3GPP TSG-RAN WG2 **Tdoc TSG-RAN WG2 022/99**
ETSI SMG2 UMTS-L23 Expert Group **Tdoc SMG2 UMTS-L23 071/99**
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ETSI/SMG2/UMTS physical layer expert group Tdoc SMG2 UMTS-L1 762/98
Place : Espoo (Finland)
Date : 14th 18th December 1998

Title : Liaison statement to SMG2 L23 and UTRAN architecture groups on network timing issues
Source : SMG2 UMTS L1
To : SMG2 UMTS UTRAN architecture group; SMG2 UMTS L23

The SMG2 UMTS physical Layer expert group is currently studying the proposals contained in attached contribution SMG2 UMTS L1 561/98 (UTRA FDD Network Timing Issues) and SMG2 UMTS L1 677/98 (Periodic and nonperiodic UTRA Fdd Slotted frame allocation, Nokia**).**

The proposals consist in deriving relative timing information between a UTRA FDD cell and its GSM neighbours and between a UTRA cell and its UTRA neighbours based e.g. on measurements reported by the UE as part of the handover preparation (see Tdoc 677 and 561 respectively). Then such network timing information is communicated to the UE either via broadcast or dedicated signalling.

The UMTS physical layer expert group identified several points, which require further study as follows:

1) There is a need to better understand the gain brought by the proposal (whether this is for handover preparation, whether it avoid BCCH decoding before performing the soft handover, whether this can be used also for cell reselection…)
2) It should be studied whether all 4 cases (Asynchronous case and the 3 case with network timing for different accuracies) need to be included. The number of cases could be narrowed down. It should be in particular clarified whether it needed to have a finer synchronisation than the frame.
3) Impact on the signalling should be better assessed, as far as the broadcasting to all MS in the cell or dedicated signalling.
4) The refreshing rate must be studied in more details. In particular the currently assumed frequency error requirement must be taken into account.
5) It should be clarified how the UE monitoring requirements would be impacted if such a proposal was to be considered. If such network timing information was provided by the network to the mobile, would the monitoring requirements be tightened? Indeed if such feature was implemented in the network a logical consequence would be that the slotted mode would be accordingly dimensioned/organised by the network in order to decrease the potential performance loss on the basis that the UE has a priori knowledge of where to find the cell.

It is the understanding that UMTS L1 that this proposal will have an impact on the interfaces within the UTRAN. The UMTS L1 expert group invites the UMTS L23 and UTRAN architecture group to comment on the proposal and indicate to the UMTS L1 whether there are any limitations foreseen, e.g. restriction on the pair of cells for which the information can be derived (cells managed by the same RNC,…), amount of signalling.

UTRAN architecture group is invited to comment on the viability of the proposals and to provide suggestions of other possible means to achieve the same goals.

Attachments

SMG2 UMTS L1 561/98, UTRA FDD Network Timing Issues, Nokia
SMG2 UMTS L1 667/98, Periodic and nonperiodic UTRA FDD Slotted frame allocation, Nokia