Agenda Item : 6.2

Source : **NTT DoCoMo**

Title : **Study Item [Iub/1] "ID for NBAP Paging Message"**

Document for : **Status Report**

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1. ABSTRACT

This document is a report of the discussion made on the reflector regarding what parameter is used for NBAP PAGING message to indicate cells to page. From TTC/ARIB, it was proposed to use LAI, on the other hand, From ETSI, it was proposed to use cell list.

2. AGREEMENTS and PROPOSALS

There are several types of paging listed below which uses PCCH.
(1) Paging from CS CN (MSC)
(2) Paging from PS CN (SGSN)
(3) URA paging (RNC)
(4) Cell level paging (RNC)

We have agreed to have a cell level paging because there is a requirement for cell level paging in case of paging the cell which is not related to LAI, RAI or URA ID. Therefore TTC/ARIB proposed to have the following parameters.

(TTC/ARIB) (Method A)
(1) Type of paging (Information indicates LA/RA/URA/Cell list)
(2) Paging location ID(LAI / RAI / URA ID / List of Cell IDs)

(ETSI) (Method B)
(1) List of Cell IDs

3. COMPARISON

Comparison is made and shown in the table1 and 2. Table 1 is a comparison from the view of mapping table and Table 2 is a comparison from the view of load of controlling in RNC.

case	node	METHOD A	METHOD B
Paging from CS CN (MSC)	RNC	LAI and NodeBs	LAI and NodeBs and Cells
	NodeB	LAI and Cells.	No mapping table
Paging from PS CN (SGSN)	RNC	RAI and NodeBs	RAI and NodeBs and Cells
	NodeB	RAI and Cells.	No mapping table
URA paging (RNC)	RNC	URA ID and NodeBs	URA ID and NodeBs and Cells
	NodeB	URA ID and Cells.	No mapping table
Cell level paging (RNC)	RNC	No mapping table	No mapping table
	NodeB	No mapping table	No mapping table

TABLE 1 Comparison 1

From this comparison table, in method B, no mapping tables are needed in NodeB and "List of Cell IDs" covers all needs, which in turn seems simpler NodeBs. But the mapping table of RNC becomes quite big.

case	METHOD A	METHOD B
Paging from CS CN (MSC)	Duplicate the PAGING messages for each NodeB which has same LAI.	Produce different contents of PAGING messages for each NodeB.
Paging from PS CN (SGSN)	Duplicate the PAGING messages for each NodeB which has same RAI.	Produce different contents of PAGING messages for each NodeB.
URA paging (RNC)	Duplicate the PAGING messages for each NodeB which has same URA ID.	Produce different contents of PAGING messages for each NodeB.

TABLE 2 Comparison 2

From this comparison table, in method A, RNC only duplicates the contents of PAGING message to all NodeBs. On the other hand, in method B, RNC has to produce NodeB specific contents for each NodeB. In method B, its load is heavier than in method A to produce several different content messages at a same time when receiving one trigger.

Another point is that, in method B, unless LAI changes, the cell list used for PAGING triggered by MSC is always the same. Therefore it can be replaced by a reference ID such as LAI.

4. CONCLUSION
We haven't reached an agreement regarding this issue yet. We have only listed pros and cons regarding this issue.