

**Agenda Item:** 16.4  
**Source:** GSM Association VPT, Mannesmann Mobilfunk, T-Mobil, Vodafone  
**Title:** NBAP : Node B Failure Indication  
**Document for:** Approval

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## 1 Introduction

This document proposes a message content for the NBAP message **Node B Failure Indication**.

## 2 Node B Failure Indication

This message is sent from Node B to CRNC to notify the CRNC of a failure condition at Node B and the resulting impact on the logical resources supported.

Information Element	Reference	Type
Message Discriminator		M
Message Type		M
Failure Type (1)		M
<b>Resource Impact</b>		C <sup>1</sup>
<b>Local Cell ID (2)</b>		C <sup>2</sup>
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>Cell ID</b>		C <sup>3</sup>
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>Cell Carrier ID</b>		C <sup>4</sup>
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>Communication Control Port ID</b>		O
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>BCH ID</b>		O
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>PCH ID</b>		O
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>FACH ID</b>		O
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>RACH ID</b>		O
Resource Operational State (3)		M
Service Impact Level (4)		M
<b>DSCH ID</b>		O

Resource Operational State (3)		M
Service Impact Level (4)		M
<b>USCH ID</b>		<b>O</b>
Resource Operational State (3)		M
Service Impact Level (4)		M
Cause		O
Transaction ID		M

- C1 The information element is present when the Failure Type indicates service impact..  
C2 The information element is present when a Node B has no Cell ID configured.  
C3 The information element is present when Node B supports multiple cell ID's.  
C4 The information element is present when a cell contains multiple carriers.

- (1) The Failure Type shall be as defined chapter 3 below.  
(2) The Local Cell ID shall be as defined in chapter 4 below.  
(3) The Resource Operational State shall be as defined in chapter 5 below.  
(4) The Service Impact Level shall be as defined in chapter 6 below.

### 3 Failure Type

The failure type shall indicate the category of failure with respect to its impact on the logical resources supported at Node B. The following categories shall be defined:

1. Service Impacting – The failure has impacted on the logical resources supported at Node B.
2. Cell Control – The failure has impacted on the ability for the cell parameters to be administered or O&M functions performed.

The definition of other failure types is ffs.

### 4 Local Cell ID

The local cell ID represents an identifier used for initial configuration purposes.

### 5 Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure. In accordance with [1], the resource operational state can have the following values:

1. Enabled
2. Disabled

### 6 Service Impact Level

The service impact level shall indicate the level of impact on the related logical resource of a Node B failure. The following service impact levels shall be defined:

1. Resource disabled permanent – Total loss of resource due to a permanent fault.
2. Resource disabled temporary – Total loss of resource due to a temporary fault.
3. Service degraded permanent – Resource performance degraded due to a permanent fault.
4. Service degraded temporary - Resource performance degraded due to a temporary fault.
5. Capacity reduced permanent – The capacity of the resource is reduced due to a permanent fault.
6. Capacity reduced temporary - The capacity of the resource is reduced due to a temporary fault.

The definition of other service impact levels is ffs.

### 7 Proposal

The following changes to 25.433 (NBAP Specification) are proposed:

1. Chapter 2 shall be inserted as section 9.1.x of 25.433.
2. Chapters 3-6 shall be inserted as sections 9.2.x of 25.433.

### 8 References

[1] CCITT Recommendation X.731 Information Technology – Open Systems Interconnection – Systems Management: State Management function (01/92)