

LAMPIRAN A

DATA PENGAMATAN SEBELUM DAN SESUDAH IMPLEMENTASI 2nd CARRIER

Data Sebelum Implementasi 2nd Carrier :

RNC	FREQ	_Date	RRC_SR	CSSR Voice (%)	CSSR PS R99 (%)	CSSR HSDPA (%)	VSRRCRejCo deCong	VSRABFailEst abCSCoDeCo ng	VSRABFailEst abPSCoDeCo ng	VSRABFail EstabPSCo deCong	Max Code Utilization(%)
RNMKS02	10763 (F1)	10-Aug-12	98.87	97.72	97.72	97.72	94	25	95	95	85.63
RNMKS02	10763 (F1)	11-Aug-12	98.85	96.77	96.77	96.77	90	27	90	90	81.63
RNMKS02	10763 (F1)	12-Aug-12	98.82	97.09	97.09	97.09	97	25	92	92	75.63
RNMKS02	10763 (F1)	13-Aug-12	98.85	97.52	96.52	96.52	97	23	95	95	86.23
RNMKS02	10763 (F1)	14-Aug-12	98.85	96.51	96.51	96.51	97	20	92	92	79.84
RNMKS02	10763 (F1)	15-Aug-12	98.84	96.63	96.63	96.63	90	22	90	90	81.41
RNMKS02	10763 (F1)	16-Aug-12	98.85	97.57	97.57	95.57	59	9	25	25	79.41
RNMKS02	10763 (F1)	17-Aug-12	98.85	96.47	98.47	96.47	73	10	30	30	83.13
RNMKS02	10763 (F1)	18-Aug-12	98.86	97.75	97.75	95.75	48	8	25	25	79.34
RNMKS02	10763 (F1)	19-Aug-12	98.83	96.59	96.59	96.59	46	11	28	28	83.52
RNMKS02	10763 (F1)	20-Aug-12	98.86	97.69	97.69	97.69	42	8	27	27	73.13
RNMKS02	10763 (F1)	21-Aug-12	98.87	96.54	96.54	96.54	93	21	90	90	73.13
RNMKS02	10763 (F1)	22-Aug-12	98.86	97.46	97.46	97.46	99	24	99	99	81.41
RNMKS02	10763 (F1)	23-Aug-12	98.85	96.67	97.67	97.67	92	26	93	93	75.73

RNMKS02	10763 (F1)	24-Aug-12	98.85	97.70	96.70	96.70	97	20	91	91	72.34
RNMKS02	10763 (F1)	25-Aug-12	98.87	96.69	95.69	96.69	91	23	92	92	79.34
RNMKS02	10763 (F1)	26-Aug-12	98.85	97.11	97.11	97.11	98	27	98	98	10.86

Data setelah Implementasi 2nd Carrier :

RNC	FREQ	_Date	RRC_SR	CSSR Voice (%)	CSSR PS (%)	CSSR HSDPA (%)	VSRRCRejCodeCong	VSRABFailEst abCSCodeCong	VSRABFailEst abPSCodeCong	VSRABFailEst abPSCodeCong	Max Code Utilization(%)
RNMKS02	10763 (F1)	27-Aug-12	99.88	98.67	98.67	98.67	17	7	10	10	72.58
RNMKS02	10763 (F1)	28-Aug-12	99.83	98.63	98.63	98.63	49	8	9	9	23.36
RNMKS02	10763 (F1)	29-Aug-12	99.85	98.32	98.32	98.32	20	7	11	11	22.73
RNMKS02	10763 (F1)	30-Aug-12	99.85	98.32	98.32	98.32	20	7	8	8	24.30
RNMKS02	10763 (F1)	31-Aug-12	99.84	98.55	98.55	98.55	24	6	7	7	22.34
RNMKS02	10763 (F1)	01-Sep-12	99.84	98.55	98.55	98.55	24	6	13	13	17.73
RNMKS02	10763 (F1)	02-Sep-12	99.86	98.44	98.44	98.44	31	5	9	9	15.55
RNMKS02	10763 (F1)	03-Sep-12	99.86	98.44	98.44	98.44	31	5	10	10	15.00
RNMKS02	10763 (F1)	04-Sep-12	99.86	98.51	98.51	98.51	31	5	12	12	14.61
RNMKS02	10763 (F1)	05-Sep-12	97.86	98.94	98.94	98.94	31	7	11	11	15.39
RNMKS02	10763 (F1)	06-Sep-12	99.80	98.17	98.17	98.17	27	7	5	5	17.34
RNMKS02	10763 (F1)	07-Sep-12	99.85	99.68	99.68	99.68	55	0	6	6	17.58

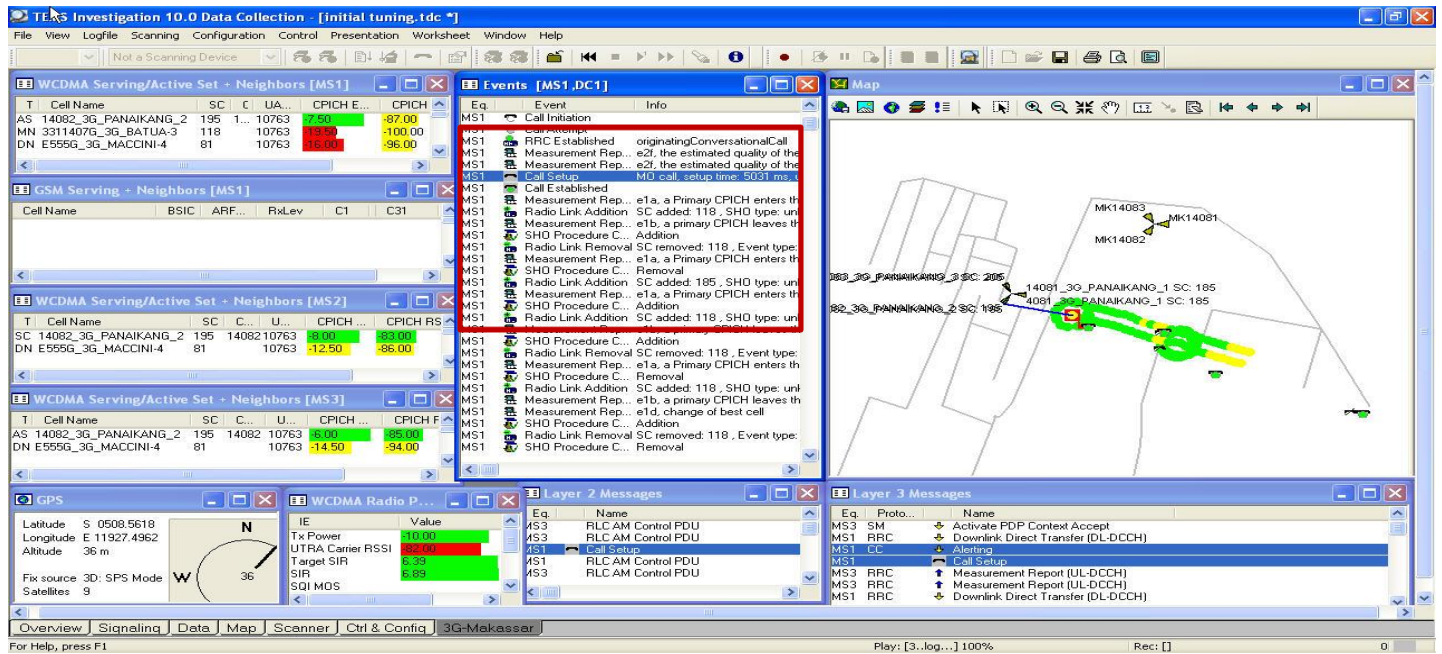
RNMKS02	10763 (F1)	08-Sep-12	99.87	99.76	99.76	99.76	43	2	3	3	13.98
RNMKS02	10763 (F1)	09-Sep-12	99.82	99.76	99.76	99.76	36	0	6	6	13.59
RNMKS02	10763 (F1)	10-Sep-12	99.88	99.79	99.79	99.79	31	0	5	5	11.33
RNMKS02	10763 (F1)	11-Sep-12	99.87	99.73	99.73	99.73	24	0	8	8	16.33
RNMKS02	10763 (F1)	12-Sep-12	99.88	99.75	99.75	99.75	20	0	5	5	10.86
RNMKS02	10763 (F1)	13-Sep-12	99.69	99.24	99.24	99.24	4	0	4	4	13.98
RNMKS02	10763 (F1)	14-Sep-12	99.78	99.32	99.32	99.32	106	3	6	6	17.89
RNMKS02	10763 (F1)	15-Sep-12	98.89	99.69	99.69	99.69	25	0	5	5	15.78
RNMKS02	10763 (F1)	16-Sep-12	99.85	99.62	99.62	99.62	4	0	4	4	11.25
RNMKS02	10763 (F1)	17-Sep-12	99.82	99.69	99.69	99.69	4	0	3	3	9.45
RNMKS02	10763 (F1)	18-Sep-12	99.84	99.56	99.56	99.56	5	0	5	5	9.06
RNMKS02	10763 (F1)	19-Sep-12	99.91	99.76	99.76	99.76	0	0	5	5	9.06
RNMKS02	10763 (F1)	20-Sep-12	99.89	99.89	99.89	99.89	0	0	3	3	9.45
RNMKS02	10763 (F1)	21-Sep-12	99.91	99.91	99.91	99.91	0	0	4	4	8.06
RNMKS02	10763 (F1)	22-Sep-12	99.88	99.62	99.62	99.62	9	0	2	2	8.06
RNMKS02	10763 (F1)	23-Sep-12	99.88	99.67	99.67	99.67	16	0	5	5	6.45
RNMKS02	10763 (F1)	24-Sep-12	99.88	99.60	99.60	99.60	12	0	4	4	5.34
RNMKS02	10763 (F1)	25-Sep-12	99.87	99.67	99.67	99.67	9	0	3	3	5.56
RNMKS02	10763 (F1)	26-Sep-12	99.89	99.78	99.78	99.78	11	1	7	7	5.17
RNMKS02	10763 (F1)	27-Sep-12	99.88	99.51	99.51	99.51	16	2	3	3	4.41

RNMKS02	10763 (F1)	28-Sep-12	99.87	99.75	99.75	99.75	14	1	4	4	3.06
RNMKS02	10763 (F1)	29-Sep-12	99.87	99.59	99.59	99.59	24	1	7	7	3.45
RNMKS02	10763 (F1)	30-Sep-12	99.89	99.66	99.66	99.66	14	0	2	2	4.14

LAMPIRAN B

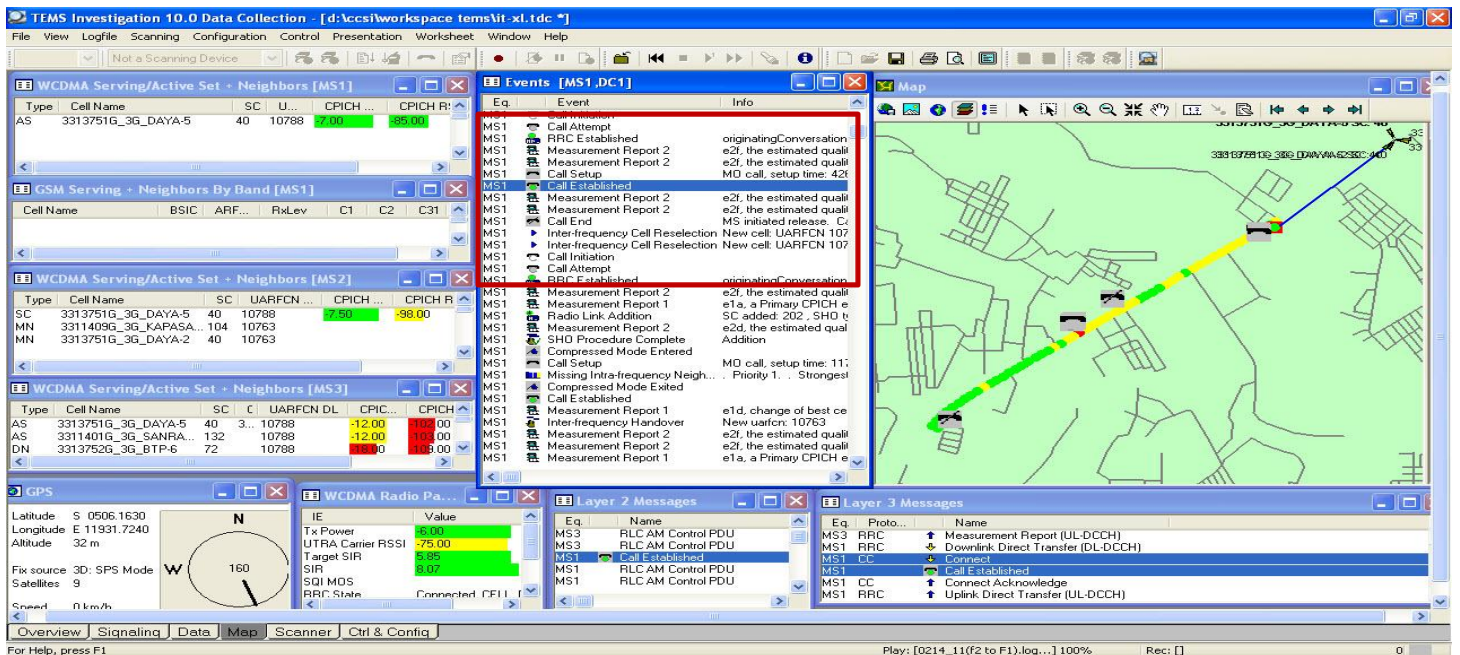
**HASIL REPORT PENGAMATAN
PERFORMANSI BEBERAPA DAERAH
TERTENTU DENGAN *DriveTest***

• Call Setup Voice F1, UE1 Dedicated Mode



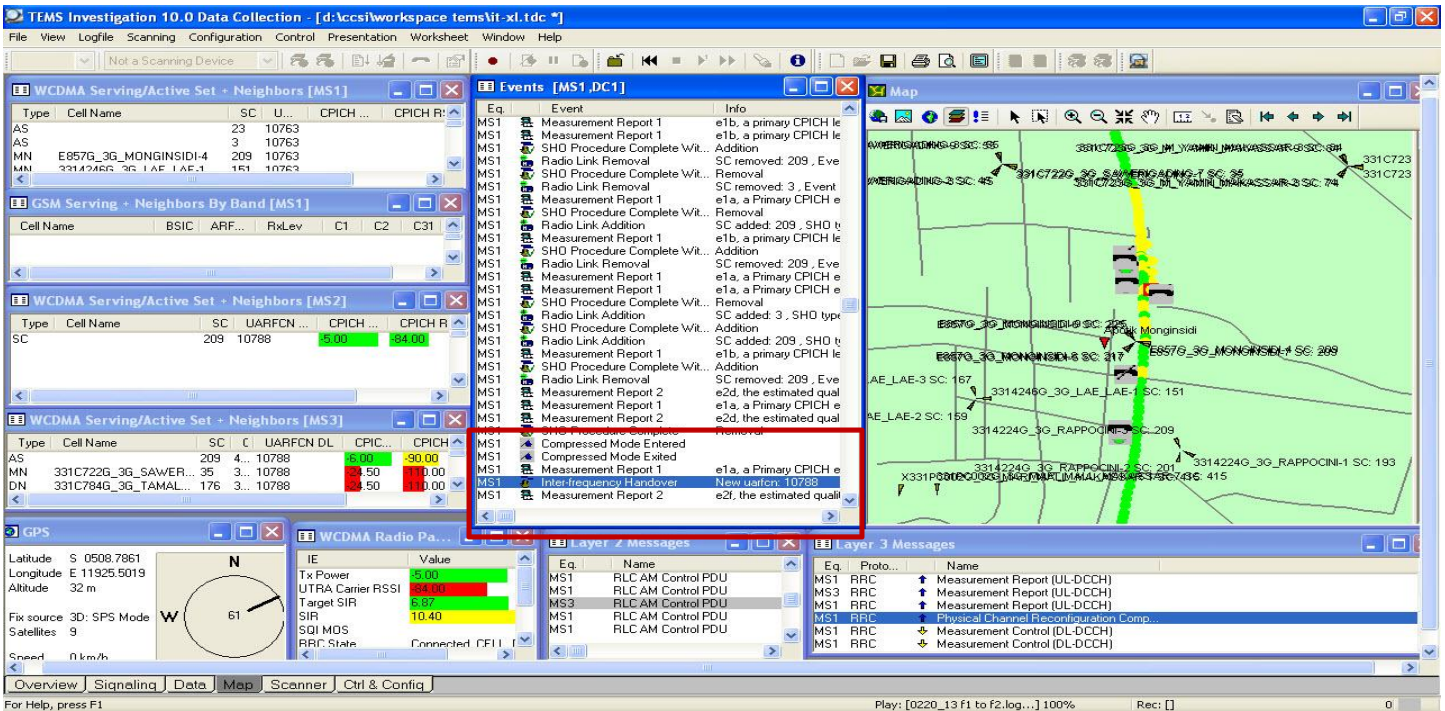
- **Event** = Call Setup.
- **Analysis** = UE1 sukses mengisi F1 saat UE1 call setup. UE1 *camp* dalam F2 3G_TERMINAL KM6 sec3(SC 26).

• Call Setup Voice F2 UE1 Dedicated Mode



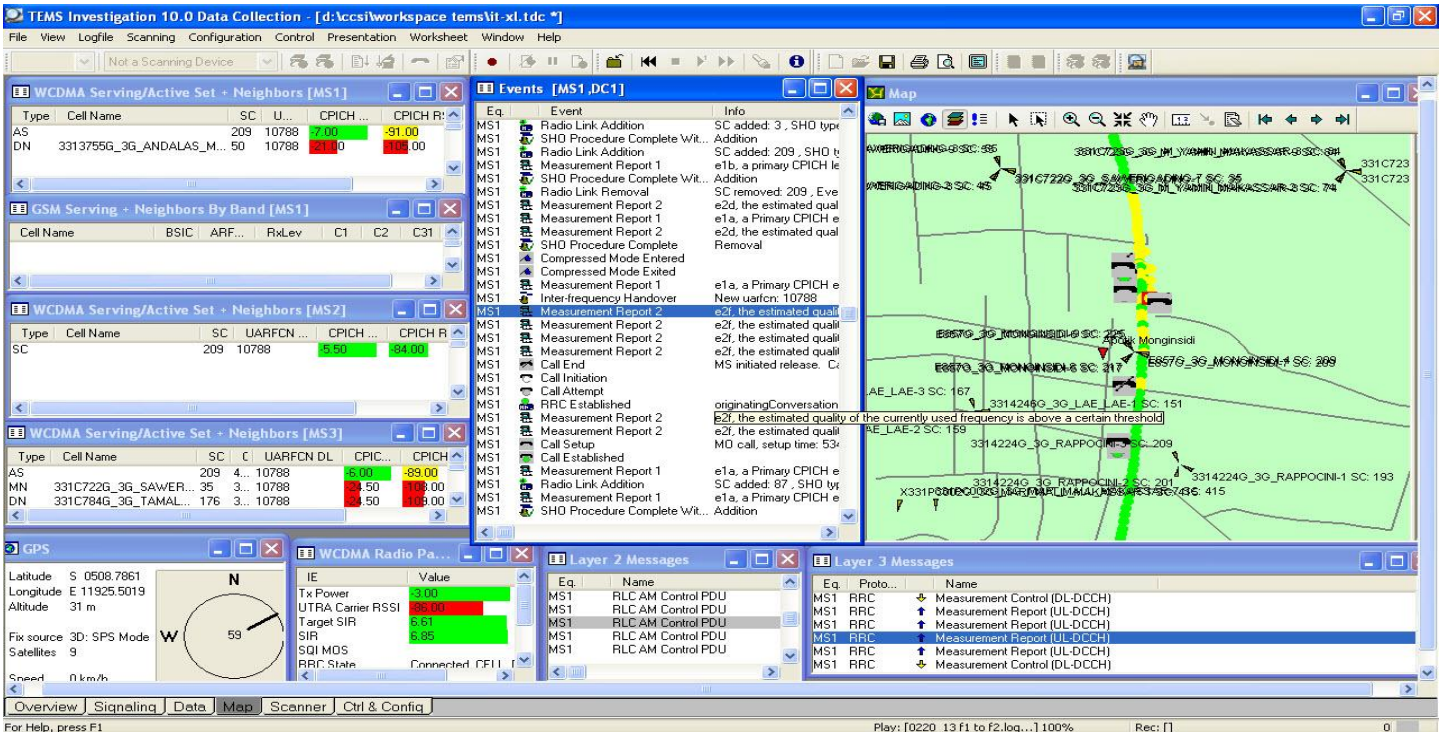
- **Event** = Call Setup.
- **Analysis** = UE1 sukses mengisi F2 saat UE1 call setup CS . UE1 *camp* dalam F2 3G_Daya sektor 2 (SC 40) .

Interfrequency HO F1 to F2 , UE1 Dedicated Mode



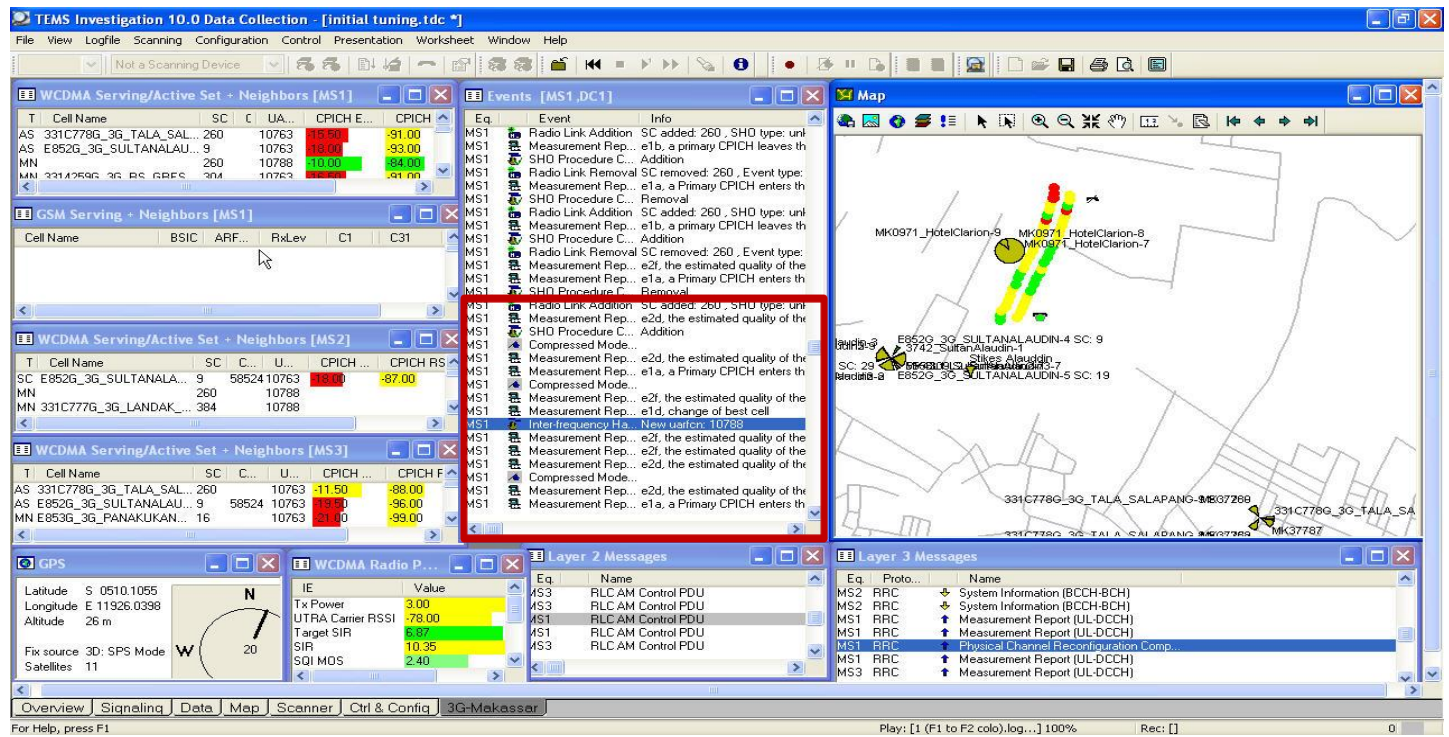
- **Event** = Intra frequency F1 ke F2 (Neigh).
- **Analysis** = UE1 sukses intra frequency F1 to F2.

Interfrequency HO F1 to F2 (Neigh), UE1 Dedicated Mode



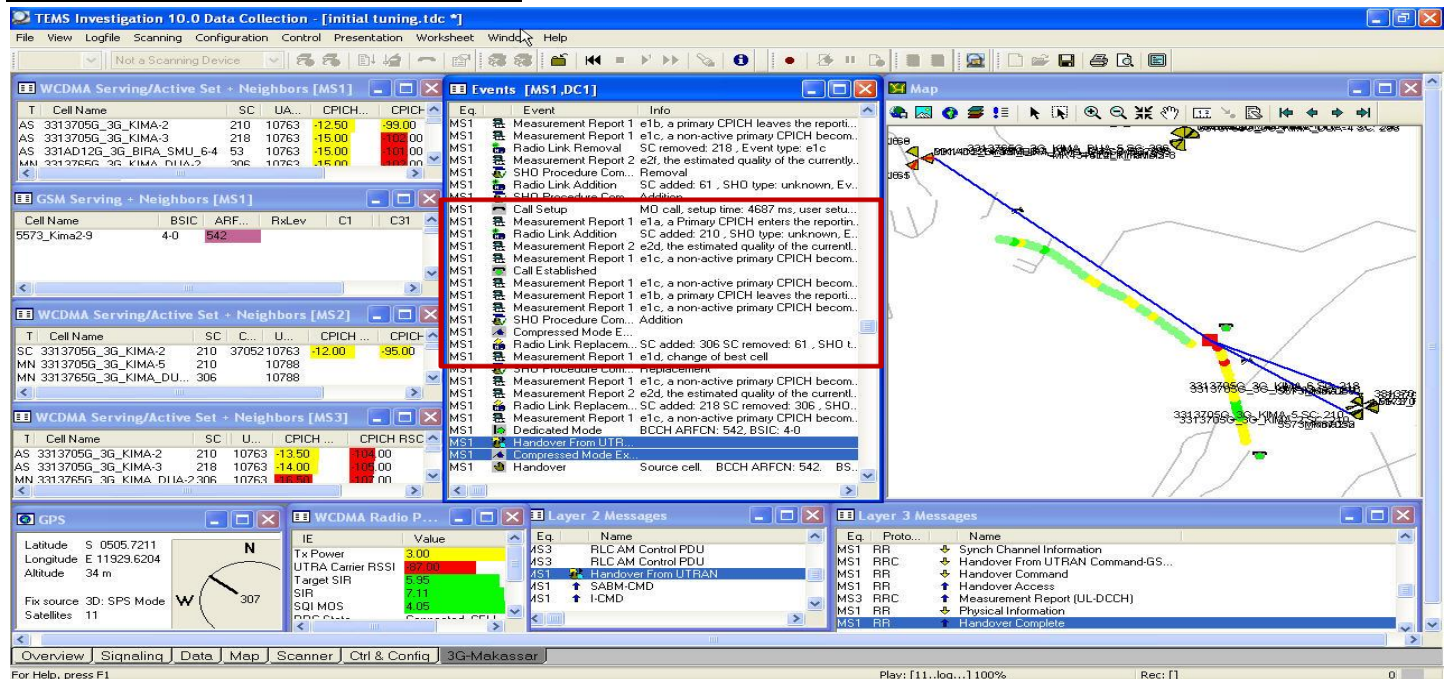
- **Event** = Inter frequency handover F1 to F2 (Neigh).
- **Analysis** = UE1 sukses inter frequency Handover F1 to F2.

Interfrequency HO F1 to F2 (Colo), UE1 Dedicated Mode



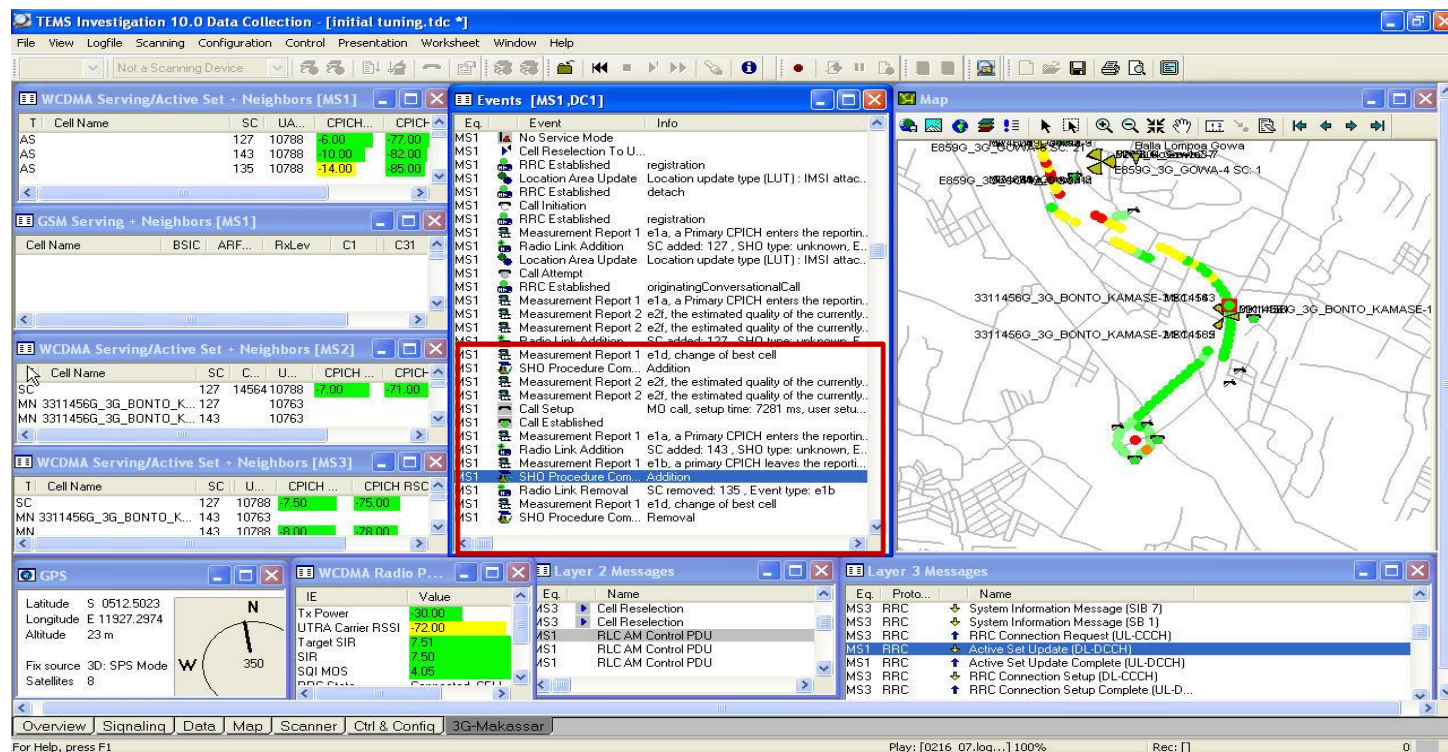
- **Event** = Intra frequency F1 to F2 (Colo).
- **Analysis** = UE1 sukses SHO dari F1 3G_TALASALAPANG-9(SC 260) ke F2 3G_TALASALAPANG-6 (S 260).

HO F1 to GSM, UE1 Dedicated Mode



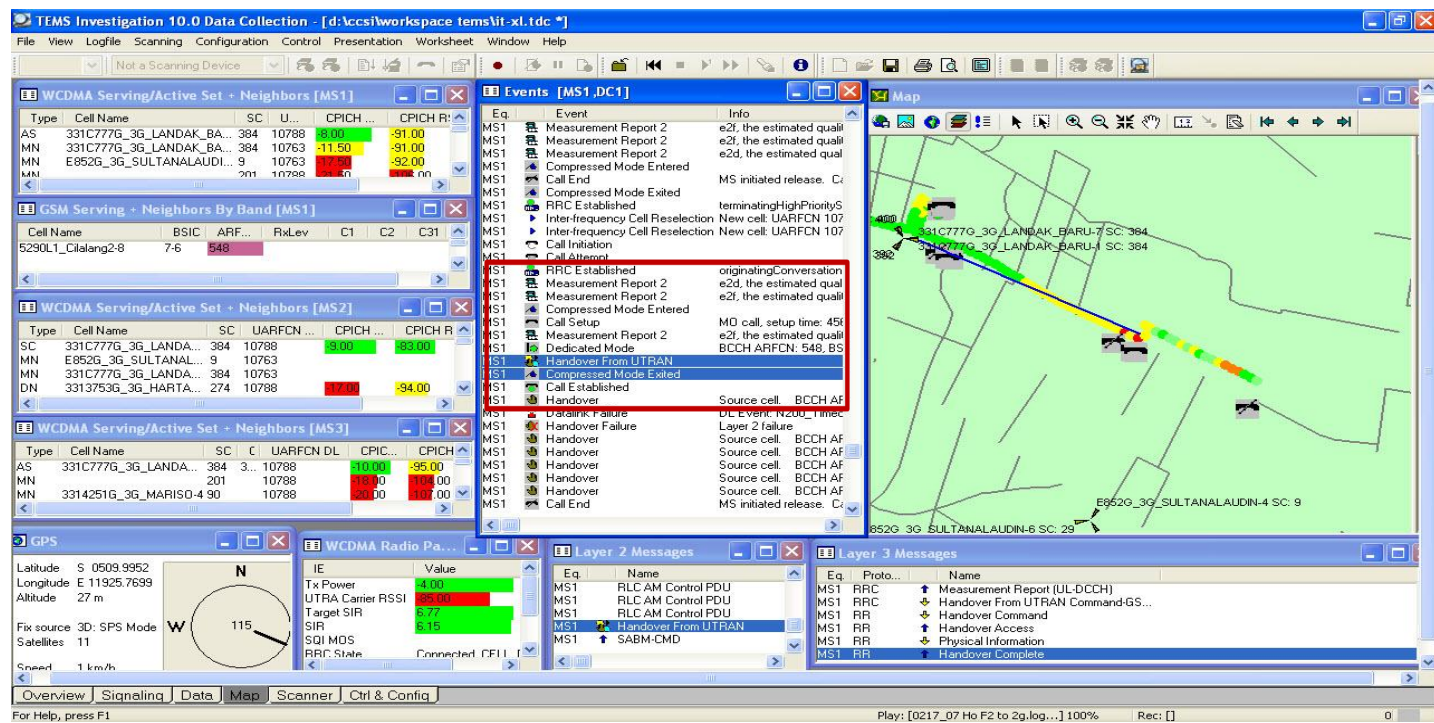
- **Event** = Inter RAT F1 to GSM (colo).
- **Analysis** = UE1 sukses Handover dari UTRAN ke GSM. Inter RAT F1 3G_KIMA-2 sec2 (SC 210) ke GSM Kima2_9.

Interfrequency HO F2 to F2 (Colo), UE1 Dedicated Mode



- **Event** = Intra frequency HO F2 ke F2 (Colo/ neighbour).
- **Analysis** = UE1 sukses *intra frequency* HO F2 Bonto_Kamase sec1 (SC 127) ke F2 3G_Bonto_Kamase sec3 (SC 143).

HO F2 to GSM (Neighbour), UE1 Dedicated Mode



- **Event** = Handover F2 ke GSM (neighbour)
- **Analysis** = UE1 sukses Handover dari UTRAN F2 3G_LANDAK_BARU sec1 (SC 384) GSM Cilalang2-8.

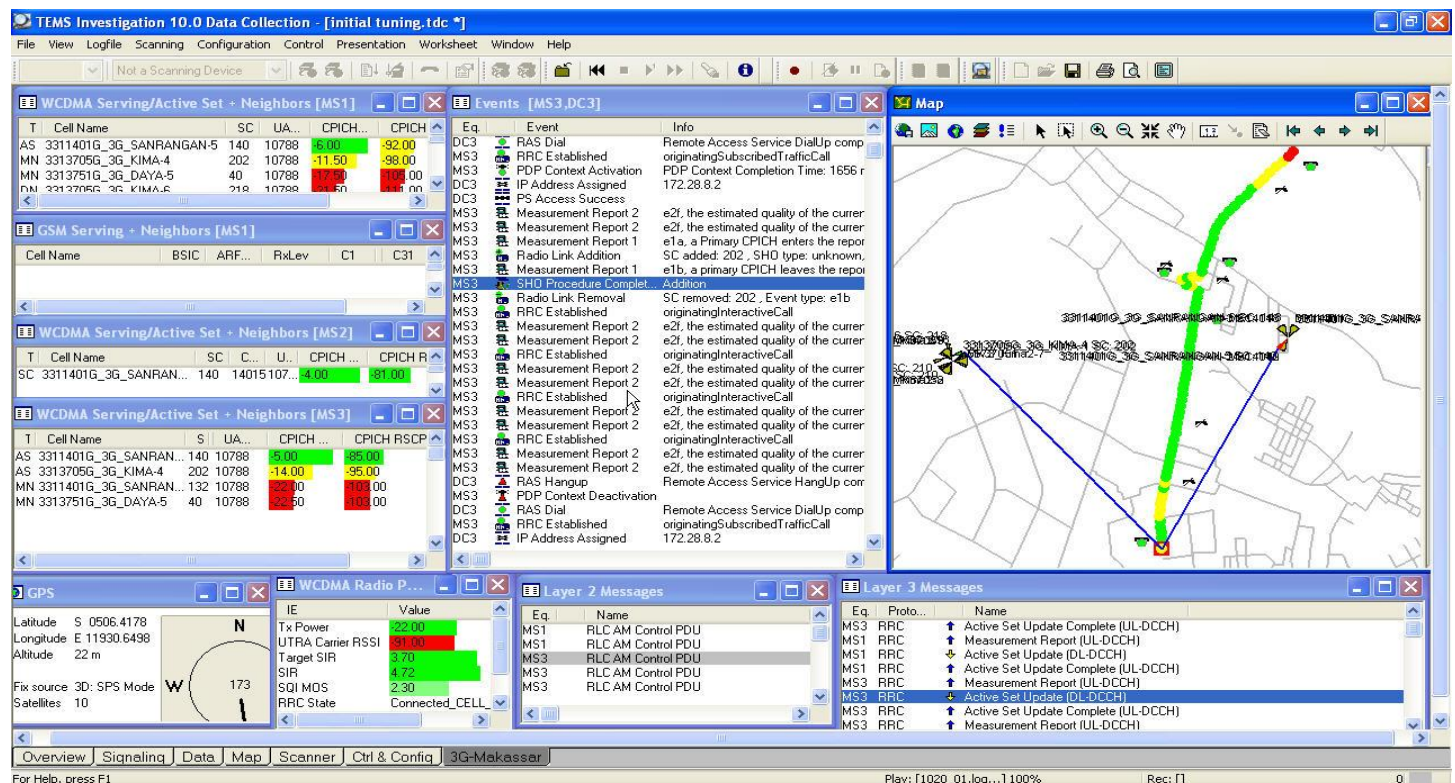
Call Setup Data F1, UE3 PS Mode

- **Event** = Call Setup
- **Analysis** = UE3 sukses mengisi F1 saat UE3 *call setup* PS . UE3 *camp* pada F1 3G_BULUROKENG-7 sec 1 [SC 182].

Call Setup Data F2, UE3 PS Mode

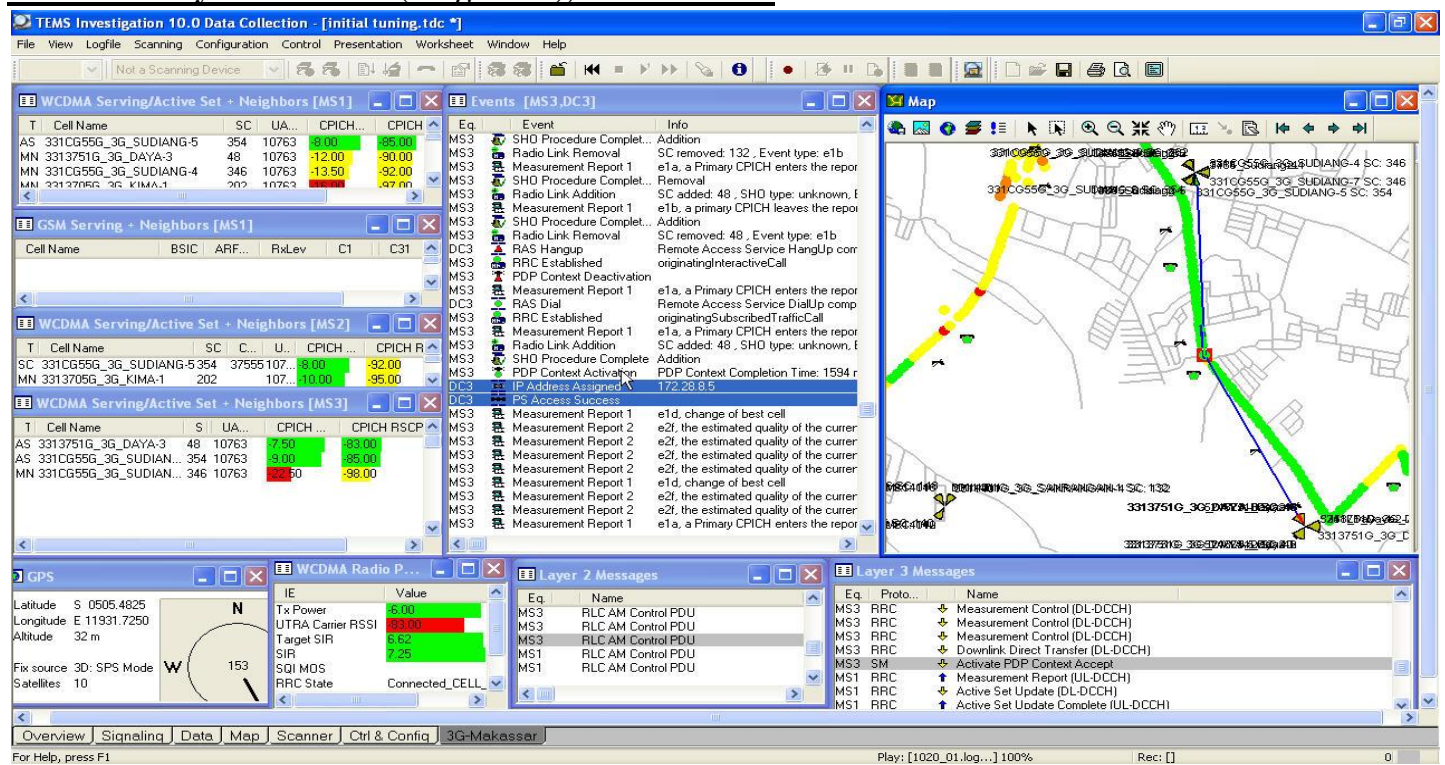
- **Event** = call setup data
- **Analysis** = UE3 Success call setup data dari F2 3G_SUDIANG-8 SC (354).

Intrafrequency HO F2 to F2 (Neighbour), UE3 PS Mode



- **Event** = Intra Frequency F2 to F2 (Neighbour).
- **Analysis** = SHO Procedure complete from F2 3G-Sanrangan sec2 (SC 140) to F2 3G-Kima sec 1 (SC 202).

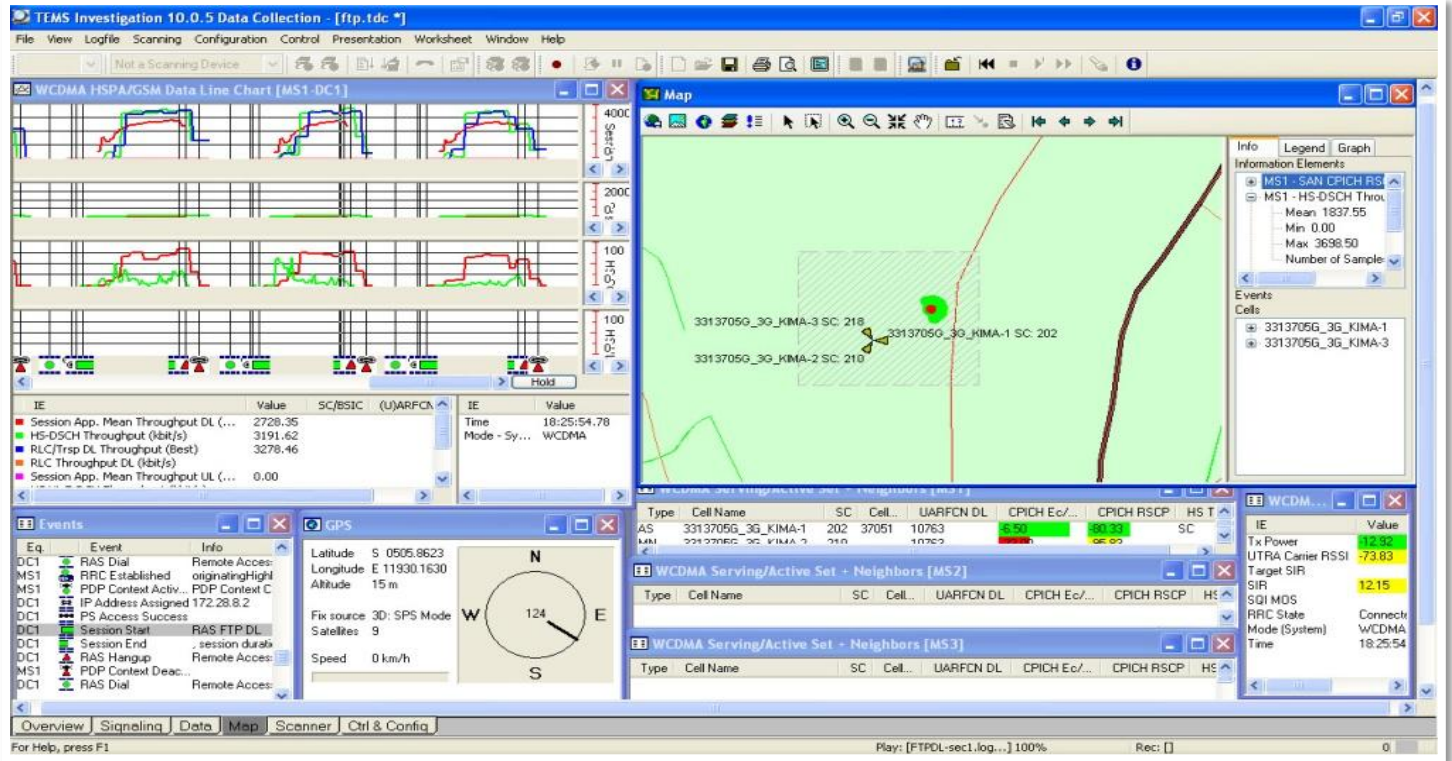
Intrafrequency HO F1 to F1 (Neighbour), UE3 PS Mode



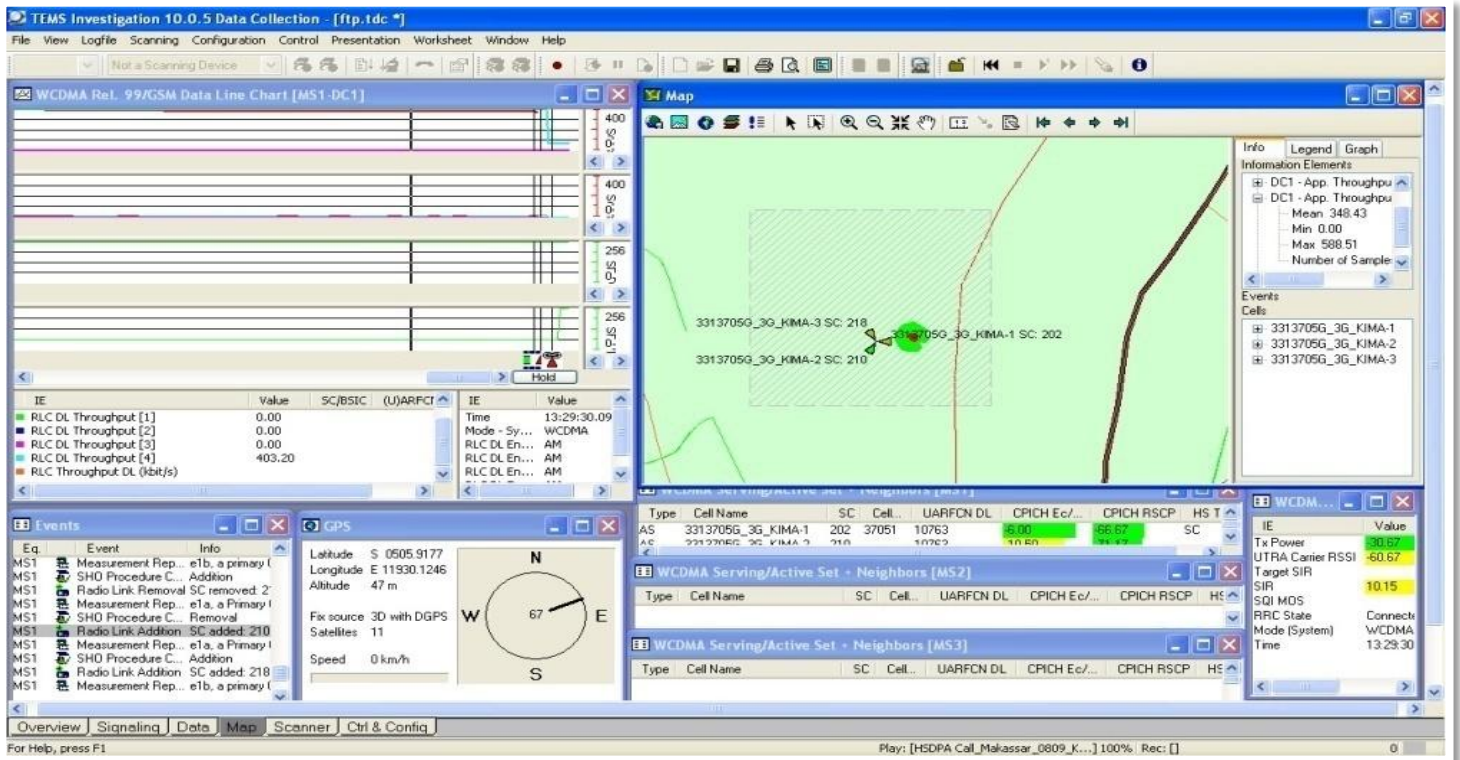
- **Event** = Intra frequency F1 ke F1 (neighbour)
- **Analysis** = UE3 Success SHO dari F1 3G-SUDIANG sec2 (SC 354) ke F1 3G-DAYA sec3 (SC 48)

Stationary Test PS Data (Before)

1. HSDPA on F1



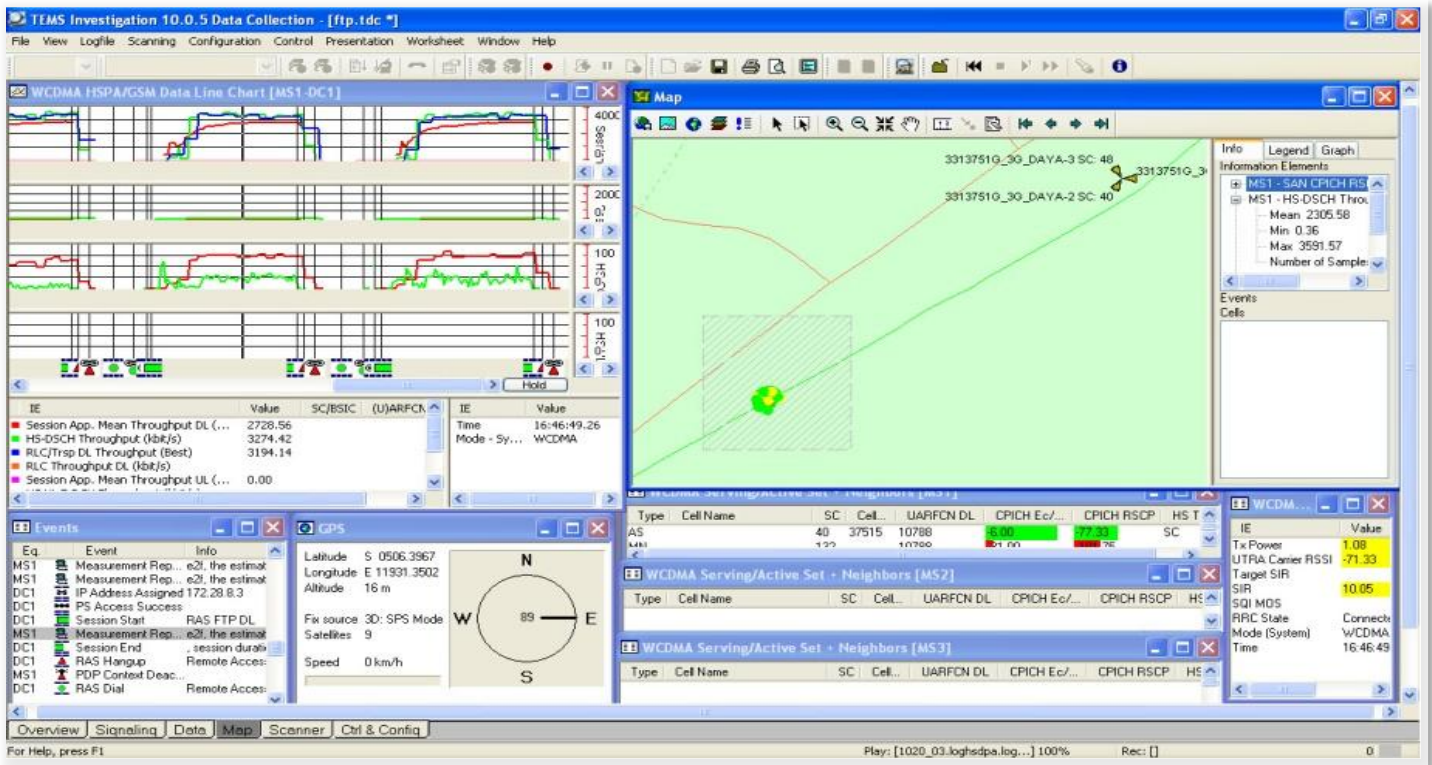
2. R99 on F1



- Max. throughput 588.51 kbps (0.5 Mbps)
- Mean throughput 348.43 kbps (0.3 Mbps)

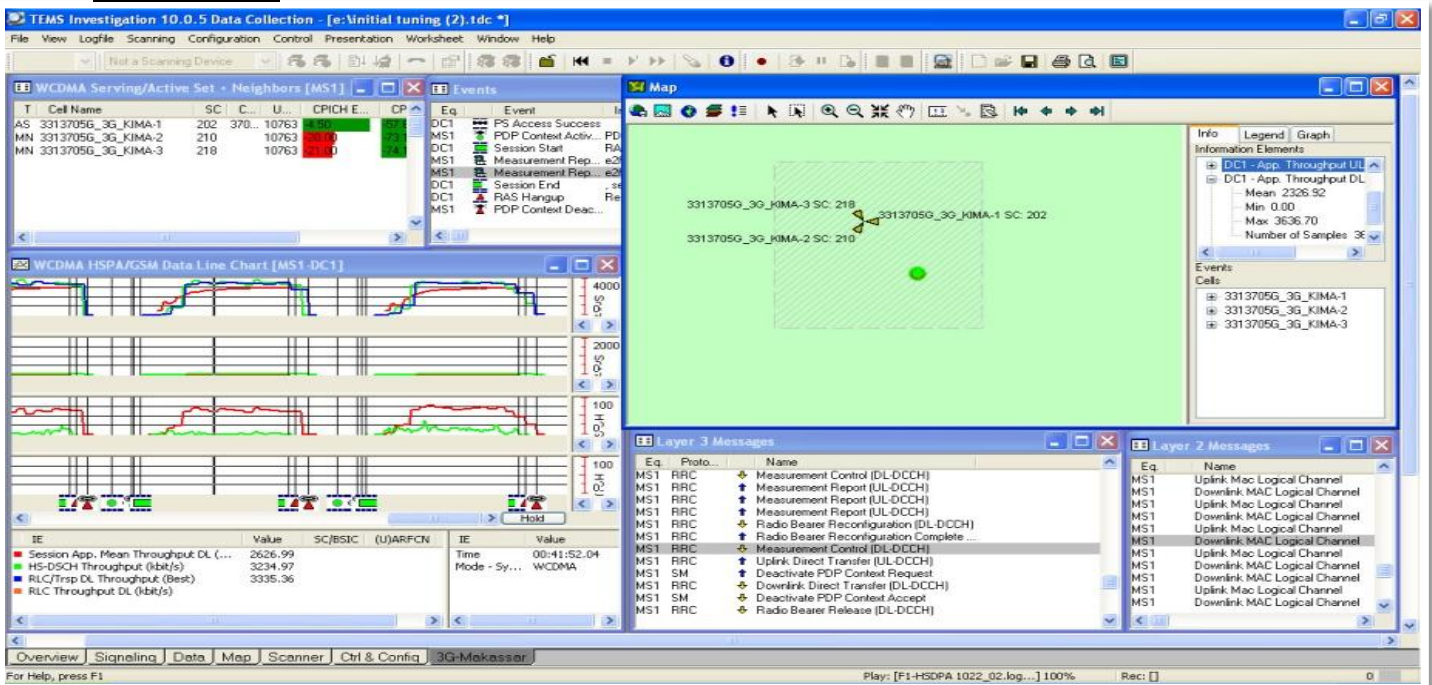
Stationary Test PS Data (After)

1. HSDPA di F2



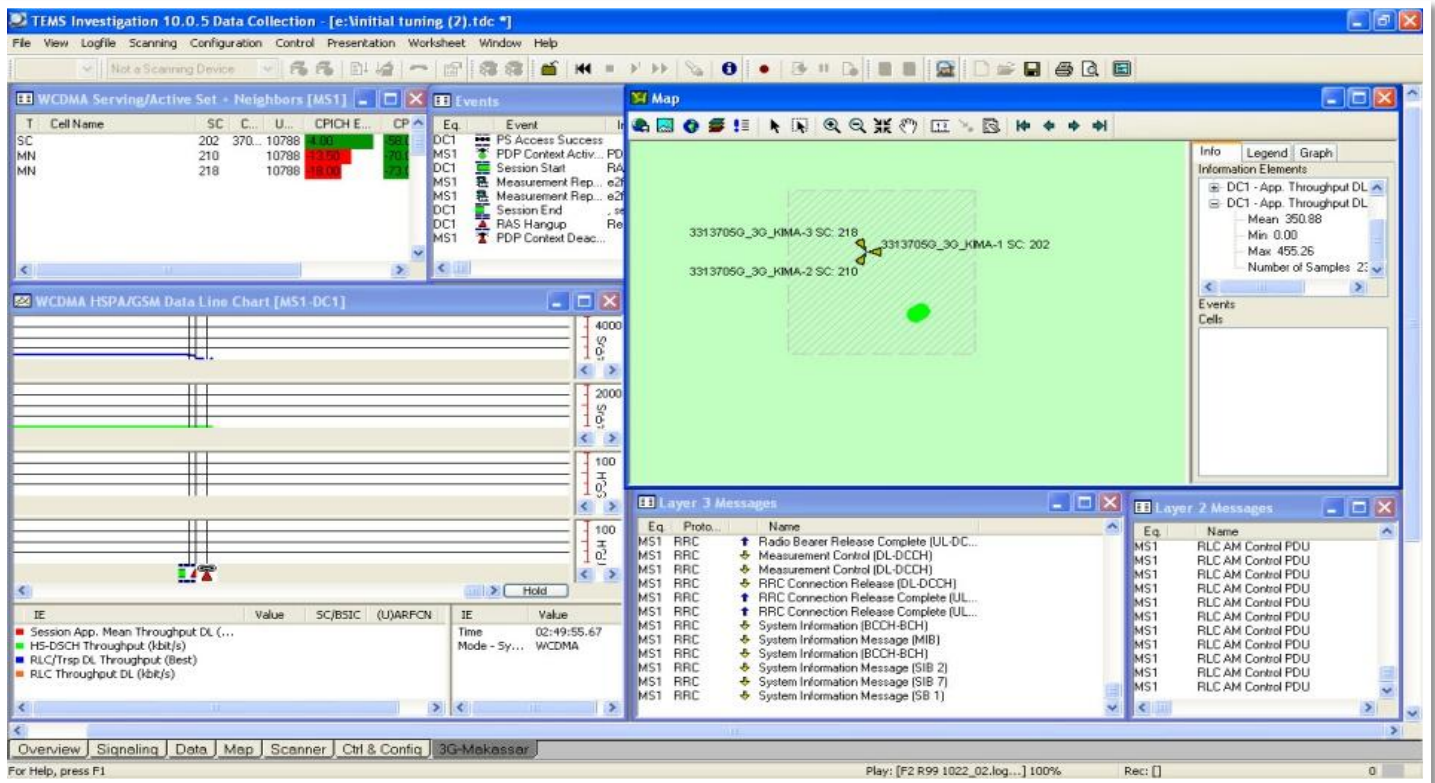
- Max. throughput 3591.57 kbps (3.5 Mbps)
- Mean throughput 2305.58 kbps (2.3 Mbps)

2. HSDPA di F1



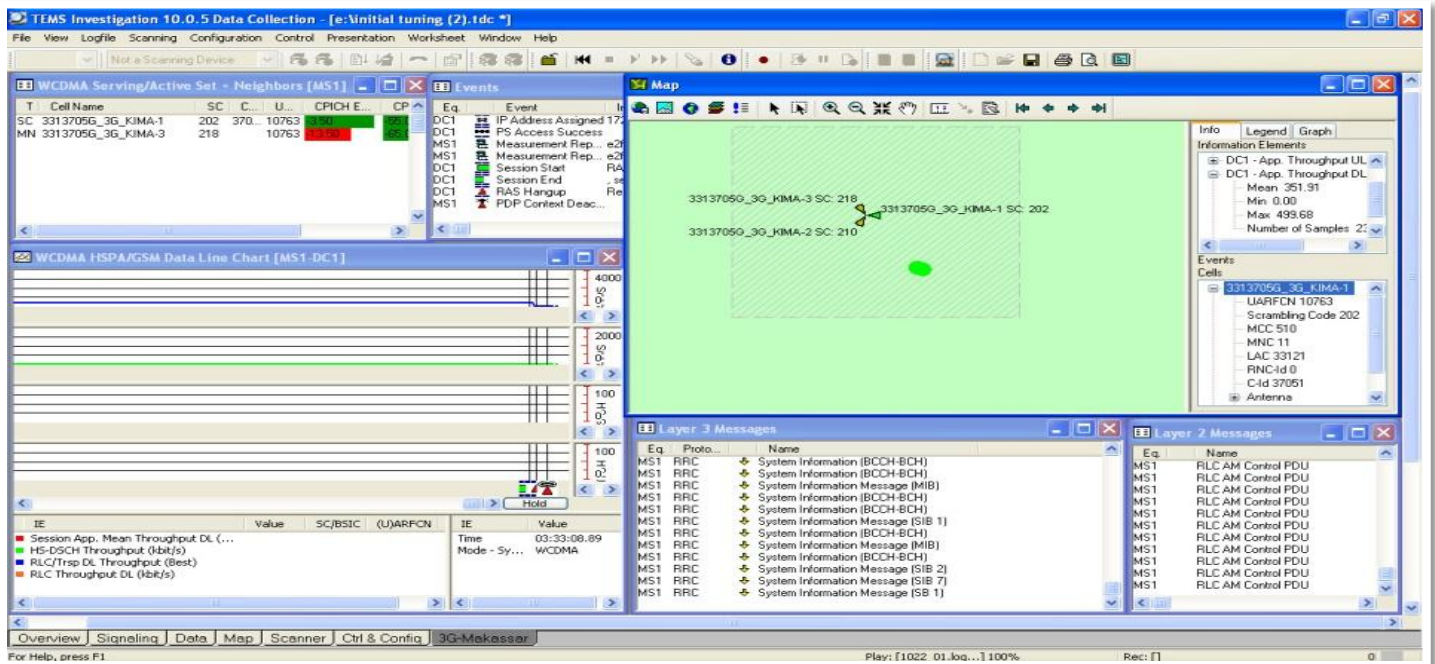
- Max. throughput 3636.70 kbps (3.6 Mbps)
- Mean throughput 2326.92 kbps (2.3 Mbps)

3. R99 di F2



- Max. throughput 455.26 kbps (0.4 Mbps)
- Mean throughput 350.88 kbps (0.3 Mbps)

4. R99 di F1



- Max. throughput 499.68 kbps (0.4 Mbps)
- Mean throughput 351.91 kbps (0.3 Mbps)

LAMPIRAN C

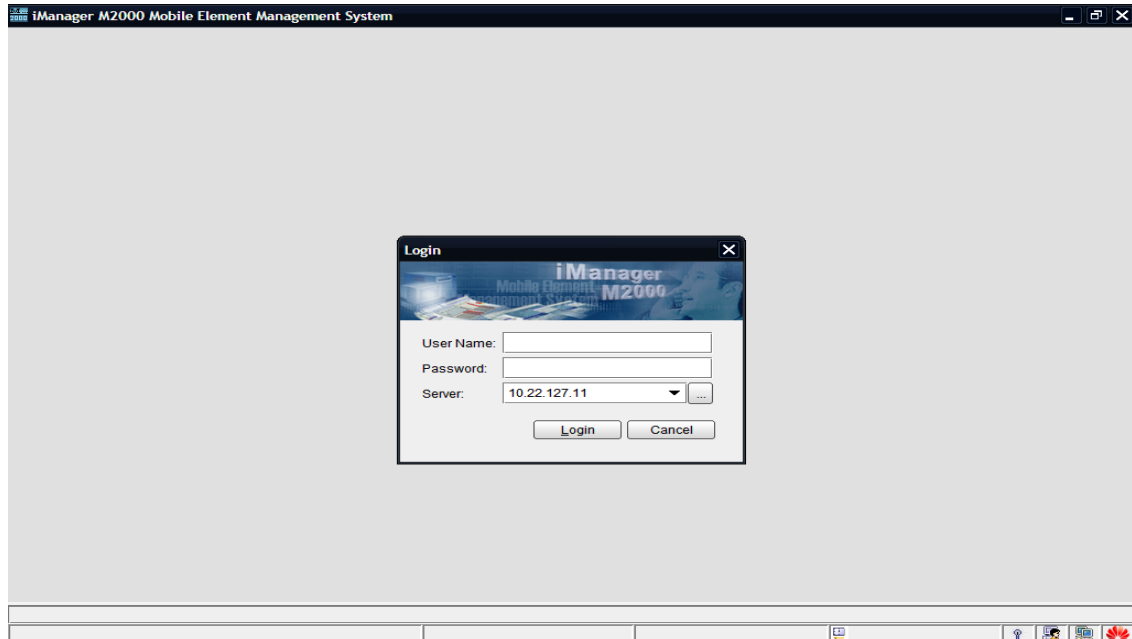
PENGAMBILAN DATA DATA

PENGAMATAN DENGAN OSS

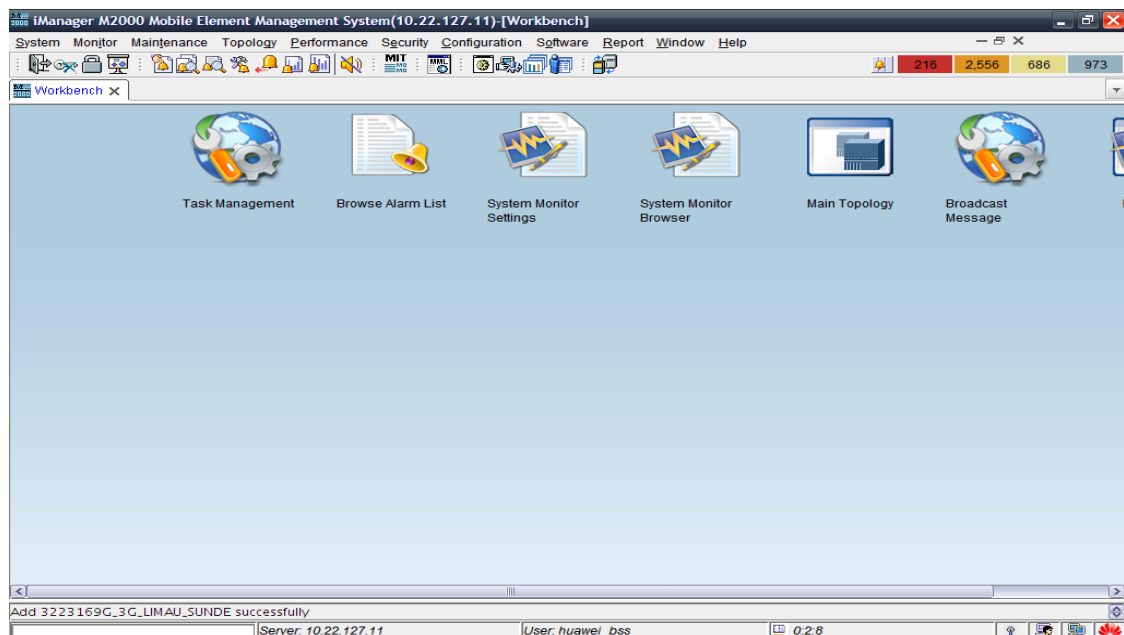
M2000 HUAWEI

Berikut adalah step step login dan query performance jaringan 3G di PT. X :

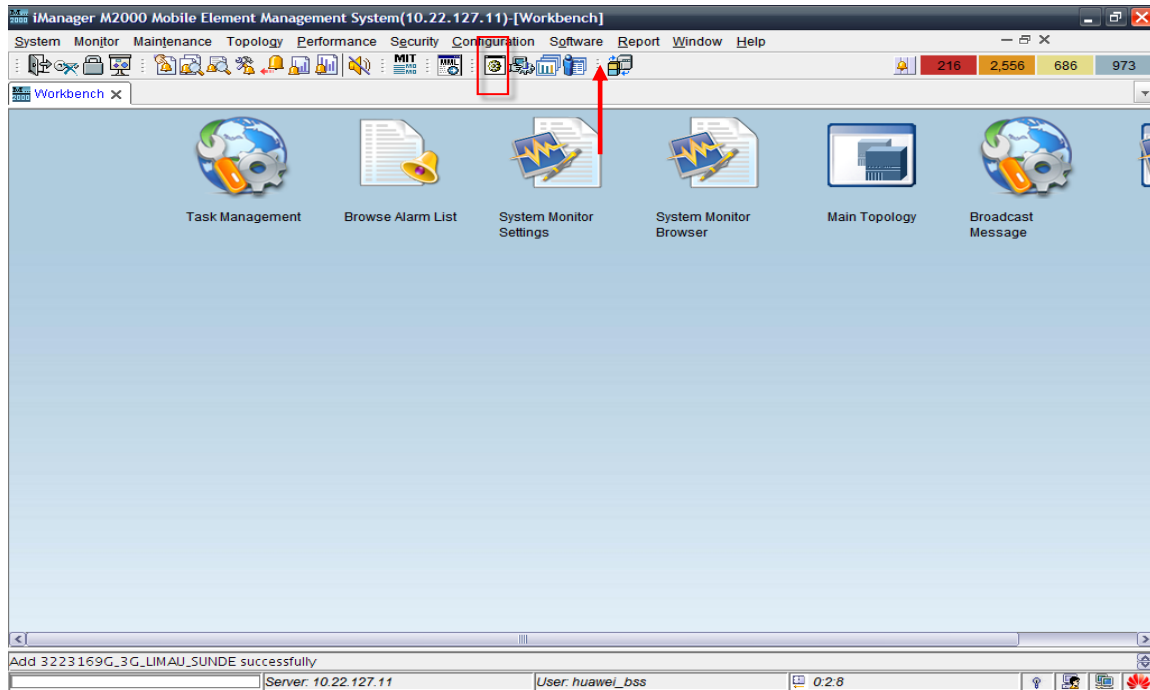
1. Buka program aplikasi Intranet iManager2000 client application yang terhubung melalui jaringan Intranet, dan login sesuai akun user, dan masukkan OSS SERVER IP address 10.22.127.11



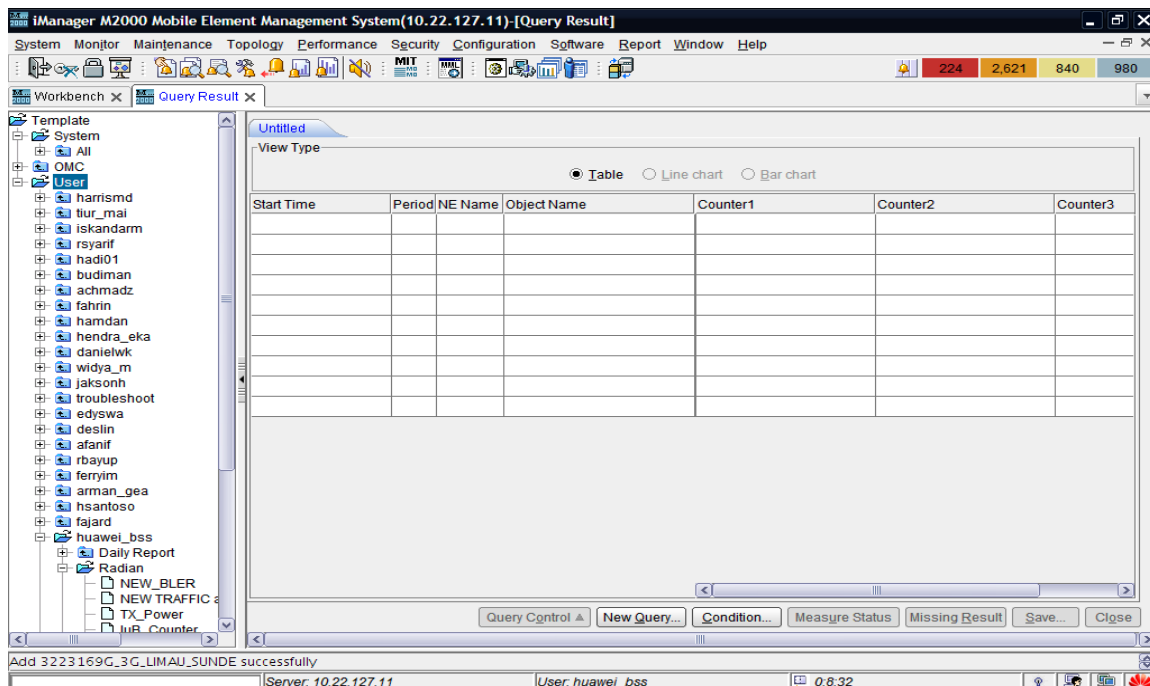
2. Setelah login berhasil maka akan muncul tampilan (screen) seperti berikut:



3. Untuk mengambil (query) statistik performance, silahkan liat icon di taskbar (Query Result). Atau dengan melakukan click pada taskbar Performance -> Query Result

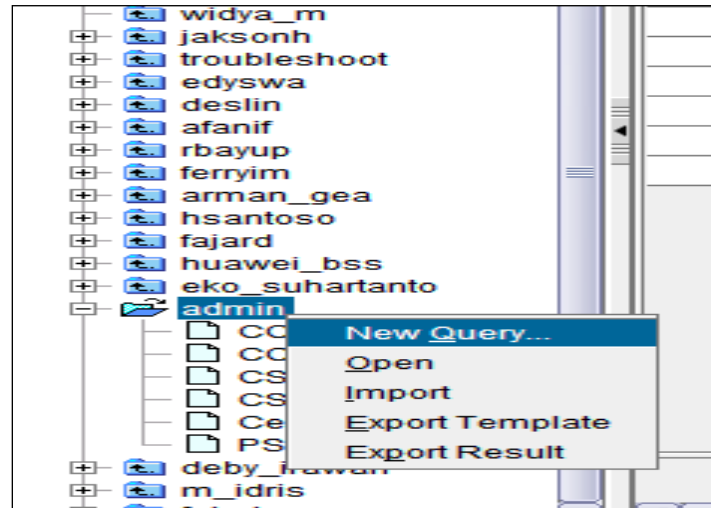


4. Kemudian akan muncul halaman seperti gambar berikut:
- *User profile* dan *counter collecting* template explorer.
 - Query Result area.

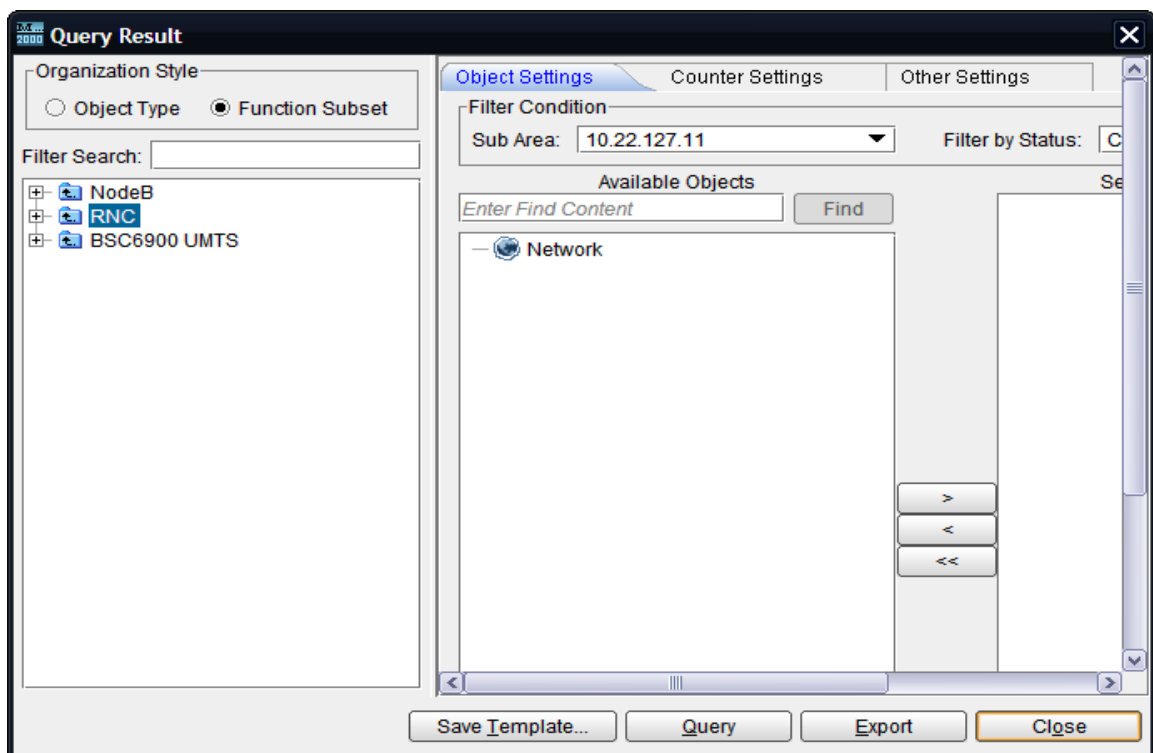


5. Untuk *query performance counters*, harus mengatur template untuk menentukan counters dan NE levels, dan juga dapat mengatur *aggregation time*.

- Klik kanan pada *user* di dalam template explorer.
- *Select New Query*

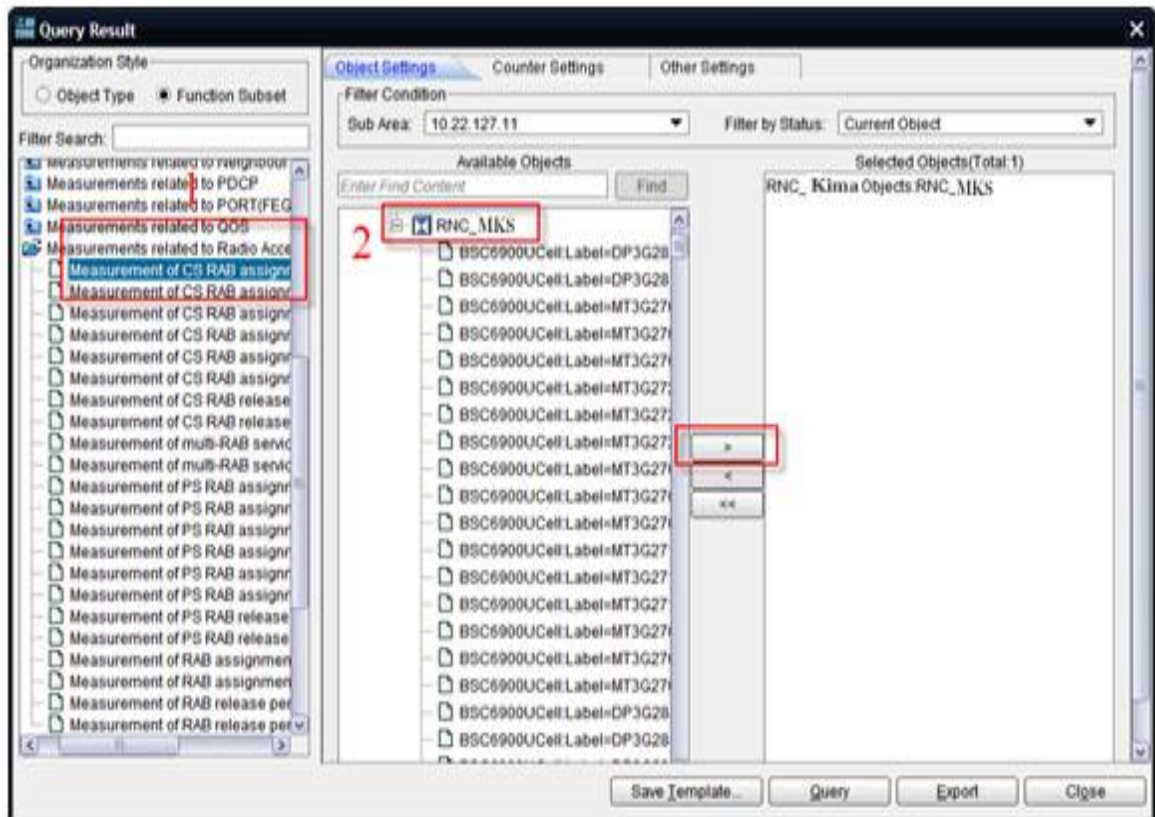


6. Tampilan Jendela Query



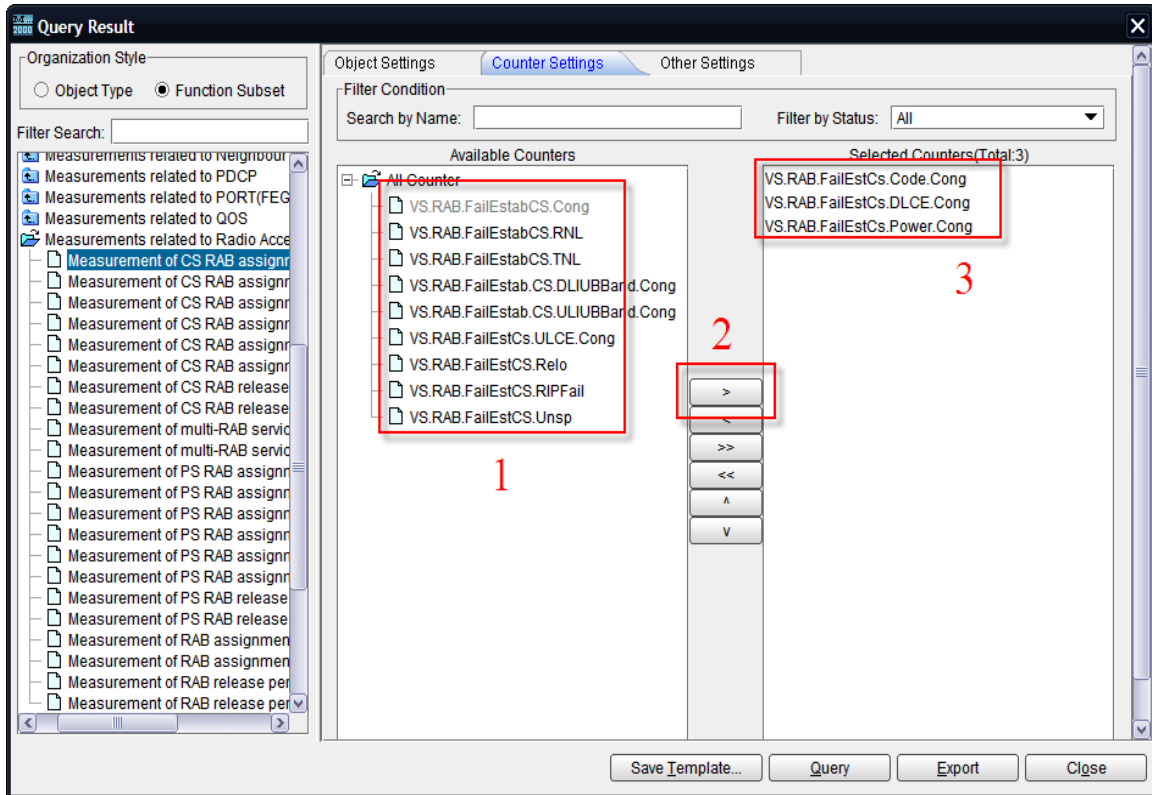
7. Tampilan Object settings :

- Pilih fungsi yang dibutuhkan di bawah RNC prespective pada browser fungsi dengan tingkat terendah Measurement fungsi.
- Pilih objek yang ingin diukur, jika Anda ingin mengukur objek semua di bawah RNC, hanya pilih nama RNC dan kemudian klik ">" tombol untuk memilih semua objek di bawah RNC.



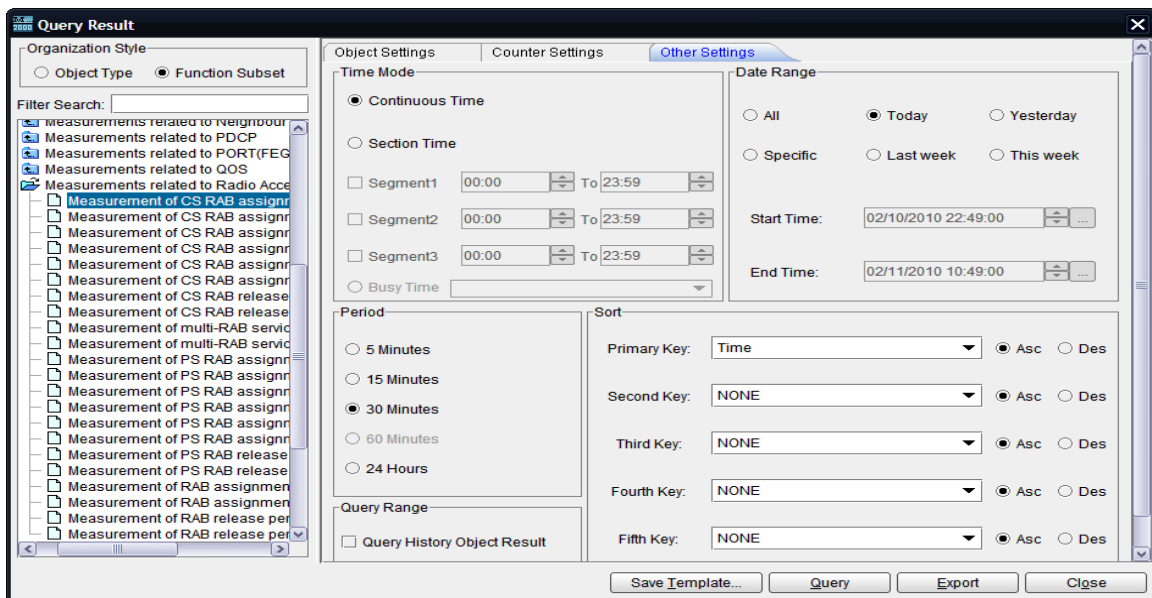
8. Counter settings tab contains:

- Pilih counter yang diperlukan untuk pengukuran.
- klik ">" tombol untuk memilih kontra.
- kontra yang dipilih akan pindah ke daerah counter terpilih.



9. Setting counter aggregation mode :

- Time mode : Pilih Continuous Time.
- Date Range : Tentukan data pengukuran.
- Period : Tentukan periode pengukuran.
- Sort : ordering mode of the query result.



10. Setelah melakukan pengukuran ada beberapa untuk menyelesaikan pengukuran :

- Save Template : Menyimpan pengaturan, sehingga pada saat data diperlukan tinggal memilih template yang telah ada.
- Query : Untuk menampilkan hasil dari query.

The screenshot displays the Manager M2000 Mobile Element Management System interface. The main window shows a query result for the date 02/11/2010 11:19. The table below lists various RNC cells and their performance metrics.

Start Time	Period	NE Name	BSC6900Cell	VS. RAB FailEstCs. Code Cong	VS. RAB FailEstCs. DLCE Cong	VS. RAB FailEstCs. Power Cong
02/11/2010 00:00:00	30	RNC_	Label-DP3G28182...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-DP3G28181...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27083...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27082...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27081...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27293...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27292...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27291...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27073...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27072...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27071...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27183...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27182...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27181...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27063...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27062...	0	0	0
02/11/2010 00:00:00	30	RNC_	Label-MT3G27061...	0	0	0

Total 9984

Buttons: Query Control, New Query, Condition, Measure Status, Missing Result, Save, Close

Server: 10.22.127.11 | User: huawei_bss | 0.52.14