TSG-RAN Meeting #12
Stockholm, Sweden, 12-15, June, 2001

RP-010343

Title: **Agreed CRs (Rel-4) 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	049	-	R1-01-0449	Clarification of IP_Frame(x) definition	REL-4	D	LCS1-UEpos	4.0.0	4.1.0
2	25.224	055	1	R1-01-0618	Correction of IPDL burst parameters	REL-4	F	LCS1-UEpos	4.0.0	4.1.0

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R1-01-0449

CR-Form-v3

CHANGE REQUEST

⌘ **25.224** **CR** **049** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

*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:	⌘	Clarification of IP_Frame(x) definition
Source:	⌘	TSG RAN WG1
Work item code:	⌘	LCS1-UEpos-enh
Date:	⌘	14. May 2001
Category:	⌘	**D**
Release:	⌘	REL-4

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:	⌘	The definition of IP_Frame is not clearly specified.
Summary of change:	⌘	One sentence added regarding IP_Frame(x) definition.
Consequences if not approved:	⌘	Missing additional comment could lead to confusion.

Clauses affected:	⌘	4.10.3
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.

4.10.3 Calculation of idle period position

In burst mode, the first burst starts in the radio frame with SFN = Burst_Start. The n^{th} burst starts in the radio frame with SFN = Burst_Start + n×Burst_Freq. The sequence of bursts according to this formula continues up to and including the radio frame with SFN = 4095. At the start of the radio frame with SFN = 0, the burst sequence is terminated (no idle periods are generated) and at SFN = Burst_Start the burst sequence is restarted with the first burst followed by the second burst etc., as described above.

Continuous mode is equivalent to burst mode, with only one burst spanning the whole SFN cycle of 4096 radio frames, this burst starts in the radio frame with SFN = 0. In case of continuous mode the parameter IP_Start defines the first frame with idle periods.

The position of an idle period~~time slot that has to be idle~~ is defined by two values: IP_Frame(x) and IP_Slot. IP_Frame(x) defines the x^{th} frame within a burst that contains the idle period. IP_Slot defines the slot in that frame during which no transmission takes place except for the SCH.~~in which the slot with the number IP_Slot has to be switched off.~~

The actual frame with idle periods within a burst is calculated as follows:

IP_Frame(x) = IP_Start + (x-1) × IP_Spacing with x = 1, 2, 3, ...

If the parameter IP_PCCPCH is set to 1, then the P-CCPCH will not be transmitted in the frame IP_Frame(x) +1 within a burst.

Figure 7 below illustrates the idle periods for the burst mode case, if the IP_P-CCPCH parameter is set to 0.

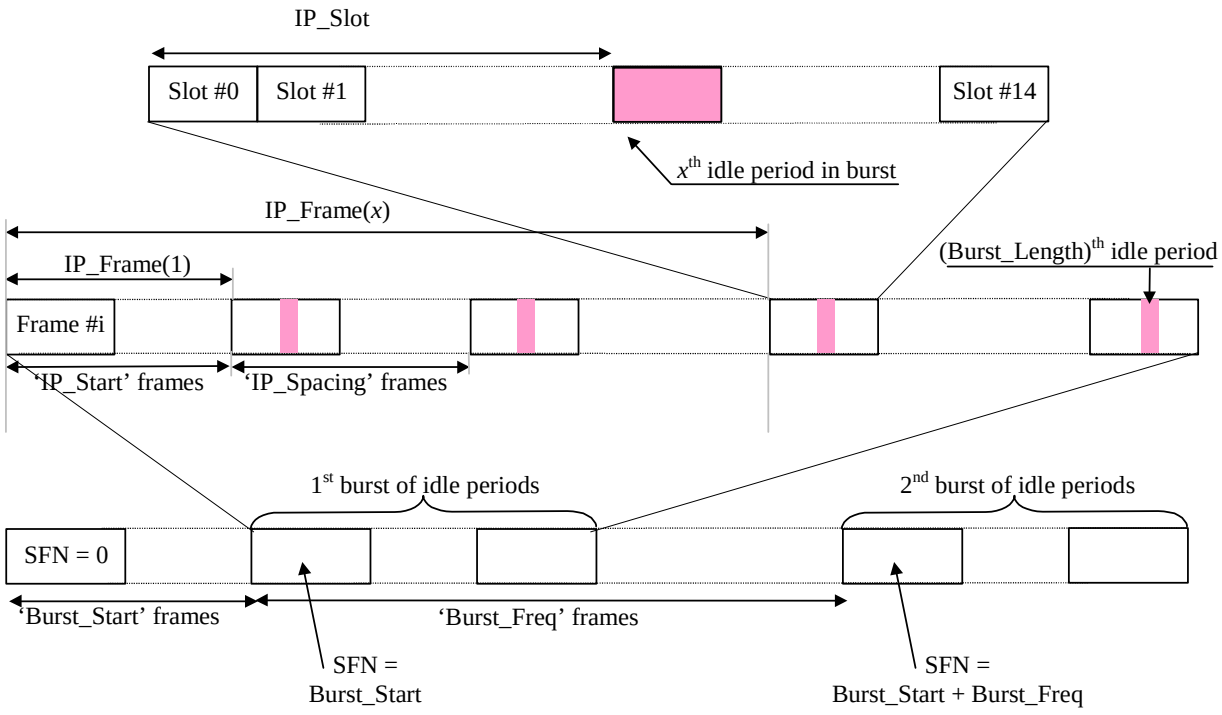

Figure 7: Idle Period placement in the case of burst mode operation with IP_P-CCPCH parameter set to 0

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R1-01-0618

CR-Form-v3

CHANGE REQUEST

⌘ **25.224** **CR** **055** ⌘ rev **1** ⌘ Current version: **4.0.0** ⌘

*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 IPDL burst parameters
Source:	⌘	TSG RAN WG1
Work item code:	⌘	LCS1-UEpos
Date:	⌘	14. May 2001
Category:	⌘	**F**
Release:	⌘	REL-4

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
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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:	⌘	In the current definition of some IPDL burst mode parameters the scaling factor of 256 is missing. This could lead to wrong starting points of the bursts in IPDL burst mode.
Summary of change:	⌘	Correction in the definition of the IPDL burst mode parameters.
Consequences if not approved:	⌘	Wrong calculation of starting points of IPDL bursts.

Clauses affected:	⌘	4.10.2; 4.10.3
Other specs Affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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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.

4.10.2 Parameters of IPDL

The following parameters are signalled to the UE via higher layers:

IP_Status: This is a logic value that indicates if the idle periods are arranged in continuous or burst mode.

IP_Spacing: The number of 10 ms radio frames between the start of a radio frame that contains an idle period and the next radio frame that contains the next idle period. Note that there is at most one idle period in a radio frame.

IP_Start: The number of the first frame with idle periods. In case of continuous mode IP_Start is the SFN of the first frame with idle periods and in case of burst mode IP_Start defines the number of frames after Burst_Start with the first frame with idle periods.

IP_Slot: The number of the slot that has to be idle [0..14].

IP_PCCPCH: This logic value indicates, if the P-CCPCH is switched off in two consecutive frames. The first of these two frames contains the idle period.

Additionally in the case of burst mode operation the following parameters are also communicated to the UE.

Burst_Start: Specifies the start of the first burst of idle periods. 256×Burst_Start is ~~T~~the SFN where the first burst of idle periods starts.

Burst_Length: The number of idle periods in a burst of idle periods.

Burst_Freq: Specifies the time between the start of a burst and the start of the next burst. 256×Burst_Freq is ~~T~~the number of radio frames between the start of a burst and the start of the next burst.

4.10.3 Calculation of idle period position

In burst mode, the first burst starts in the radio frame with SFN = 256×Burst_Start. The n^{th} burst starts in the radio frame with SFN = 256×Burst_Start + n×256×Burst_Freq. The sequence of bursts according to this formula continues up to and including the radio frame with SFN = 4095. At the start of the radio frame with SFN = 0, the burst sequence is terminated (no idle periods are generated) and at SFN = 256×Burst_Start the burst sequence is restarted with the first burst followed by the second burst etc., as described above.

Continuous mode is equivalent to burst mode, with only one burst spanning the whole SFN cycle of 4096 radio frames, this burst starts in the radio frame with SFN = 0. In case of continuous mode the parameter IP_Start defines the first frame with idle periods.

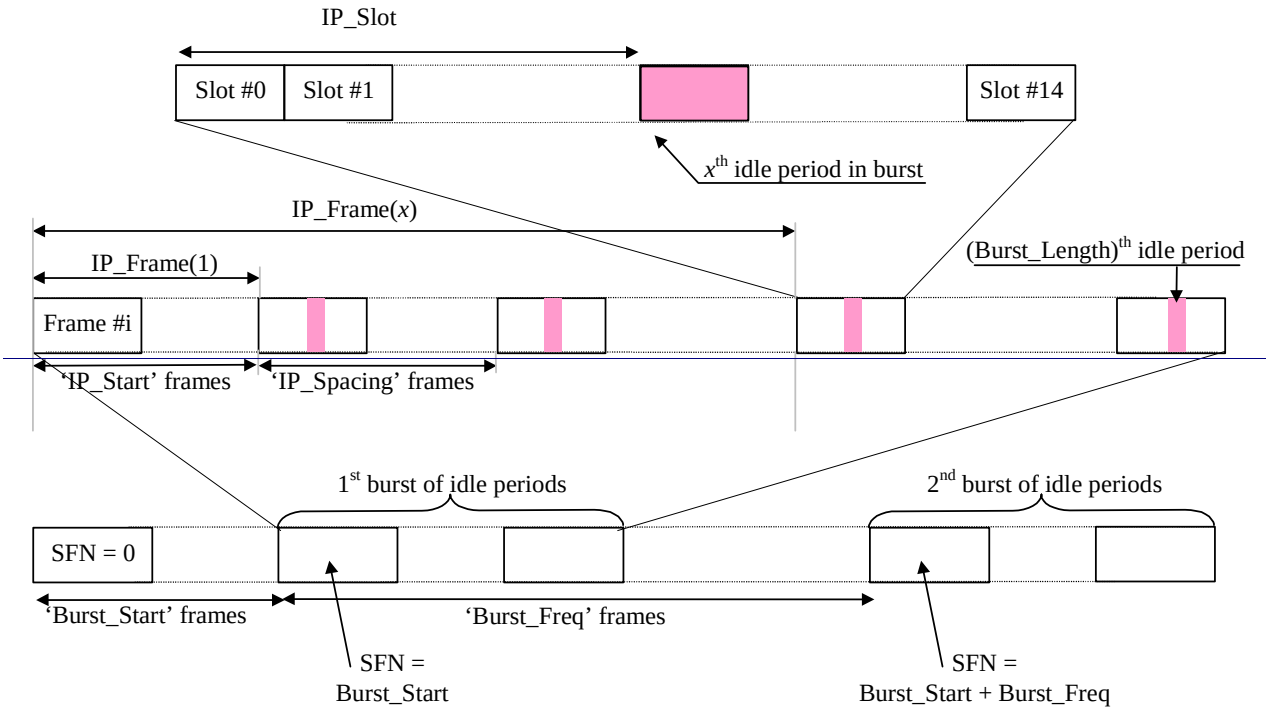
The time slot that has to be idle is defined by two values: IP_Frame(x) and IP_Slot. IP_Frame(x) defines the x^{th} frame within a burst in which the slot with the number IP_Slot has to be switched off.

The actual frame with idle periods within a burst is calculated as follows:

IP_Frame(x) = IP_Start + (x-1) × IP_Spacing with x = 1, 2, 3, ...

If the parameter IP_PCCPCH is set to 1, then the P-CCPCH will not be transmitted in the frame IP_Frame(x) +1 within a burst.

Figure 7 below illustrates the idle periods for the burst mode case, if the IP_P-CCPCH parameter is set to 0.



~~**Figure 7: Idle Period placement in the case of burst mode operation with IP_P-CCPCH parameter set to 0**~~

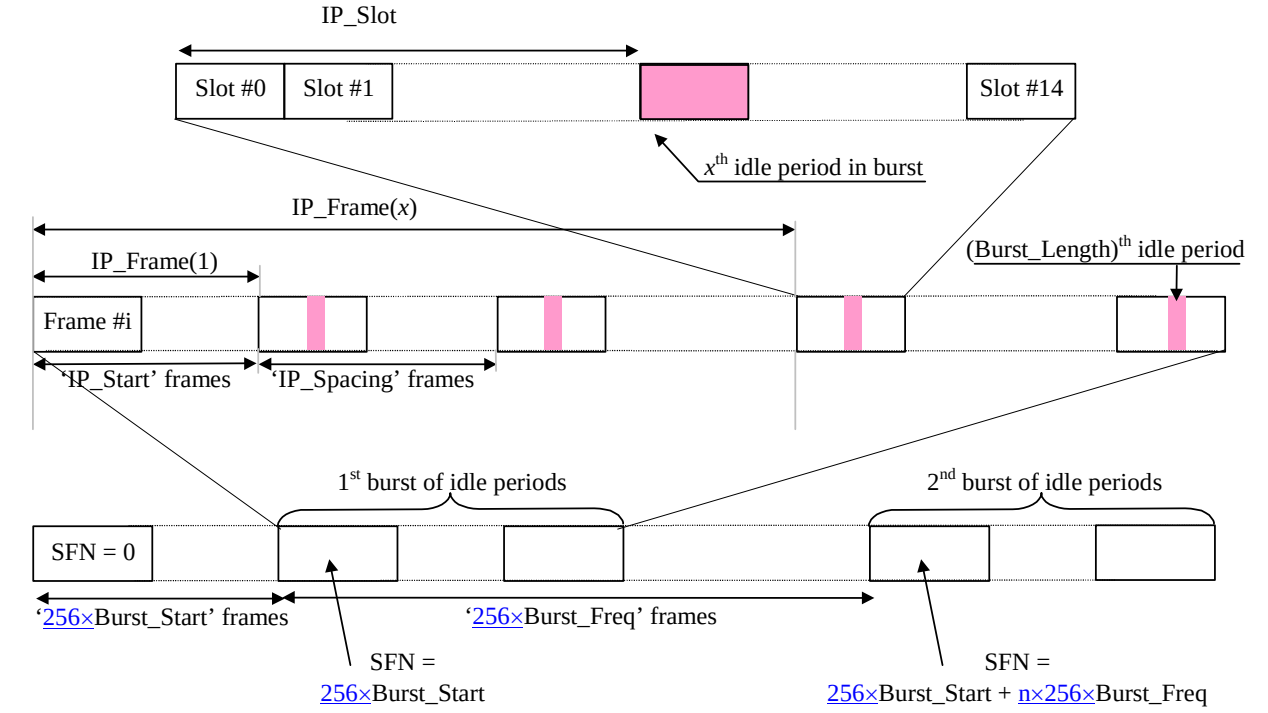


Figure 7: Idle Period placement in the case of burst mode operation with IP_P-CCPCH parameter set to 0