TSG-RAN Working Group 3 meeting #7   **R3-99b40**
20-24 September 1999   based on R3-99947
Sophia Antipolis, France

Agenda Item: 16.3

Source: Fujitsu

Title: Proposed Parameters to SRNS RELOCATION COMMIT
                    Message

Document for: Discussion and Decision
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1. Introduction

   At the last RAN3 meeting, the optional parameters for SRNS RELOCATION COMMIT message was proposed (R3-99947) but it was not fully understood so that we Fujitsu submit this contribution to make our intention clear.

2. Discussion

   Main discussion point is how the new SRNC get the necessary information if additional call, call release, radio link reconfiguration or CS incoming call occurs in URA_PCH state. In these cases, URA paging initiated by SRNC occurs and state changes to cell connected (Cell_FACH). And generally, SRNC relocation may occur. So it is necessary to clarify how to deliver the information which the new SRNC needs.
   There are 4 cases SRNC relocation occurs in URA connected state.
Case 1) In URA Connected state, additional call occurs
   Suppose new packet call happens in URA connected state. That means 'Activate PDP Context Request' message informs from SGSN to SRNC. This is one of the SM (Session Manager) messages and is transparently informed to UE from SGSN. But UTRAN is in URA connected so that this message can't be informed to UE because there are no DCH nor FACH connection which is established between SRNC and UE. So SRNC initiates URA paging in order to transfer itself to cell connected state.
   SRNC may be changed if UE moves to another cell while it was in URA connected state. That means SRNC relocation procedure may also occur while URA paging is performed. Figure 1 shows this case. (This sequence is recognised in CN1.)
   After SRNC relocation, new SRNC should inform 'Activate PDP Context Request' message to UE instead of the previous SRNC.
   So the problem will arise. How the new SRNC get the 'Activate PDP Context Request' message ? Our solution is that the 'SRNC Relocation Commit' message should have the direct transfer part which contains
PDP Context Request' message. As a result, the new SRNC will get the 'SRNC Relocation Commit' message from the previous SRNC.
Case 2): In URA Connected state, one or more call release occurs
Case 3): In URA Connected state, Radio Link Reconfiguration occurs
   These two cases are as same as Case 1) except the SM messages. ('Deactivate PDP Context Request' and

Case 4): In URA Connected state, CS Paging from MSC occurs
   The same situation with Case 1) occurs.
   Suppose new CS incoming call happens in URA connected state. That means Paging message informs through the existing connection (MSC->SGSN->SRNC). But UTRAN is in URA connected so that SRNC doesn't know where UE is in cell level. So it initiates URA paging to transfer to cell connected state.
   IF the UE moves to another cell, SRNC relocation procedure may also occur. Figure 2 shows this case.
   After SRNC relocation, new SRNC should inform Paging message to UE instead of the previous SRNC.
   So the problem will arise. How the new SRNC get the parameters of Paging message ? Our solution is that the 'SRNC Relocation Commit' message should have those parameters. As a result, the new SRNC will get the paging parameters from the previous SRNC.

3. Proposal

   It is proposed that Annex A should be replaced to the section 9.1.24 in TR 25.423.
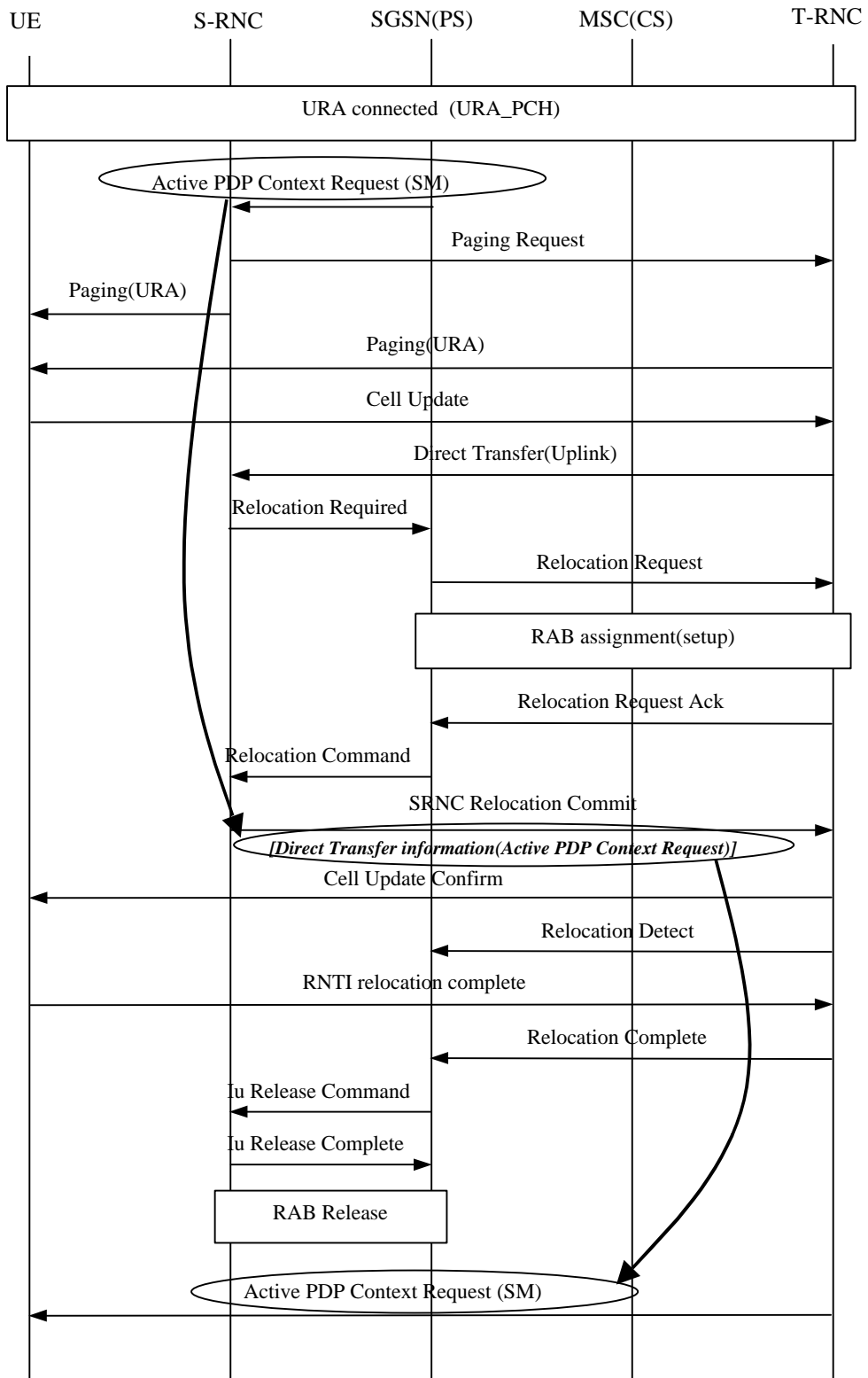
UE   S-RNC   SGSN(PS)   MSC(CS)   T-RNC

URA connected (URA_PCH)

Active PDP Context Request (SM)

Paging Request

Paging(URA)

Paging(URA)

Cell Update

Direct Transfer(Uplink)

Relocation Required

Relocation Request

RAB assignment(setup)

Relocation Request Ack

Relocation Command

SRNC Relocation Commit

[Direct Transfer information(Active PDP Context Request)]

Cell Update Confirm

Relocation Detect

RNTI relocation complete

Relocation Complete

Iu Release Command

Iu Release Complete

RAB Release

Active PDP Context Request (SM)

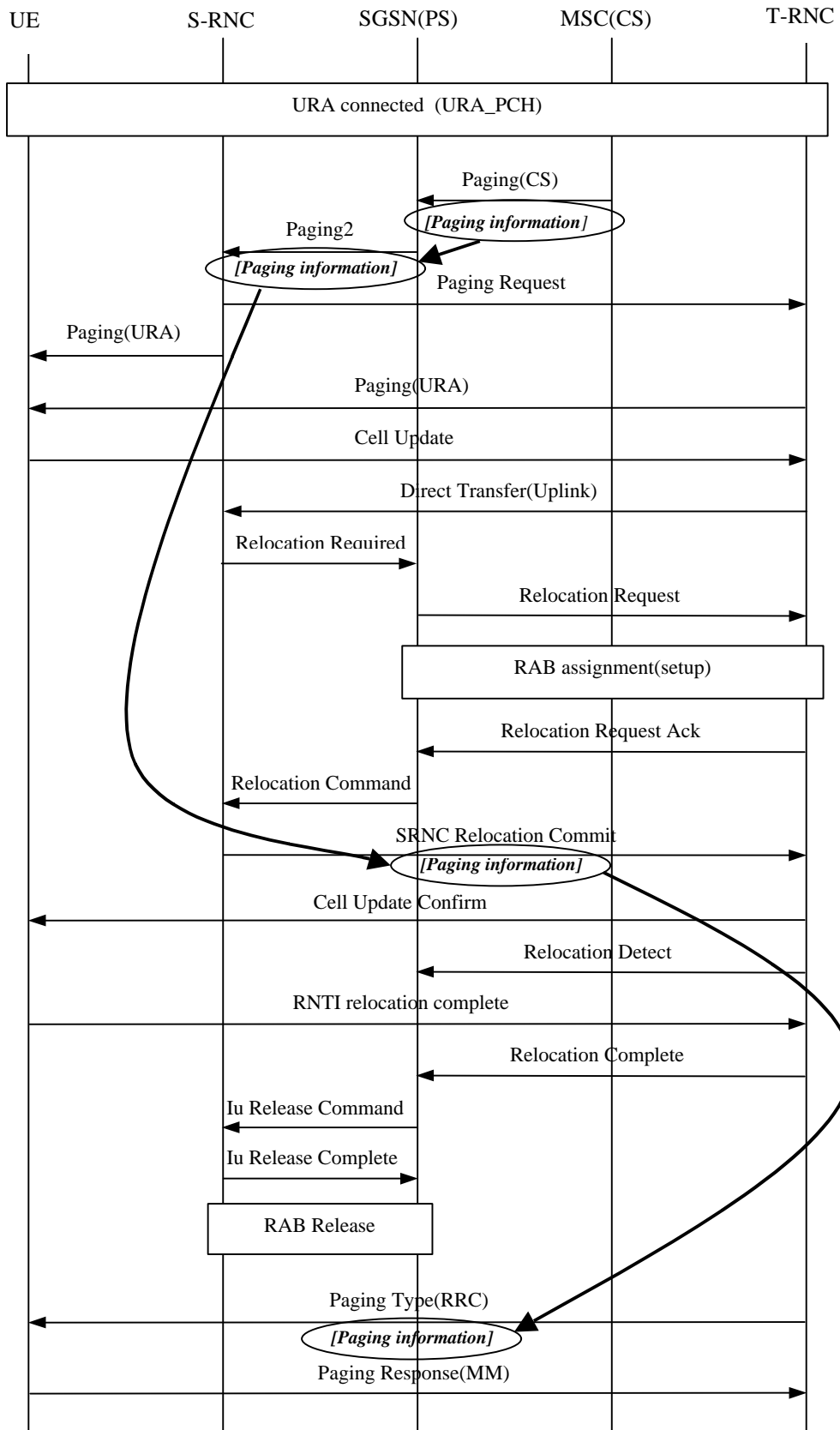**Figure 1 Case of additional call occurs in URA connected state**

Figure 2　Case of CS incoming call occurs in URA connected state

ANNEX A

9.1.24 SRNS RELOCATION COMMIT

Information element	Reference	Type
Message type		**M**
Transaction ID		M
D-RNTI		O
Paging information		O
CN domain identity		M
Paging cause		M
Direct transfer information		O
CN domain identity		M
NAS message		M