

3GPP TSG RAN WG1 Meeting #10
Beijing, China, 18 JAN 2000 - 21 JAN 2000

Document **R1-00-0096**

e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.						
25.221	CR 012	Current Version: V3.1.0						
GSM (AA.BB) or 3G (AA.BBB) specification number ↑	↑ CR number as allocated by MCC support team							
For submission to: TSG RAN #7 <small>list expected approval meeting # here ↑</small>	for approval for information <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">X</td></tr><tr><td style="text-align: center;"> </td></tr></table>	X		strategic <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;"> </td></tr><tr><td style="text-align: center;"> </td></tr></table> (for SMG use only) non-strategic <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;"> </td></tr><tr><td style="text-align: center;"> </td></tr></table>				
X								

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form : <http://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: Nokia **Date:** 17.12.1999

Subject: Introduction of the timeslot formats for RACH to the TDD specifications

Work item: TS25.221

Category: <small>(only one category shall be marked with an X)</small>	F Correction <input type="checkbox"/>	Release: Phase 2 <input type="checkbox"/>
A Corresponds to a correction in an earlier release <input type="checkbox"/>	Release 96 <input type="checkbox"/>	
B Addition of feature <input type="checkbox"/>	Release 97 <input type="checkbox"/>	
C Functional modification of feature <input type="checkbox"/>	Release 98 <input type="checkbox"/>	
D Editorial modification <input checked="" type="checkbox"/>	Release 99 <input checked="" type="checkbox"/>	
	Release 00 <input type="checkbox"/>	

Reason for change: RACH timeslot formats are still missing from the TDD specifications

Clauses affected: 5.2.2.3

Other specs affected:	Other 3G core specifications <input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications <input type="checkbox"/>	→ List of CRs:	
	MS test specifications <input type="checkbox"/>	→ List of CRs:	
	BSS test specifications <input type="checkbox"/>	→ List of CRs:	
	O&M specifications <input type="checkbox"/>	→ List of CRs:	

Other comments:



<----- double-click here for help and instructions on how to create a CR.

5.2.2.3 Timeslot formats

5.2.2.3.1 Downlink timeslot formats

The downlink timeslot format depends on the spreading factor, midamble length and on the number of the TFCI bits, as depicted in the table 4a.

Table 4a: Time slot formats for the Downlink

Slot Format #	Spreading Factor	Midamble length (chips)	N_{TFCI} (bits)	Bits/slot	$N_{Data/Slot}$ (bits)	$N_{data/data\ field}$ (bits)
0	16	512	0	244	244	122
1	16	512	4	244	240	120
2	16	512	8	244	236	118
3	16	512	16	244	228	114
4	16	512	32	244	212	106
5	16	256	0	276	276	138
6	16	256	4	276	272	136
7	16	256	8	276	268	134
8	16	256	16	276	260	130
9	16	256	32	276	244	122
10	1	512	0	3904	3904	1952
11	1	512	4	3904	3900	1950
12	1	512	8	3904	3896	1948
13	1	512	16	3904	3888	1944
14	1	512	32	3904	3872	1936
15	1	256	0	4416	4416	2208
16	1	256	4	4416	4412	2206
17	1	256	8	4416	4408	2204
18	1	256	16	4416	4400	2200
19	1	256	32	4416	4384	2192

5.2.2.3.2 Uplink timeslot formats

The uplink timeslot format depends on the spreading factor, midamble length, the TPC presence and on the number of the TFCI bits. In the case that TPC is used, different amount of bits are mapped to the two data fields. The timeslot formats are depicted in the table 4b.

Table 4b: Timeslot formats for the Uplink

Slot Format #	Spreading Factor	Midamble length (chips)	N_{TFCI} (bits)	N_{TPC} (bits)	Bits/slot	$N_{Data/Slot}$ (bits)	$N_{data/data}$ field(1) (bits)	$N_{data/data}$ field(2) (bits)
0	16	512	0	0	244	244	122	122
1	16	512	4	0	244	240	120	120
2	16	512	8	0	244	236	118	118
3	16	512	16	0	244	228	114	114
4	16	512	32	0	244	212	106	106
5	16	512	0	2	244	242	122	120
6	16	512	4	2	244	238	120	118
7	16	512	8	2	244	234	118	116
8	16	512	16	2	244	226	114	112
9	16	512	32	2	244	210	106	104
10	16	256	0	0	276	276	138	138
11	16	256	4	0	276	272	136	136
12	16	256	8	0	276	268	134	134
13	16	256	16	0	276	260	130	130
14	16	256	32	0	276	244	122	122
15	16	256	0	2	276	274	138	136
16	16	256	4	2	276	270	136	134
17	16	256	8	2	276	266	134	132
18	16	256	16	2	276	258	130	128
19	16	256	32	2	276	242	122	120
20	8	512	0	0	488	488	244	244
21	8	512	4	0	488	484	242	242
22	8	512	8	0	488	480	240	240
23	8	512	16	0	488	472	236	236
24	8	512	32	0	488	456	228	228
25	8	512	0	2	488	486	244	242
26	8	512	4	2	488	482	242	240
27	8	512	8	2	488	478	240	238
28	8	512	16	2	488	470	236	234
29	8	512	32	2	488	454	228	226

30	8	256	0	0	552	552	276	276
31	8	256	4	0	552	548	274	274
32	8	256	8	0	552	544	272	272
33	8	256	16	0	552	536	268	268
34	8	256	32	0	552	520	260	260
35	8	256	0	2	552	550	276	274
36	8	256	4	2	552	546	274	272
37	8	256	8	2	552	542	272	270
38	8	256	16	2	552	534	268	266
39	8	256	32	2	552	518	260	258
40	4	512	0	0	976	976	488	488
41	4	512	4	0	976	972	486	486
42	4	512	8	0	976	968	484	484
43	4	512	16	0	976	960	480	480
44	4	512	32	0	976	944	472	472
45	4	512	0	2	976	974	488	486
46	4	512	4	2	976	970	486	484
47	4	512	8	2	976	966	484	482
48	4	512	16	2	976	958	480	478
49	4	512	32	2	976	942	472	470
50	4	256	0	0	1104	1104	552	552
51	4	256	4	0	1104	1100	550	550
52	4	256	8	0	1104	1096	548	548
53	4	256	16	0	1104	1088	544	544
54	4	256	32	0	1104	1072	536	536
55	4	256	0	2	1104	1102	552	550
56	4	256	4	2	1104	1098	550	548
57	4	256	8	2	1104	1094	548	546
58	4	256	16	2	1104	1086	544	542
59	4	256	32	2	1104	1070	536	534
60	2	512	0	0	1952	1952	976	976
61	2	512	4	0	1952	1948	974	974
62	2	512	8	0	1952	1944	972	972
63	2	512	16	0	1952	1936	968	968
64	2	512	32	0	1952	1920	960	960
65	2	512	0	2	1952	1950	976	974
66	2	512	4	2	1952	1946	974	972
67	2	512	8	2	1952	1942	972	970

68	2	512	16	2	1952	1934	968	966
69	2	512	32	2	1952	1918	960	958
70	2	256	0	0	2208	2208	1104	1104
71	2	256	4	0	2208	2204	1102	1102
72	2	256	8	0	2208	2200	1100	1100
73	2	256	16	0	2208	2192	1096	1096
74	2	256	32	0	2208	2176	1088	1088
75	2	256	0	2	2208	2206	1104	1102
76	2	256	4	2	2208	2202	1102	1100
77	2	256	8	2	2208	2198	1100	1098
78	2	256	16	2	2208	2190	1096	1094
79	2	256	32	2	2208	2174	1088	1086
80	1	512	0	0	3904	3904	1952	1952
81	1	512	4	0	3904	3900	1950	1950
82	1	512	8	0	3904	3896	1948	1948
83	1	512	16	0	3904	3888	1944	1944
84	1	512	32	0	3904	3872	1936	1936
85	1	512	0	2	3904	3902	1952	1950
86	1	512	4	2	3904	3898	1950	1948
87	1	512	8	2	3904	3894	1948	1946
88	1	512	16	2	3904	3886	1944	1942
89	1	512	32	2	3904	3870	1936	1934
90	1	256	0	0	4416	4416	2208	2208
91	1	256	4	0	4416	4412	2206	2206
92	1	256	8	0	4416	4408	2204	2204
93	1	256	16	0	4416	4400	2200	2200
94	1	256	32	0	4416	4384	2192	2192
95	1	256	0	2	4416	4414	2208	2206
96	1	256	4	2	4416	4410	2206	2204
97	1	256	8	2	4416	4406	2204	2202
98	1	256	16	2	4416	4398	2200	2198
99	1	256	32	2	4416	4282	2192	2190

5.2.2.3.3 RACH timeslot formats

For the RACH the timeslot format is only spreading factor dependent. Burst type 1 midamble is always used. The two data fields contain a different number of bits.

Table 4c: Timeslot formats for the RACH

Slot Format #	Spreading Factor	Midamble length (chips)	Bits/slot	$N_{\text{Data/Slot}}$ (bits)	$N_{\text{data/data field(1)}}$ (bits)	$N_{\text{data/data field(2)}}$ (bits)
0	16	512	232	232	122	110
1	8	512	464	464	244	220