TSG-RAN Meeting #13
Beijing, China, 18 - 21, September, 2001

RP-010525

Title: **Agreed CRs (R99 and Rel-4 Category A) to TS 25.224**

Source: **TSG-RAN WG1**

Agenda item: **8.1.3**

No.	Spec	CR	Rev	R1 T-doc	Subject	Release	Cat	W/I Code	V_old	V_new
1	25.224	063	1	R1-01-0943	Correction of criteria for OOS indication	R99	F	TEI	3.7.0	3.8.0
2	25.224	064	1	R1-01-0943	Correction of criteria for OOS indication	REL-4	A	TEI	4.1.0	4.2.0

3GPP TSG RAN Meeting #13 ***R1-01-0943***
Beijing, China, 18th – 21st , September, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.224** **CR** **063** ⌘ rev **1** ⌘ Current version: **3.7.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

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

Title:	⌘	Correction of criteria for OOS indication
Source:	⌘	TSG RAN WG1
Work item code:	⌘	TEI
Date:	⌘	28.08.2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(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:	⌘	Currently misunderstandings are possible in the definition of the OOS criteria, because for the special burst detection criterion, no detection window is given. This CR clarifies, that also for the special burst, the detection window of 160ms (or 320ms resp.) is applied.
Summary of change:	⌘	Clarifications on OOS criteria
Consequences if not approved:	⌘	• Possible misunderstandings in other WGs • Possible Indication of OOS although actually DTX is applied • Erroneous OOS indication

Clauses affected:	⌘	4.4.2.1.2
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.
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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.

4.4.2.1.2 Downlink synchronisation primitives

Layer 1 in the UE shall check the synchronization status of each DL CCTrCH individually in every radio frame 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 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}~~.~~ within the last 160 ms period. The value 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

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

In-sync shall be reported using the CPHY-Sync-IND primitive if any ~~one~~ of the following criteria is 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].

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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.

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.

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