TSG-RAN Working Group 3 meeting #7 ***TSGR3#7(99)B60***
Sophia Antipolis, France, 20th - 24th September 1999

Agenda Item: 15.3
Source: Ericsson

Title: Merging of NBAP Procedures for Resource Event Management: Resource Status Indication and Resource Notification Indication

Document for: Decision

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1. INTRODUCTION

This contribution proposes that the NBAP procedures Resource Status Indication and Resource Notification Indication are merged to one procedure. The functions of the two procedures are very similar; Resource Status Indication reports status of logical radio resources in Node B, e.g. at failure and after repair, while Resource Notification Indication reports the availability of Local Cell Ids and some of their capabilities.

2. DESCRIPTION

As described in 25.433 v.1.2.0, the Node B reports the availability of Local Cell identities with Resource Notification Indication and some characteristics that are possible to use. If these characteristics are changed, e.g. due to a fault, can be reported to the CRNC either with the Resource Status Indication or the Resource Notification Indication. The specification gives both options. To have a simple and robust handling that supports the requirement on multi-vendor, it is better to have only one way of dealing with the same matter. As the procedure Resource Status Indication is more general, it is proposed that the function of Resource Notification Indication in included in Resource Status Indication.

2.1 Resource Status Indication

With the Resource Status Indication message the Node B informs the RNC about changed capabilities of a logical resource.

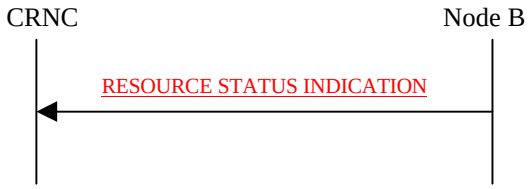
The following reasons to start this procedure are foreseen (list is not exhaustive):

- A Local Cell Id has become available in Node B, due to manual intervention.
- A Local Cell Id has become unavailable in Node B, due to manual intervention.
- A piece of equipment is taken out of service in Node B (due to a fault or manual intervention), and the logical resource that it serves is taken out of service or its service is degraded. The loss of equipment could result in the loss of a local cell, a cell, control transport channel, number of codes supported or power availability.
- A piece of equipment is taken in service for a logical resource in Node B. Node B sends the common NBAP message „Resource Status Indication“ to the RNC to indicate increased capability for the actual logical resource.
- HW resources allocated for the cell control are no longer available and HW resources must be reallocated for that purpose. Node B sends the common NBAP message „Resource Status Indication“ to the RNC to indicate that cell parameters have been cleared and common transport channels of the cell have been locally

released. The RNC may also initiate other procedures to clear resources affected by the failure. It is up to the RNC to e.g. retransmit the configuration data and reallocate the common transport channels. In this case the message contains at least the Local Cell Identifier.

- HW resources allocated for the traffic termination point are no longer available and HW resources must be reallocated for that purpose. Node B sends the common NBAP message „ Resource Status Indication “ to the RNC to indicate that all radio links and Node B communication contexts of the traffic termination point have been locally released. In this case the message contains at least the communication control port identifier, which uniquely also identifies the traffic termination point. At reception of the Traffic Termination Point Failure message the C-RNC is expected to locally release all the radio links and the C-RNC communication contexts of the identified traffic termination point.

The Node B shall use the following procedure to advise the CRNC of changed capabilities within a Node B:



The RESOURCE STATUS INDICATION message may include the following parameters:

- Local Cell Id
- Logical resource identity for the affected resource, i.e. Cell Id or the control transport channel Id.
- Indication type FFS
- Resource information (e.g. cell capacity, logical resources configured, communications control port identifier)
- Service Impact Level (indicates the grade of the service degradation i.e. total loss or degradation, also may indicate whether the fault is permanent or temporary etc.) FFS

For the procedure to be executed successfully, the following is needed:

- A Node B control port is available for communication between the RNC and the Node B.

3. PROPOSAL

Proposal 1

Delete the chapter 8.1.6.2 Node B Resource Notification in 25.433 v1.2.0 NBAP Specification and replace the chapter 8.1.6.1 Resource Status Indication in 25.433 v1.2.0 NBAP Specification with the information in chapter 2.1 in this contribution.

Proposal 2

Delete the chapter 9.1.31 Node B Resource Notification in 25.433 v1.2.0 NBAP Specification.

Proposal 3

Mark all Information Elements Service Impact Level as FFS in chapter 9.1.30 Resource Status Indication in 25.433 v1.2.0 NBAP Specification.

Proposal 4

Mark the chapter 9.2.1.34 Service Impact Level in 25.433 v1.2.0 NBAP Specification as FFS.

4. REFERENCES

[1] TS 25.433 V1.2.0 - NBAP Specification