3GPP TSG-RAN Working Group 1 Meeting No. 10
Beijing, China, 18 JAN 2000 - 21 JAN 2000

Agenda Item: Ad Hoc 1

Source: Nokia

Title: Page Indicator Channel Tx power clarification

Document for: Approval

The aim of the CR presented below is to clarify the existing section on The Page Indicator Channel in the TS25.221.

The change that is proposed is a simple statement addition in order to clarify the power level on which the PICH is transmitted. In the current version of the specifications there is an ambiguity since the power level is defined for the Paging Channel but not for the PICH. The simple reasoning for this clarification is that the UE needs to be aware of the power level the PICH is transmitted on.

We propose to adopt the below presented change in to the section on PICH in TS25.221.

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Document **R1-00-0097**

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	013	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   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 :* 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: Nokia   **Date:**

Subject: Paging Indicator Channel reference power

Work item: TS25.221

Category:	F Correction		**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	**X**		Release 99	**X**
				Release 00	☐

Reason for change: The current specification does not define the transmission power of the PICH.

Clauses affected: 5.3.7

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:

help.doc

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

5.3.7 The Page Indicator Channel (PICH)

The Page Indicator Channel (PICH) is a physical channel used to carry the Page Indicators (PI). The PICH substitutes one or more paging sub-channels that are mapped on a CCPCH, see 6.2.2. The page indicator indicates a paging message for one or more UEs that are associated with it. PICH is always transmitted at the same reference power level as the P-CCPCH.

The page indicators of length $L_{PI}=2$, $L_{PI}=4$ or $L_{PI}=8$ symbols are transmitted in a normal burst (type 1 or 2) as seen in figure 16. The number of page indicators N_{PI} per time slot is given by the number L_{PI} of symbols for the page indicators and the burst type. In Table 5 this number is shown for the different possibilities of burst types and PI lengths.

Table 5 Number N_{PI} of PI per time slot for the different burst types and PI lengths L_{PI}

	$L_{PI}=2$	$L_{PI}=4$	$L_{PI}=8$
Burst Type 1	61	30	15
Burst Type 2	69	34	17

The same burst type is used for the PICH in every cell. In case of $L_{PI}=4$ or $L_{PI}=8$, one symbol in each data part adjacent to the midamble is left over. These symbols are filled by dummy bits that are transmitted with the same power as the PI. Figure 16 shows examples for the transmission of page indicators in the different burst types for $L_{PI}=4$.
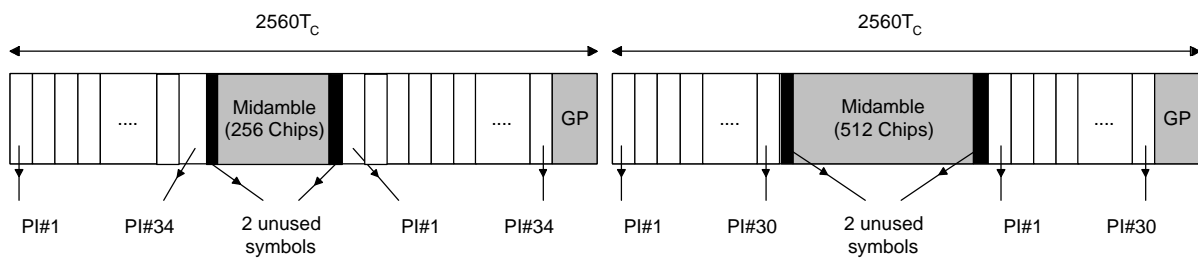

Figure 16: Example of PI Transmission in PICH bursts of different types for $L_{PI}=4$