CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

| **25.223** | CR | **007r1** | Current Version: | 3.3.0 |

GSM (AA.BB) or 3G (AA.BBB) specification number ↑   *↑ CR number as allocated by MCC support team*

| For submission to: | **RAN#9** | for approval | **X** | strategic | | *(for SMG* |
| *list expected approval meeting # here* ↑ | | for information | | non-strategic | | *use only)* |

Form: CR cover sheet, version 2 for 3GPP and SMG   *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

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

| **Source:** | Siemens AG | **Date:** | 27/06/2000 |

| **Subject:** | Gain Factors for TDD Mode |

| **Work item:** | |

Category: F   Correction   **X**   **Release:**   Phase 2   ☐
          A   Corresponds to a correction in an earlier release   ☐   Release 96   ☐
(only one category   B   Addition of feature   ☐   Release 97   ☐
shall be marked   C   Functional modification of feature   ☐   Release 98   ☐
with an X)   D   Editorial modification   ☐   Release 99   **X**
                    Release 00   ☐

| **Reason for change:** | Alignment with FDD Mode |

| **Clauses affected:** | 6.5.1 |

Other specs affected:

Other 3G core specifications	**X**	→ List of CRs:	TS25.224CR019r1
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

| **Other comments:** | |

help.doc

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

6.5.1 Combination of physical channels in uplink

Figure 4 illustrates the principle of combination ~~how the maximum~~ of two different physical uplink channels ~~are combined~~ within one timeslot. The DPCHs to be combined belong to same CCTrCH, did undergo spreading as described in sections before and are thus represented by complex-valued sequences. First, the amplitude of all DPCHs is adjusted according to UL open loop power control as described in [10]. Each DPCH ~~complex-valued spread channel~~ is then separately weighted by a weight factor γ_i ~~G_r~~ and combined using complex addition. After combination of Physical Channels the gain factor β_j is applied, depending on the actual TFC as described in [10].

In case of different CCTrCH, principle shown in Figure 4 applies to each CCTrCH separately.
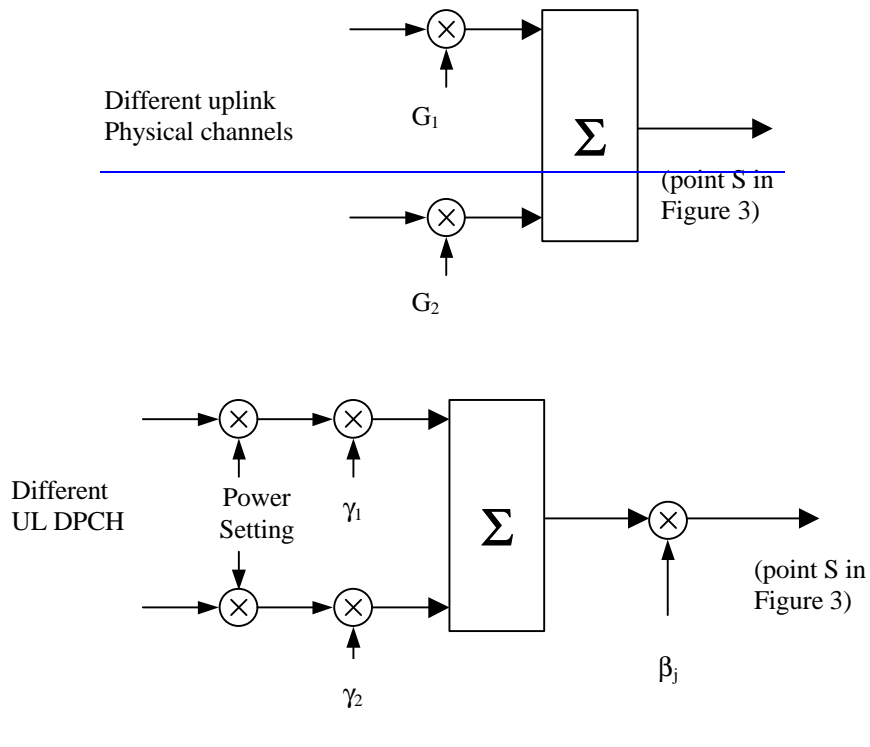

Figure 4: Combination of different physical channels in uplink

The values of weight factors γ_i are depending on the spreading factor SF of the corresponding DPCH:

SF of DPCH$_i$	γ_i
16	1
8	$\sqrt{2}$
4	2
2	$2\sqrt{2}$
1	4

The possible values for gain factors β_j (corresponding to *j*–th TFC) are listed in table below:

Signalling value for β_j	Quantized value β_j
15	16/8
14	15/8
13	14/8
12	13/8
11	12/8

10	11/8
9	10/8
8	9/8
7	8/8
6	7/8
5	6/8
4	5/8
3	4/8
2	3/8
1	2/8
0	1/8