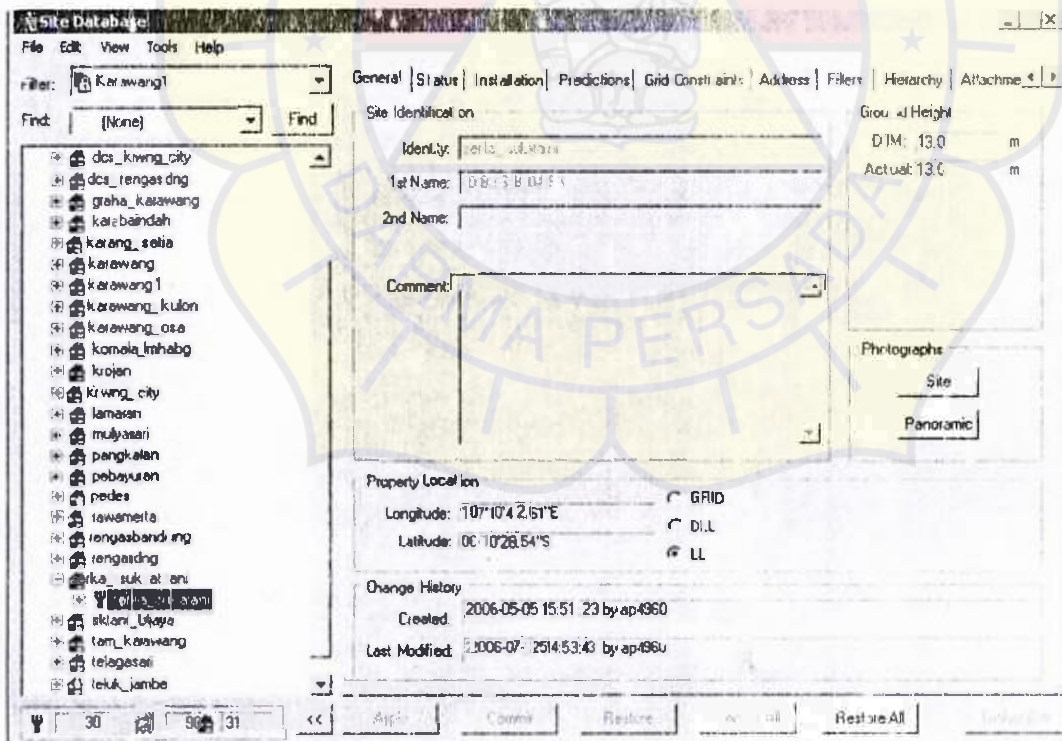
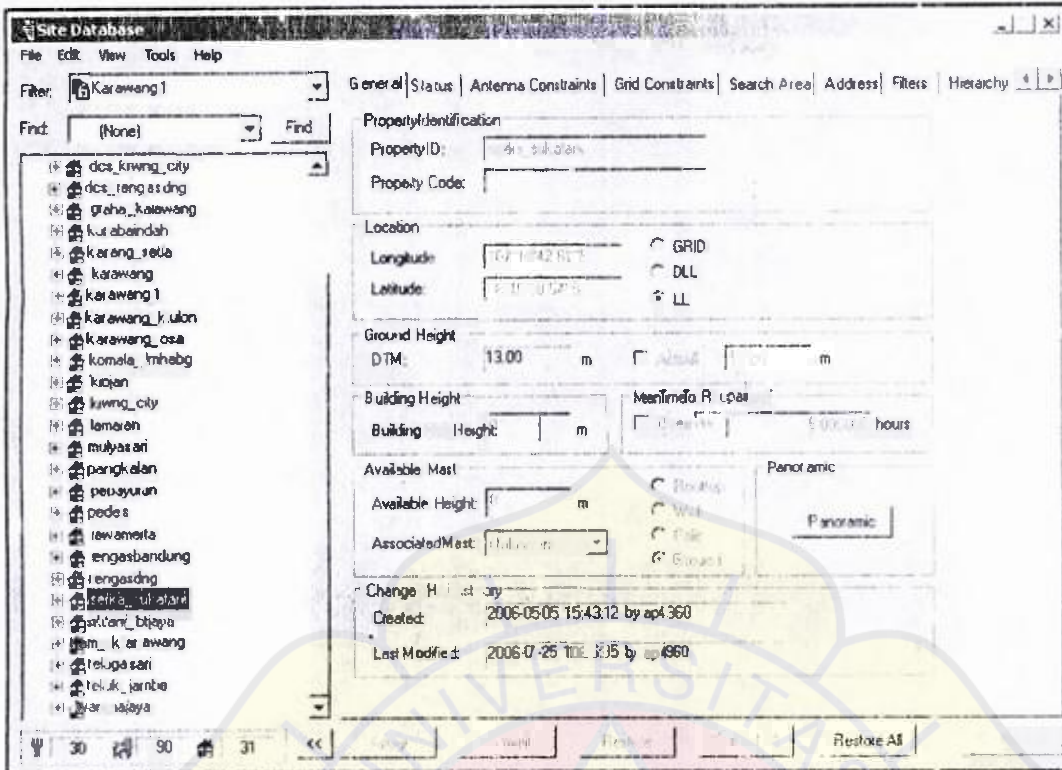






LAMPIRAN 7

SITE DATABASE



Site Database

File Edit View Tools Help

File: Karawang1

Find: (None) Find

dcs_kwang_city
 dcs_tengasdng
 graha_karawang
 kerabindah
 kerang_setia
 karawang
 karawang1
 karawang_kulon
 karawang_osa
 komala_lmhabg
 krojan
 kiwang_city
 lamayan
 mulyasari
 pangkelan
 pebayuran
 pedas
 sawamerta
 rengasbandung
 rengasdng
 seika_sukatani
 seika_sukatani1
 seika_sukatani2
 seika_sukatani3
 saktani_btjaya

General | Status | Antennas | Antenna Constraints | Cell Config | Neighbour | Exceptions | Predictions

Identity

Identity: seika_sukatani1

Cell Name: seika_sukatani1

GSMID: 4781

CGI: 00-0005633-2 4281

Predictions

Model: Motorola S00

GSM Parameters

MNC: 30

MCC: 000

LAC: 5003

RAC: 0

NSEI: Indonea

BSIC

NCC:

BCC:

Change History

Created: 2006-05-06 16:56 by ap4960

Last Modified: 2006-07-25 15:16:27 by ap4960

Apply Cancel Restore Default Restore All

Site Database

File Edit View Tools Help

File: Karawang1

Find: (None) Find

dcs_kwang_city
 dcs_tengasdng
 graha_karawang
 kerabindah
 kerang_setia
 karawang
 karawang1
 karawang_kulon
 karawang_osa
 komala_lmhabg
 krojan
 kiwang_city
 lamayan
 mulyasari
 pangkelan
 pebayuran
 pedas
 sawamerta
 rengasbandung
 rengasdng
 seika_sukatani
 seika_sukatani1
 seika_sukatani2
 seika_sukatani3

General | Antenna/TRX | Carriers | Hopping | EXPRS | HSCSD/ECSD | TRX | BCF

Carrier Layers

Carrier Layer	Use	Hop	Req'd	Alloc'd	Max
1CH900					

Carrier Layer: 1CH900

Carriers Req'd:

Max Alloc Carriers: 1

TRX Req:

Subc: 0

Total Carriers Req: 1

Total Carriers Alloc: 1

Total TRX Alloc:

Allocated Reserved

Allocated MA List: [Empty]

Carriers

Carrier	Alloc'd	Fixed	Forbid'n	State
1				
2				
3				
4				
5	Y		A	
6				
7				
8				
9				
10				

Carrier State

Active Inactive Standby Locked Error

Group View

View Refresh Close

30 90 31

Restore All

Site Database

File Edit View Tools Help

Filer: karawang1

Find: (none) Find

General | Antenna/TRX | Carriers | Hopping | (E)GPRS | MSCS.D/ECSD | TRX | BCF

Carrier Layers

Carrier Layer	Use	Hop	Req'd	Alloc'd	Max
BCCH900	Y				

Carrier Layer
Carriers Req:

Max Alloc Carriers: 25

TRXReq:

Subcell
Total Carriers Req: 1

Total Carriers Alloc: 1

Total TRX Alloc:

Allocated MA List:

Carriers

Carrier	Alloc'd	Fixed	Forbid'n	State

Group View

Carrier State

All

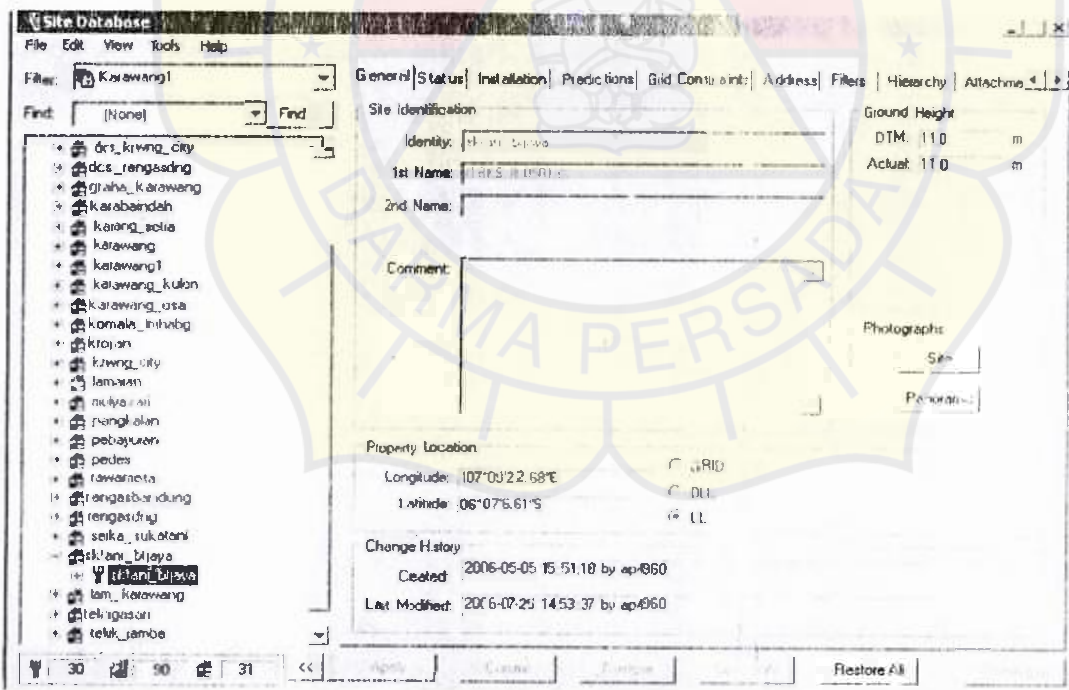
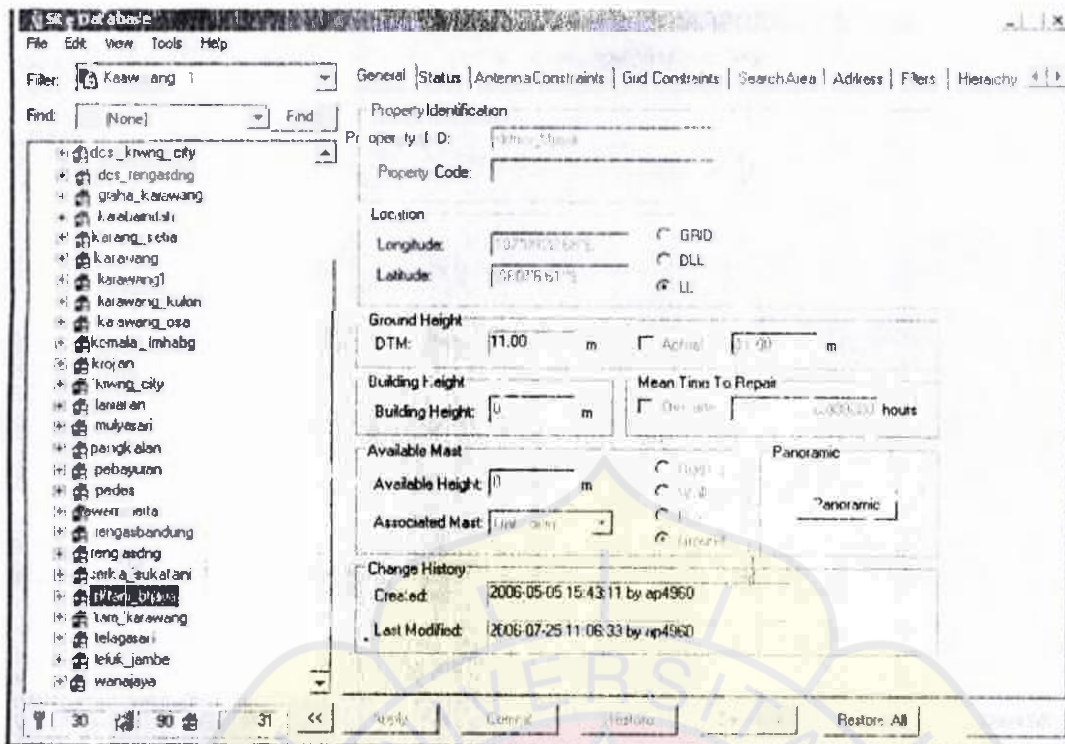
In Use

Free

30 90 31

Res: Core All

Untuk kasus 1



Site Database

File Edit View Tools Help

Filter: Karawang1

Find: (None) Find

- dcx_kuwng_city
- dcx_rengasdng
- graha_karawang
- kerabandah
- karang_seba
- karawang
- karawang1
- karawang_kulon
- karawang_osa
- komala_inhibg
- kuajan
- kuwng_city
- lamaran
- mulyasan
- pangkalan
- pebayuran
- pedes
- war_nel_to
- wengastbandung
- wengasdng
- seka_sukaten
- sktari_blaya
- sktari_blaya1
- sktari_blaya2
- sktari_blaya3

General | Status | Antennas | Antenna Constraints | CellConfig | Neighbour | Exceptions | Predictions

Identity

Identity: []

Cell Name: []

GSM ID: []

CGI: [000-000-0000-0000]

Predictions

Model: []

GSM Parameters

MNC: []

MCC: []

LAC: []

RAC: []

NSEI: []

BSIC

NCC: []

BCC: []

Change History

Created: 2006-05-05 16:04:00 by ap660

Last Modified: 2006-07-25 15:06:17 by ap660

30 90 31 << >> Restore All

Site Database

File Edit View Tools Help

Filter: Karawang1

Find: (None) Find

- dcx_kuwng_city
- dcx_rengasdng
- graha_karawang
- kerabandah
- karang_seba
- karawang
- karawang1
- karawang_kulon
- karawang_osa
- komala_inhibg
- kuajan
- kuwng_city
- lamaran
- mulyasan
- pangkalan
- pebayuran
- pedes
- war_nel_to
- wengastbandung
- wengasdng
- seka_sukaten
- sktari_blaya
- sktari_blaya1
- sktari_blaya2

General | Antenna/TRX | Carriers | Hopping | IEIGPRS | HSCSD/X.C.S.D. | TRX | BCF

Carrier Layers

Carrier Layer	Usage	Hop	Req'd	Alloc'd	Mult
TCM:00					

Carrier Layer: []

Carrier Req: []

Max Alloc Carriers: 1

TRX Req: []

Subcell

Total Carriers Req: 1

Total Carriers Alloc: 1

Total TRX Alloc: []

All Carriers Selected Allocated MA List

Carriers

Carrier	Alloc'd	Fixed	Forbidden	State
2				
3	Y			A
4				
5				
6				
7				
8				
9				
10				

Carrier State

Active Idle Forbidden Backoff Reserved

30 90 31 << >> Restore All

Site Database

File Edit View Tools Help

Filter: Karawang1

Find: (None) Find

General | Antenna/TRX | Carriers | Hopping | (E)GPRS | HSCSD/ECSD | TRX | BCF

Carrier Layers

Carrier Layer	Use	Hop	Req	Alloc'd	Max
BCCH900	Y		1	1	
TSCH900					

Carrier Layer
Carrier Req:

Max Alloc Carriers: 25
TRX Req:

Subcell
Total Carriers Req:

Total Carriers Alloc:

Total TRX Alloc:

Allocated Hopping Allocated MA List:

Carriers

Carrier	Alloc'd	Fixed	Forbidden	State

Group View

Carrier State

Restore All

30 90 31 <<

Untuk kasus 2