TSG-RAN Working Group 4 (Radio) meeting #5   *TSGW4#5(99)273*
Miami 14th –16th of June 1999

Agenda Item: 8.3

Source: Nokia

Title: BS Receiver intermodulation characteristics

Document for: Approval

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1.   Introduction

This document proposes requirements and definitions for the BS Receiver intermodulation characteristics. The BS receiver needs to have a sufficient capability to stand and attenuate interfering signals, which are entering to antenna input at the same time with a wanted signal. The intermodulation characteristics measurement will verify this capability.

Nokia propose to use a WCDMA signal as one of the test signals hence this will simulate better normal network condition than two CW signals would do. The signal level for both of the test signals is proposed to be – 48 dBm.

2. Text proposal for ' 7.8 Intermodulation characteristics'

7.8   *Intermodulation characteristics*

Third and higher order mixing of the two interfering RF signals can produce an interfering signal in the band of the desired channel. Intermodulation response rejection is a measure of the capability of the receiver to receiver a wanted signal on its assigned channel frequency in the presence of two or more interfering signals which have a specific frequency relationship to the wanted signal.

The static reference performance [FER/BER] as specified in clause 7.3.1 ~~ashould~~ should be met when the following signals are applied to the receiver;
- ❑ A wanted signal at the assigned channel frequency, 3 dB above the static reference level.
  A CW interfering signal at frequency [10 MHz] and a ~~[CW]~~ [WCDMA] signal at frequency [20.1 MHz] with a level of [-48] dBm
- ❑ Wanted and interfering signals are coupled to BS antenna input

Wanted Signal	Interfering Signal Level	Offset	Type of Interfering Signal
<REFSENS> dBm + 3 dB	- 48 dBm	10 MHz	CW signal
<REFSENS> dBm + 3 dB	- 48 dBm	20 MHz	WCDMA signal with one code

3.   Conclusion

Requirements and definitions for the BS Receiver intermodulation characteristics have been proposed to be used in TS 25.104.