TSG-RAN Meeting #10
Bangkok, Thailand, 6 - 8 December 2000

RP-000544

Title: **Agreed CRs to TS 25.224**

Source: **TSG-RAN WG1**

Agenda item: **5.1.3**

No.	R1 T-doc	Spec	CR	Rev	Subject	Cat	V_old	V_new
1	R1-001470	25.224	035	1	Radio Link establishment and sync status reporting	F	3.4.0	3.5.0
2	R1-001342	25.224	040	-	Clarification on PICH power setting	F	3.4.0	3.5.0
3	R1-001372	25.224	042	-	Correction to TDD timing advance description	F	3.4.0	3.5.0
4	R1-001402	25.224	043	-	Limit on maximum value of alpha used for open loop power control	F	3.4.0	3.5.0

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Bangkok, Thailand, 6-8, December 2000

Tdoc R1-00-1470

CR-Form-v3

CHANGE REQUEST

⌘ **25.224** **CR** **35** ⌘ rev **1** ⌘ Current version: **3.4.0** ⌘

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Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Radio Link establishment and sync status reporting
Source:	⌘	TSG RAN WG1
Work item code:	⌘	***Date:*** ⌘ 23 November, 2000
Category:	⌘	**F** ***Release:*** ⌘ R99

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
C *(Functional modification of feature)*
D *(Editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Prior version of in-sync/out-of-sync procedure was ambiguous and incomplete.
Summary of change:	⌘	Clarification of use of special bursts and alignment of TDD with FDD two-phase approach..
Consequences if not approved:	⌘	Unacceptable delays in declaring initial sync, and erroneous detection of out-of-sync for DTX case.

Clauses affected:	⌘	4.2.2.3.2,4.2.2.3.3,4.4.2.1.2,4.4.2.1.2,4.4.2.2,4.4.2.2.1,4.4.2.2.2,4.5
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications ⌘
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.2.2.3.2 Power Control Loop

After the synchronisation between UTRAN and UE is established, the UE transits into open-loop transmitter power control (TPC).

The power setting for each uplink DPCH in one CCTrCH shall be calculated by the following equation:

$P_{UL} = \alpha L_{P\text{-}CCPCH} + (1-\alpha)L_0 + I_{BTS} + SIR_{TARGET} +$ Constant value

where

P_{UL}: Power setting in dBm, cf. section "Combination of physical channels in uplink" in [10]; This value corresponds to a particular CCTrCH (due to CCTrCH-specific SIR_{TARGET}) and a particular timeslot (due to possibly timeslot-specific α and I_{BTS}).

$L_{P\text{-}CCPCH}$: Measure representing path loss in dB (reference transmit power is broadcast on BCH).

L_0: Long term average of path loss in dB.

I_{BTS}: Interference signal power level at cell's receiver in dBm, which is broadcast on BCH.

α: α is a weighting parameter which represents the quality of path loss measurements. α may be a function of the time delay between the uplink time slot and the most recent down link time slot containing a beacon channel, see [8]. α is calculated at the UE. An example for calculating α as a function of the time delay is given in annex A.1.

SIR_{TARGET}: Target SINR in dB. A higher layer outer loop adjusts the target SIR.

Constant value: This value shall be set by higher Layer (operator matter). and is broadcast on BCH.

If the midamble is used in the evaluation of $L_{P\text{-}CCPCH}$ and L_0, and the Tx diversity scheme used for the P-CCPCH involves the transmission of different midambles from the diversity antennas, the received power of the different midambles from the different antennas shall be combined prior to evaluation of these variables

4.2.2.3.3 Out of synchronisation handling

As stated in 4.2.3.3, the association between TPC commands sent on uplink DPCH and PUSCH, with the power controlled downlink DPCH and PDSCH is signaled by higher layers. In the case of multiple DL CCTrCHs it is possible that an UL CCTrCH will provide TPC commands to more than one DL CCTrCH.

In the second phase of synchronisation evaluation, as defined in 4.4.2.1.2 , the UE shall shut off the ~~uplink~~ transmission of an UL CCTrCH if the following criteria ~~is~~ are fulfilled for any one of the DL CCTrCHs commanded by its TPC:

- The UE estimates the received dedicated channel burst quality over the last ~~[~~160~~]~~ ms period to be worse than a threshold Q_{out}, and in addition, no special burst, as defined in 4.5, is detected with quality above a threshold, Q_{sbout} ~~This criterion is never fulfilled during the first [160] ms of the dedicated channel's existence~~. Q_{out} and Q_{sbout} are ~~is~~ defined implicitly by the relevant tests in [2]. If the UE detects the beacon channel reception level [10 dB] above the handover triggering level, then the UE shall use a 320 ms estimation period for the burst quality evaluation and for the Special Burst detection window.~~;~~

  ~~- if the UE detect the beacon channel reception level [10 dBm] above the handover triggering level, then the UE uses [320] ms estimation period for the burst quality evaluation.~~

UE shall subsequently resume the uplink transmission of the CCTrCH if the following criteria ~~is~~ are fulfilled:

- The UE estimates the received dedicated CCTrCH burst reception quality over the last ~~[~~160~~]~~ ms period to be better than a threshold Q_{in} ~~.~~or the UE detects a burst with quality above threshold Q_{sbin} and TFCI decoded to be that of the Special Burst. ~~This criterion is always fulfilled during the first [160] ms of the dedicated channel's existence.~~ Q_{in} and Q_{sbin} are ~~is~~ defined implicitly by the relevant tests in [2]. If the UE detects the beacon channel reception level [10 dB] above the handover triggering level, then the UE shall use a 320 ms estimation period for the burst quality evaluation and for the Special Burst detection window.

  ~~- If the UE detects the beacon channel reception level [10 dB] above the handover triggering level, then the UE shall be allowed to use a further [320] ms estimation period for the burst quality evaluation.~~

4.4.2.1 Synchronisation primitives

4.4.2.1.1 General

For the dedicated channels, synchronisation primitives are used to indicate the synchronisation status of radio links, both in uplink and downlink. The definition of the primitives is given in the following subclauses.

4.4.2.1.2 Downlink synchronisation primitives

Layer 1 in the UE shall check the synchronization status of each DL CCTrCH individually in every radio frame. ~~check synchronisation status of the downlink dedicated channels.~~ All bursts and transport channels of a CCTrCH shall be taken into account. Synchronisation status is indicated to higher layers, using the CPHY-Sync-IND or CPHY-Out-of-Sync-IND primitives. For dedicated physical channels configured with Repetition Periods [15] only the configured active periods shall be taken into account in the estimation. The status check shall also include detection of the Special Bursts defined in 4.5 for DTX.

The criteria for reporting synchronization status are defined in two different phases.

The first phase lasts until 160 ms after the downlink CCTrCH is considered to be established by higher layers. During this time, Out-of-sync shall not be reported. In-sync shall be reported using the CPHY-Sync-IND primitive if any one of the following three criteria is fulfilled.

a) The UE estimates the burst reception quality over the previous 40 ms period to be better than a threshold Q_{in}. This criterion shall be assumed not to be fulfilled before 40 ms of burst reception quality measurement have been collected.

b) At least one transport block with a CRC attached is received in a TTI ending in the current frame with correct CRC.

c) The UE detects at least one Special Burst. Special Burst detection shall be successful if the burst is detected with quality above a threshold, Q_{sbin}, and the TFCI is decoded to be that of the Special Burst.

The second phase starts 160 ms after the downlink dedicated channel is considered established by higher layers.. During this phase both Out-of-Sync and In-Sync are reported as follows.

Out-of-sync shall be reported using the CPHY-Out-of-Sync-IND primitive if all three ~~any~~ of the following criteria are fulfilled:

- the UE estimates the received dedicated channel burst quality over the last ~~[~~160~~]~~ ms period to be worse than a threshold Q_{out}. The value, Q_{out} is defined implicitly by the relevant tests in [2];

- no Special Burst is detected with quality above a threshold Q_{sbout}. ~~. This criterion is never fulfilled during the first [160] ms of the dedicated channel's existence.~~ The value ~~Q_{out}~~ Q_{sbout} is defined implicitly by the relevant tests in [2];

- over the previous 160 ms, no transport block has been received with a correct CRC

I~~-~~ if the UE detects the beacon channel reception level [10 dB] above the handover triggering level, the UE shall uses ~~[~~320~~]~~ ms estimation period for the burst quality evaluation and for the Special Burst and CRC detection window.~~;~~

~~- the last [16] transport blocks, as observed on all TrCHs using CRC, are received with incorrect CRC and in addition, over the last [160] ms, no transport block has been received with correct CRC. In case the beacon channel reception criteria is fulfilled the values are [32] transport blocks and [320] ms respectively.~~

In-sync shall be reported using the CPHY-Sync-IND primitive if any one ~~both~~ of the following criteria is~~are~~ fulfilled:

- the UE estimates the received burst reception quality over the last ~~[~~160~~]~~ ms period to be better than a threshold Q_{in} . The value, Q_{in} is defined implicitly by the relevant tests in [2].

- the UE detects at least one Special Burst with quality above a threshold Q_{sbin}. The value, Q_{sbin}, is defined implicitly by the relevent tests in [2]. ~~. This criterion is always fulfilled during the first [160] ms of the dedicated channel's existence. Q_{in} is defined implicitly by the relevant tests in [17];~~

- at least one transport block with a CRC attached ~~, as observed on all TrCHs using CRC,~~ is received in a TTI ending in the current frame with correct CRC~~. If there is no TrCH using CRC, this criterion is always fulfilled.~~

If the UE detects the beacon channel reception level [10 dB] above the handover triggering level, the UE uses 320 ms estimation period for the burst quality evaluation and for the Special Burst and CRC detection window.

If no data are provided by higher layers for transmission during the second phase on the downlink dedicated channel then DTX shall be applied as defined in section 4.5.~~In-sync shall be reported using the CPHY-Sync-IND primitive in case of DTX if the following criterion is fulfilled:~~

~~- The UE receives a special burst in case of DTX and estimates its burst reception quality to be better than a threshold Q_{in}.~~

How the primitives are used by higher layers is described in [15]. The above definitions may lead to radio frames where neither the In-Sync or Out-of-Sync primatives are reported.

4.4.2.1.3 Uplink synchronisation primitives

Layer 1 in the Node B shall every radio frame check synchronisation status, individually for each UL CCTrCH ~~of~~ the radio link. Synchronisation status is indicated to the RL Failure/Restored triggering function using either the CPHY-Sync-IND or CPHY-Out-of-Sync-IND primitive.

The exact criteria for indicating in-sync/out-of-sync is not subject to specification, but could e.g. be based on received burst quality or CRC checks. One example would be to have the same criteria as for the downlink synchronisation status primitives.

4.4.2.2 Radio link monitoring

4.4.2.2.1 Downlink radio link failure

The downlink CCTrCHs ~~radio links~~ are monitored by the UE, to trigger radio link failure procedures. The downlink ~~radio link~~ CCTrCH failure ~~criteria~~ status is specified in [15], and is based on the synchronisation status primitives CPHY-Sync-IND and CPHY-Out-of-Sync-IND, indicating in-sync and out-of-sync respectively. These primitives shall provide status for each DL CCTrCH separately.

4.4.2.2.2 Uplink radio link failure/restore

The uplink CCTrCHs ~~radio links~~ are monitored by the Node B in order ~~,~~ to trigger CCTrCH~~radio link~~ failure/restore procedures. ~~Once the radio links have been established, they will be in the in-sync or out-of-sync states as shown in figure 1 in subclause 4.3.2.1. Transitions between those two states are described below.~~

The uplink CCTrCH ~~radio link~~ failure/restore status ~~criteria~~ is reported using ~~based on~~ the synchronisation status primitives CPHY-Sync-IND and CPHY-Out-of-Sync-IND, indicating in-sync and out-of-sync respectively.

When the CCTrCH~~radio link~~ is in the in-sync state, Node B shall start timer T_RLFAILURE after receiving N_OUTSYNC_IND consecutive out-of-sync indications. Node B shall stop and reset timer T_RLFAILURE upon receiving successive N_INSYNC_IND in-sync indications. If T_RLFAILURE expires, Node B shall indicate to higher layers which CCTrCHs are out-of-sync using the synchronization status primitives. Furthermore, the CCTrCH state shall be changed to the out-of-sync state.~~trigger the RL Failure procedure and indicate which radio links are out-of-sync. When the RL Failure procedure is triggered, the radio links' state changes to the out-of-sync state.~~

When a CCTrCH is ~~the radio links are~~ in the out-of-sync state, after receiving N_INSYNC_IND successive in-sync indications Node B shall indicate that the CCTrCH has ~~trigger the RL Restore procedure and indicate which radio links have~~ re-established synchronisation and the CCTrCH's state shall be changed to the in-sync-state. ~~When the RL Restore procedure is triggered, the radio links' state changes to the in-sync state.~~

The specific parameter settings (values of T_RLFAILURE, N_OUTSYNC_IND, and N_INSYNC_IND) are configurable, see [16].

4.5 Discontinuous transmission (DTX) of Radio Frames

Discontinuous transmission (DTX) is applied in up- and downlink individually for each CCTrCH in case ~~when~~ the total bit rate after transport channel multiplexing differs from the total channel bit rate of the ~~allocated~~ dedicated physical channels allocated to a CCTrCH.

Rate matching is used in order to fill resource units completely, that are only partially filled with data. In the case that after rate matching and multiplexing no data at all is to be transmitted in a resource unit the complete resource unit is discarded from transmission. This applies also to the case where only one resource unit is allocated and no data has to be transmitted.

4.5.1 Use of Special Bursts fo DTX

In case there are no transport blocks provided for transmission by higher layers for any given CCTrCH after link establishment, then a Special Burst shall be transmitted in the first allocated frame of the transmission pause. If there is a consecutive period of $\lceil N\_OUTSYNC\_IND/2-1 \rceil$ frames without transport blocks provided by higher layers, then another special burst shall be generated and transmitted at the next possible frame. This pattern shall be continued until transport blocks are provided for the CCTrCH by the higher layers.

~~When DTX is applied in the uplink and after a period of (N_OUTSYNC_IND / 2)-1 silent frames no data has to be transmitted, then a special burst should be generated and transmitted in the next possible frame.~~

This special burst shall ~~should~~ have the same slot format as the ~~normal~~ burst used for data provided by higher layers. ~~where DTX is used.~~ The special burst is filled with an arbitrary bit pattern, contains a TFCI and TPC bits if inner loop PC is applied and is transmitted for each CCTrCH individually on the physical channel which is defined to carry the TFCI, . The TFCI of the special burst shall ~~ould~~ indicate that there were no transport blocks provided for transmission by higher layers as defined in [15]. ~~is no data to be transmitted.~~ The transmission power of the special burst shall be the same as that of the substituted physical channel of the CCTrCH carrying the TFCI.

4.5.2 Use of Special Bursts for Initial Establishment

Upon initial establishment and either 160 ms following detection of in-sync, or until the first transport block is received from higher layers, both the UE and the Node B shall transmit the special burst for each CCTrCH for each assigned resource which was scheduled to include a TFCI.

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Document R1-00-1342
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

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25.224	CR	040	Current Version:	3.4.0

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

For submission to:	RAN#10	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: TSG RAN WG1 **Date:** 10-11-2000

Subject: Clarification on PICH power setting

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: In WG3 specification, PICH power is set by NBAP signalling. In WG1 specifications PICH power is fixed to the P-CCPCH reference power. In order to make specifications consistent this CR changes the definitions on L1, because this aligns FDD and TDD settings and allows reduced interference for the case of good PICH coding.

Clauses affected: 5.3.7

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	CR25.221-036
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:


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4.2.3.1 P-CCPCH, PICH

The Primary CCPCH transmit power is set by higher layer signalling and can be changed based on network determination on a slow basis. The reference transmit power of the P-CCPCH is signalled on the BCH. The PICH is transmitted with the same power as the P-CCPCH.

4.2.3.2 S-CCPCH, PICH

The relative transmit power of the Secondary CCPCH and the PICH compared to the P-CCPCH transmit power are is set by higher layer signalling. The PICH power offset relative to the P-CCPCH reference power is signalled on the BCH.

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25.224	CR	042	Current Version:	3.4.0

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

For submission to:	RAN#10	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: TSG RAN WG1 **Date:** xx-Nov-2000

Subject: Correction to TDD timing advance description

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	[X]	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release	[ ]		Release 96	
B	Addition of feature	[ ]		Release 97	
C	Functional modification of feature	[ ]		Release 98	
D	Editorial modification	[ ]		Release 99	X
				Release 00	

Reason for change: Existing text does not clearly represent the relationship between the actual timing advance (TA) in chips and the information element 'UL timing advance' (a 6 bit quantity) signalled.

Clauses affected: 4.3

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
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:

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4.3 Timing Advance

UTRAN may adjust the UE transmission timing with timing advance. The initial value for timing advance (TA_{phys}) will be determined in the UTRAN by measurement of the timing of the PRACH. The required timing advance will be represented as an 6 bit number (0-63) 'UL Timing Advance' TA_{ul}, being the multiplier of 4 chips which is nearest to the required timing advance (i.e. $TA_{phys} = TA_{ul} \times 4$ chips).

When Timing Advance is used the UTRAN will continuously measure the timing of a transmission from the UE and send the necessary timing advance value. On receipt of this value the UE shall adjust the timing of its transmissions accordingly in steps of ±4chips. The transmission of TA values is done by means of higher layer messages. Upon receiving the TA command the UE shall adjust its transmission timing according to the timing advance command at the frame number specified by higher layer signaling. The UE is signaled the TA value in advance of the specified frame activation time to allow for local processing of the command and application of the TA adjustment on the specified frame. Node-B is also signaled the TA value and radio frame number that the TA adjustment is expected.to take place.

If TA is enabled by higher layers, after handover the UE shall transmit in the new cell with timing advance TA adjusted by the relative timing difference Δt between the new and the old cell:

$$TA_{new} = TA_{old} + 2\Delta t.$$

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Document R1-00-1402
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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25.224	CR	043	Current Version:	3.4.0

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

For submission to:	TSG RAN 10	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

Source: TSG RAN WG1 **Date:** 15/11/00

Subject: Limit on maximum value of alpha used for open loop power control

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: The value of alpha used in the open loop power control equation can currently be set autonomously by the UE subject to a minimum value of 0 and a maximum value of 1. The use of a high value of alpha assumes a high degree of reciprocity between the downlink beacon channel and the uplink channel being power controlled. This reciprocity is not guaranteed, however. For example, the Node B may be using separate transmit and receive antennas. It is therefore proposed that the network can impose a minimum level of filtering of the pathloss estimate by specifying a maximum value of alpha that can be used in the open loop power control equation. This parameter would be set dependent on the expected channel reciprocity.

Clauses affected: 4.2.2.3.2

Other specs affected:

Other 3G core specifications		→ List of CRs:
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:

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4.2.2.3.2 Power Control Loop

After the synchronisation between UTRAN and UE is established, the UE transits into open-loop transmitter power control (TPC).

The power setting for each uplink DPCH in one CCTrCH shall be calculated by the following equation:

$P_{UL} = \alpha L_{P\text{-}CCPCH} + (1-\alpha)L_0 + I_{BTS} + SIR_{TARGET} +$ Constant value

where

P_{UL}: Power setting in dBm, cf. section "Combination of physical channels in uplink" in [10]; This value corresponds to a particular CCTrCH (due to CCTrCH-specific SIR_{TARGET}) and a particular timeslot (due to possibly timeslot-specific α and I_{BTS}).

$L_{P\text{-}CCPCH}$: Measure representing path loss in dB (reference transmit power is broadcast on BCH).

L_0: Long term average of path loss in dB.

I_{BTS}: Interference signal power level at cell's receiver in dBm, which is broadcast on BCH.

α: α is a weighting parameter which represents the quality of path loss measurements. α may be a function of the time delay between the uplink time slot and the most recent down link time slot containing a beacon channel, see [8]. α ~~is~~ shall be calculated autonomously at the UE, subject to a maximum allowed value which shall be signalled by higher layers. An example for calculating α as a function of the time delay is given in annex A.1.

SIR_{TARGET}: Target SNR in dB. A higher layer outer loop adjusts the target SIR.

Constant value: This value shall be set by higher Layer (operator matter). and is broadcast on BCH.

If the midamble is used in the evaluation of $L_{P\text{-}CCPCH}$ and L_0, and the Tx diversity scheme used for the P-CCPCH involves the transmission of different midambles from the diversity antennas, the received power of the different midambles from the different antennas shall be combined prior to evaluation of these variables.