

Agenda Item: 10.3
Source: Nokia
Title: **Reset Resource RANAP Procedure**
Document for: Decision

1 Introduction

Resources related to a specific UE in UTRAN and CN are controlled over the lu interface by utilising the lu signalling connection. In case this signalling connection is abnormally released, there has to be a mechanism to reset the resources that were previously controlled by the lu abnormally released lu signalling connection.

One possible way to realise this functionality is to rely on indication from the lu signalling connection itself, which would tell the user of the signalling connection that an error having resulted to an abnormal release of the signalling connection has occurred. Efficiency of this approach is however highly dependent on the mechanism provided by the signalling bearers (for example on the timer values used to detect occurrence of an error situation).

To maintain the independency between transport and radio network layers an explicit RANAP procedure Reset Resource, similar to BSSMAP Reset Circuit procedure , is introduced in chapter 2.

2. Reset Resource Procedure

8.X Reset Resource

The purpose of the Reset Resource procedure is to restore the information in CN/UTRAN in the case of a failure which has affected only a small part of the equipment (e.g. abnormal lu signalling connection release).

8.X.1 UTRAN Originated Reset Resource

8.X.1.1 Normal Operation

If a resource has to be put to idle at the UTRAN due to an abnormal lu signalling connection release, a RESET RESOURCE message shall be sent to CN. When CN receives this message, it clears all the resources (if any) used for the indicated resources to be resetted and returns RESET RESOURCE ACKNOWLEDGE message to UTRAN.

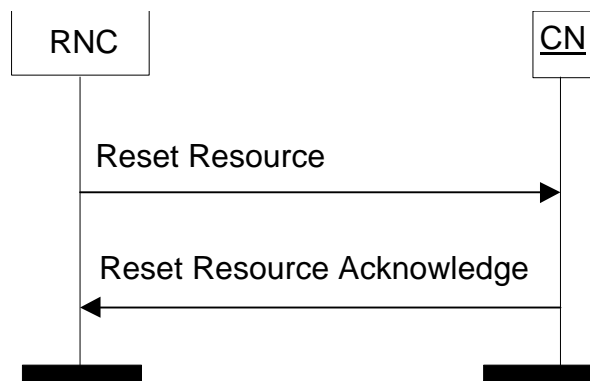


Figure 1. UTRAN originated Reset Resource procedure.

8.X.1.2 Abnormal conditions

If a RESET message is received after sending of a RESET RESOURCE message and before receipt of the corresponding response the respective Reset Resource procedure is stopped, i.e. reception of the corresponding RESET RESOURCE ACKNOWLEDGE message is not required.

8.X.2 CN Originated Reset Resource

8.x.2.1 Normal Operation

If a resource has to be put to idle at CN due to an abnormal release of lu signalling connection, a RESET RESOURCE message will be sent to the UTRAN. When RNC receives a RESET RESOURCE message, it shall respond with a RESET RESOURCE ACKNOWLEDGE message and release all UTRAN resources (if any) associated to the indicated resource to be resetted.

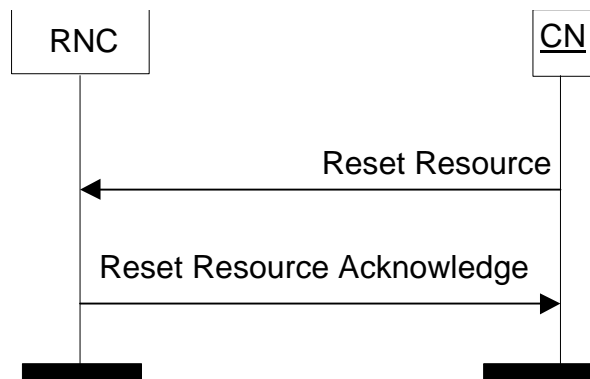


Figure 2. CN originated Reset Resource procedure.

8.X.2.2 Abnormal conditions

If a RESET message is received after sending of a RESET RESOURCE message and before receipt of the corresponding response the respective Reset Resource procedure is stopped, i.e. reception of the corresponding RESET RESOURCE ACKNOWLEDGE message is not required.

If a RESET RESOURCE message is received immediately after a RESET RESOURCE message has been sent for the same RESOURCE, the corresponding acknowledgement messages are returned.

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RANAP Messages:

RESET RESOURCE:

Information element	Reference	Type
Message type		M
Resources to be Reset x n		M
Common ID		M

RESET RESOURCE ACKNOWLEDGE:

Information element	Reference	Type
Message type		M
Resources to be Reset x n		M
Common ID		M

3. Proposal

It is proposed to include the procedure Reset Resource as described in chapter 2 to the UMTS TS 25.413.