TSG-RAN Working Group 1

Hannover, Germany, 30 August – 03 September 1999

TSGR1#7(99)c40

TSG-RAN Working Group 2 meeting #6
16th – 20th August 1999
Sophia Antipolis, France

TSGR2#6(99)974

Source: TSG RAN WG2

To: TSG RAN WG1

Copy: TSG RAN WG3

Title: Liaison on Length of SFN

_____

RAN2 would like to thank RAN1 for its liaison on 'Length of SFN' (R2-99833). RAN2 has noted RAN1's decision to make the SFN a physical layer field within the PCCPCH. However, RAN2 would like to clarify the sentence in the liaison that says, 'WG1 wishes to have CRC applied to this L1 information together with the BCH transport channel blocks.' RAN2 would like to understand whether this means that a single CRC will be used for both the SFN and a BCH transport block, or whether it means that separate CRCs will be used for the SFN and each BCH transport block.

According to the understanding of RAN2, if the SFN is a physical layer field it can be coded and decoded independently of the BCH and this has two advantages:

1. The SFN can be defined to have more robust coding than the BCH.
2. When the UE reads the SFN of an adjacent cell for making timing measurements before entering soft handover it would only need to decode the SFN number and would not need to decode the BCH blocks.

If the same CRC is used to protect the SFN and a BCH block then, although reducing the overhead, the advantages stated above seem to be lost, and in this situation RAN2 would prefer to make the SFN an RRC parameter. If different CRCs are to be applied to the SFN and each BCH block then RAN2 does not have a preference whether SFN is a physical layer field or an RRC parameter. RAN2 welcomes any clarifications or further information on this issue.

Regarding the length of the SFN field, 12 bits (corresponding to a 40.96s cycle length) seems to be appropriate for a physical layer SFN field. There may be a requirement, from a higher layer perspective, for having a longer SFN field but, if such requirements are identified, the extra bits will be defined as an RRC parameter that would not necessarily have to be repeated in every frame.