

GSM TEMS INVESTIGATION WORKSHOP

Appendix A – System Information

System Information Overview.

- | | | | |
|----------|--|--------|---|
| 1. | Cell Channel description | 4. | Location area identification |
| | Rach Control parameters | | Cell Selection parameters |
| 2. | Neighbor cells description | | RACH control parameters |
| | NCC permitted | | CBCH channel description |
| 2 bis. | Neighbor cells description
(extension) | | CBCH mobile allocation |
| 2 ter. | RACH control parameters | 5. | SI 4 rest octels |
| | Additional multiband | | Neighbor cells description |
| | information | 5 bis. | Neighbor cells description(extension) |
| | Neighbor cells description(other
bands) | 5 ter. | Additional multiband information |
| 2. | Neighbor cells
description(UMTS) | | Neighbor cells description(other bands) |
| quarter. | Location area identification | 6. | Location area identification |
| 3. | Cell identity | | Cell identity |
| | Control channel description | | Cell options |
| | Cell Options | | NCC permitted |
| | Cell Selection parameters | 7. | SI 7 rest octets |
| | RACH control parameters | 8. | SI 8 rest octects |
| | SI 3 rest octets | 13 | .GPRS information |

Multiplex of phase 2 system information messages on BCCH norm (TC is a sequence number for the 51-frame multiframe).

TC	7	0	1	2	3	4	5	6	7	0	1	2
Multiframe	B	B	B	B	B	B	B	B	B	B	B	B
System Information Type												
4	1(3)*	2	3	4	3	2	3	4	1(3)	2	3	
4	1(3)	2	3	4	3	2 bis	3	4	1(3)	2	3	
4	1(3)	2	3	4	3	2 ter	3	4	1(3)	2	3	
4	1(3)	2	3	4	2 ter	2 bis	3	4	1(3)	2	3	

$$TC = (FN \text{ DIV}(51)) \text{ MOD } 8$$

*System Information Type 1 is mandatory only when frequency hopping is used, otherwise any System Information msg can be sent

TEMS Printout of System Information Type 3.

DL: SYSTEM INFORMATION TYPE 3

Time: 12:00:14.21
Lat: not valid Lon: not valid
Frame number: 722308

Read from (ARFCN): 44
L2 Pseudo Length: 18
Cell Identity: 0065 (hex)
Location area identification
 Mobile country code (MCC): 214
 Mobile network code (MNC): 07
 Location area code (LAC): 0afc (hex)
Control channel description
 Attach/detach allowed (ATT): Yes
 BS-AG-BLKS-RES: 1
 CCCH-CONF: 1 basic physical channel, not combined with SDCCH's
 BS-PA-MFRMS: 3 multiframe period
 T3212 timeout value: 40
Cell options(BCCH)
 Power control indicator (PWRC): Not set
 DTX indicator: MS shall use uplink discontinuous transmission
 RADIO-LINK-TIMEOUT: 16
Cell selection parameters
 CELL-RESELECT HYSTERESIS: 6 dB RXLEV
 MS-TXPWR-MAX-CCH: 5
 RXLEV-ACCESS-MIN: 3
RACH control parameters
 Max retransmissions: 4
 Tx-integer: 16
Cell bar access: Not barred

TEMS Printout of System Information

Type 3 (Cont.).

Call reestablishment [RE]: Not allowed
Emergency call [EC] allowed: All MS
Not barred class[es] [ACC]: 0 1 2 3 4 5 6 7
0 9 11 12 13 14 15

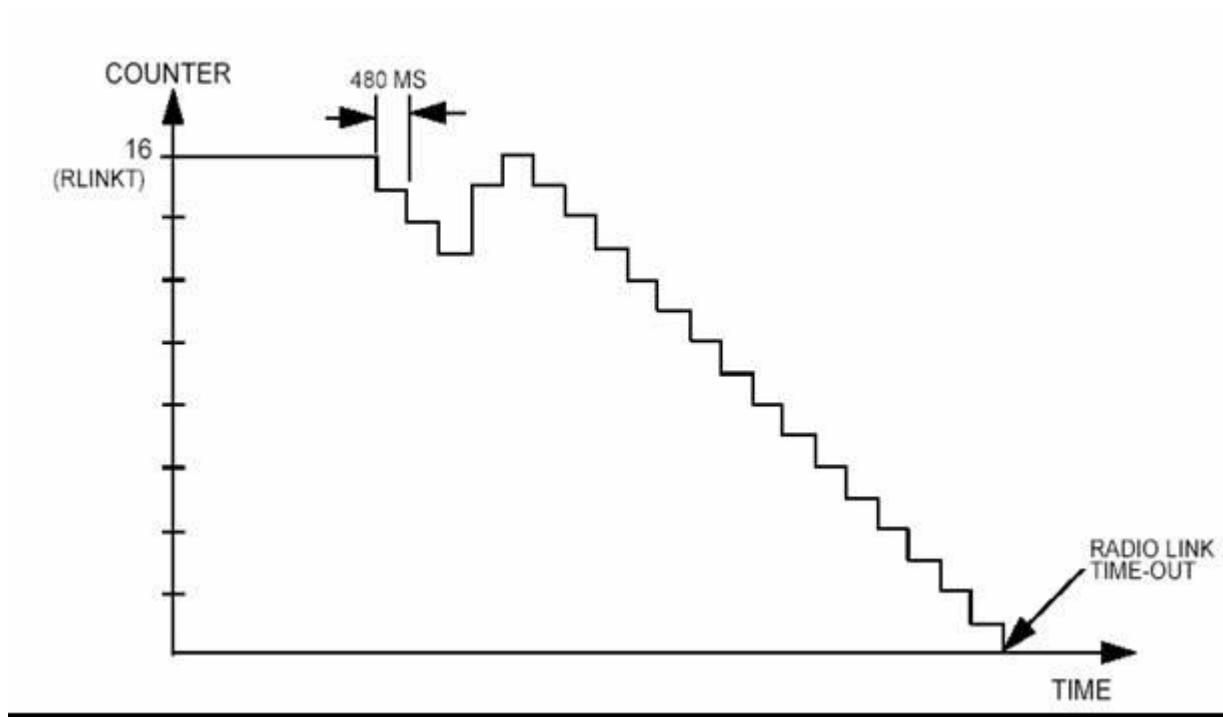
SI 3 Rest Octets

Cell Reselect Parameters Indication [PI]: C2 Parameters present
Cell Bar Qualify [CBQ]: 0
If Cell Bar Access = 0
 Cell Selection priority: Normal
 Status for cell reselection: Normal
else
 Cell Selection priority: Barred
 Status for cell reselection: Barred
Cell Reselection Offset: 0 dB
Temporary Offset: 0 dB
Penalty Time: 20 s
Power Offset Indication [POI]: Power Offset Parameter not present
Early Sending: Explicitly accepted
System Information 2ter: Available

Message dump:

00 2c 49 06 1b 00 65 12 f4 70
0a fc 48 01 28 13 65 03 ad 00
00 80 00 4b 2b

Radio Link Time-Out, Downlink.



Coding of ACCMIN Parameter.

ACCMIN value	Signal strength value
0	Below -110 dBm
1	-110 dBm to -109 dBm
2	-109 dBm to -108 dBm



62	-49 dBm to -48dBm
63	Greater than -48 dBm

Coding of CCHPWR Parameter for GSM 800 and GSM 900.

CCHPWR value	Signal strength value
0 - 2	39 dBm
3	37 dBm
4	35 dBm



18	7 dBm
19 -31	5 dBm

Coding of CCHPWR Parameter for GSM 1800

CCHPWR value	Signal strength value
29	36 dBm
30	34 dBm
31	32 dBm
0	30 dBm
1	28 dBm
2	26 dBm



14	2 dBm
15 - 28	0 dBm

Coding of CCHPWR Parameter for GSM 1900

CCHPWR value	Signal strength value
22 -29	Reserved
30	33 dBm
31	31 dBm
0	30 dBm
1	28 dBm
2	26 dBm



14	2 dBm
15 - 28	0 dBm

«Ericsson Training Center» Москва

