3GPP TSG-RAN WG3 Meeting #129 R3-255806

Bengaluru, India, August 25th–29th, 2025

Agenda Item: 17.3

Source: Ericsson, Deutsche Telekom, China Unicom, Jio Platforms, Huawei

Title: Xn impact of On-demand SIB1 for UEs in idle/inactive mode

Document for: Other

# Information

Implementing the agreement from RAN3#129 meeting.

**Agreement 1: For the class 1 procedures:**

Change the procedure and message name from “UL WUS Configuration Provision” to “OD-SIB1 Configuration Provision”

Change from NR CGI at NG-RAN node1 (Naming FFS) to NES Cell ID

Change from NR CGI at NG-RAN node2 (Naming FFS) to Cell A ID

Please all TP using the name above for the procedure, messages

**Agreement 2: For the class 2 procedures:**

UL WUS CONFIGURATION PROVISION STATUS UPDATE => OD-SIB1 Configuration Provision Status Update

Please all TP using the name above for the procedure, messages

**Agreements 3: the structure of the class 2 message**

In the class 2 message “OD-SIB1 Configuration Provision Status Update”, it is agreed to include “NES Cell ID” as Mandatory presented.

Cell A ID is optionally presented.

**Agreement 4: to capture in the class 1 procedure that:**

If *Cell A ID* IE is included in the provision request, then Cell A gNB shall, if support, broadcast the OD-SIB1 configuration in the indicated Cell A.

**Agreements 5: to capture in the Class 2 procedure text:**

If *Cell A ID* IE is present, this message indicates that the indicated Cell A has stopped the broadcasting.

If *Cell A* *ID* IE is not present, then all the Cell A(s) have stopped the broadcasting for the given NES Cell.

In the response and failure message, include Optional Cell A ID and specify that the Cell A gNB may send back the Cell A ID only if it is included in the request message.

1. Text Proposal for BL CR for TS 38.423

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of TP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

### 8.x.x OD-SIB1 Configuration Provision

#### 8.x.x.1 General

The purpose of the OD-SIB1 Configuration Provision procedure is to enable an NG-RAN node1 to provide OD-SIB1 configuration information to an NG-RAN node2 and to request the NG-RAN node2 to transmit the provided OD-SIB1 configuration information.

The procedure is also used to enable the NG-RAN node1 to request the NG-RAN node2 to stop transmission of the OD-SIB1 configuration.

The procedure uses non-UE -associated signaling.

#### 8.x.x.2 Successful Operation



Figure 8.x.x.2-1: OD-SIB1 Configuration Provision procedure, successful operation

The NG-RAN node1 initiates the procedure by sending the OD-SIB1 CONFIGURATION PROVISION REQUEST message to the NG-RAN node2.

If ‘start’ is included in the *Request Type* IE in the OD-SIB1 CONFIGURATION PROVISION REQUEST message, the NG-RAN node2 shall, if supported, broadcast the provided OD-SIB1 Configuration in SIBx and reply with the OD-SIB1 CONFIGURATION PROVISION RESPONSE message. The NG-RAN node2 stores the OD-SIB1 Configuration information.

If the *Cell A ID* IE is included in the OD-SIB1 CONFIGURATION PROVISION REQUEST message, the NG-RAN node2 shall, if supported, broadcast the OD-SIB1 Configuration in the cell indicated by the *Cell A ID* IE.

If ‘start’ is included in the *Request Type* IE in the OD-SIB1 CONFIGURATION PROVISION REQUEST message and the *NES Cell ID* IE indicates a cell for which the NG-RAN node2 is already broadcasting the OD-SIB1 Configuration:

- If the request is for an existing Cell A ID(s), the NG-RAN node2 shall, if supported, stop the ongoing broadcast for the cell identified by the *NES Cell ID* IE and start broadcast of the newly provided OD-SIB1 Configuration in SIBx. The NG-RAN node2 replaces the stored OD-SIB1 Configuration information with the newly received OD-SIB1 Configuration information.

- If the request is for a new Cell A ID, the NG-RAN node2 shall, if supported, start broadcasting the provided OD-SIB1 Configuration in SIBx in the indicated cell.

If stop is included in the *Request Type* IE in the OD-SIB1 CONFIGURATION PROVISION REQUEST message, the NG-RAN node2 shall stop broadcasting the OD-SIB1 Configuration, for the given NES Cell ID, in SIBx. The NG-RAN node2 removes the stored OD-SIB1 Configuration information.

If the *Cell A ID* IE is included in the OD-SIB1 CONFIGURATION PROVISION REQUEST message, the NG-RAN node2 includes the *Cell A ID* IE in the OD-SIB1 CONFIGURATION PROVISION RESPONSE message .

#### 8.x.x.3 Unsuccessful Operation



Figure 8.x.x.3-1: OD-SIB1 Configuration Provision procedure, unsuccessful operation

If the NG-RAN node2 cannot broadcast the provided OD-SIB1 Configuration in SI, or a failure occurs during OD-SIB1 Configuration Provision, the NG-RAN node2 shall send the OD-SIB1 CONFIGURATION PROVISION FAILURE message. The message shall contain the *Cause* IE with an appropriate value.

If the *Cell* A ID IE is included in the OD-SIB1 CONFIGURATION PROVISION REQUEST message and the NG-RAN node2 cannot broadcast the provided OD-SIB1 Configuration in SIBx of the cell indicated in the *Cell A ID* IE, or a failure occurs during OD-SIB1 Configuration Provision, the NG-RAN node2 shall send the OD-SIB1 CONFIGURATION PROVISION FAILURE message. The message shall contain the *Cause* IE with an appropriate value.

If the *Cell A ID* IE is included in the OD-SIB1 CONFIGURATION PROVISION REQUEST message, the NG-RAN node2 includes the *Cell A ID* IE in the OD-SIB1 CONFIGURATION PROVISION FAILURE message .

#### 8.x.x.4 Abnormal Conditions

Void.

### 8.x.y OD-SIB1 Configuration Provision Status Update

#### 8.x.y.1 General

This procedure is initiated by an NG-RAN node2 to inform a neighbouring NG-RAN node1 about a previously admitted OD-SIB1 configuration provision being stopped.

The procedure uses non-UE associated signalling.

#### 8.x.y.2 Successful Operation



Figure 8.x.y.2-1: OD-SIB1 Configuration Provision Status Update procedure, successful operation

The NG-RAN node2 initiates the procedure by sending the OD-SIB1 CONFIGURATION PROVISION STATUS UPDATE message to the NG-RAN node1.

Upon reception of the OD-SIB1 CONFIGURATION PROVISION STATUS UPDATE message with the *Provision Status* IE set to “stopped”, the NG-RAN node1 shall consider that a previously admitted OD-SIB1 configuration for the cell identified by the *NES Cell ID* IE is no longer broadcast in the cell identified by the *Cell A ID IE*, if present, or, if the *Cell A ID* IE is not present, no longer broadcast by the NG-RAN node2. The NG-RAN node2 removes the stored OD-SIB1 Configuration that is no longer transmitted.

#### 8.x.y.3 Unsuccessful Operation

Not applicable.

#### 8.x.y.4 Abnormal Conditions

Void.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

#### 9.x.x.x OD-SIB1 CONFIGURATION PROVISION REQUEST

This message is sent by the NG-RAN node1 to the peer NG-RAN node2 to request to start or to stop the provisioning of an OD-SIB1 configuration.

Direction: NG-RAN node1  NG-RAN node2.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | reject |
| CHOICE*Request Type* | M |  |  |  | YES | reject |
| >*Start* |  |  |  |  |  |  |
| >>OD-SIB1 Configuration | M |  | OCTET STRING | Includes the *OD-SIB1-Config* IE as specified in SIBxx in TS 38.331 [10]. | – |  |
| >>NES Cell ID | M |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node1  | – |  |
| >>Cell A ID | O |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node2 requested to broadcast the OD-SIB1 configuration. | – |  |
| >*Stop* |  |  |  |  |  |  |
| >>NES Cell ID | M |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node1  | – |  |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

#### 9.1.3.y OD-SIB1 CONFIGURATION PROVISION RESPONSE

This message is sent by an NG-RAN node2 to a peer NG-RAN node1 to indicate that the OD-SIB1 configuration will be provided by the NG-RAN node2 as requested by the NG-RAN node1.

Direction: NG-RAN node2 ® NG-RAN node1.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | reject |
| NES Cell ID | M |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node1  | YES | reject |
| Cell A ID | O |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node2 requested to broadcast the OD-SIB1 configuration. | YES | ignore |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

#### 9.1.3.z OD-SIB1 CONFIGURATION PROVISION FAILURE

This message is sent by an NG-RAN node2 to a peer NG-RAN node1 to indicate that the OD-SIB1 configuration cannot be provided by the NG-RAN node2 as requested by the NG-RAN node1.

Direction: NG-RAN node2 ® NG-RAN node1.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | reject |
| Cause | M |  | 9.2.3.2 |  | YES | ignore |
| NES Cel IDl | M |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node1 which supports OD-SIB1On-Demand SIB1 | YES | ignore |
| Cell A ID | O |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node2 requested to broadcast the OD-SIB1OD-SIB1 configuration. | YES | ignore |
| Criticality Diagnostics | O |  | 9.2.3.3 |  | YES | ignore |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

#### 9.1.3.t OD-SIB1 CONFIGURATION PROVISION STATUS UPDATE

This message is sent by an NG-RAN node2 to a peer NG-RAN node1 to report that an admitted OD-SIB1 configuration provision is being stopped.

Direction: NG-RAN node2 ® NG-RAN node1.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | ignore |
| NES Cell ID | M |  |  | Indicates the NR cell of the NG-RAN node1  | YES | reject |
| Cell A ID | O |  | NR CGI9.2.2.7 | Indicates the NR cell of the NG-RAN node2 requested to broadcast the OD-SIB1 configuration. | YES | ignore |
| Provision Status | M |  | ENUMERATED (stopped, …) | Indicates the status of the OD-SIB1 configuration transmission. | YES | reject |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

### 9.3.3 Elementary Procedure Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Elementary Procedure definitions

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

XnAP-PDU-Descriptions {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) xnap (2) version1 (1) xnap-PDU-Descriptions (0) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 Criticality,

 ProcedureCode

FROM XnAP-CommonDataTypes

 HandoverRequest,

 HandoverRequestAcknowledge,

 HandoverPreparationFailure,

 SNStatusTransfer,

 UEContextRelease,

 HandoverCancel,

 NotificationControlIndication,

 RANPaging,

 RetrieveUEContextRequest,

 RetrieveUEContextResponse,

 RetrieveUEContextConfirm,

 RetrieveUEContextFailure,

 XnUAddressIndication,

 SecondaryRATDataUsageReport,

 SNodeAdditionRequest,

 SNodeAdditionRequestAcknowledge,

 SNodeAdditionRequestReject,

 SNodeReconfigurationComplete,

 SNodeModificationRequest,

 SNodeModificationRequestAcknowledge,

 SNodeModificationRequestReject,

 SNodeModificationRequired,

 SNodeModificationConfirm,

 SNodeModificationRefuse,

 SNodeReleaseRequest,

 SNodeReleaseRequestAcknowledge,

 SNodeReleaseReject,

 SNodeReleaseRequired,

 SNodeReleaseConfirm,

 SNodeCounterCheckRequest,

 SNodeChangeRequired,

 SNodeChangeConfirm,

 SNodeChangeRefuse,

 RRCTransfer,

 XnRemovalRequest,

 XnRemovalResponse,

 XnRemovalFailure,

 XnSetupRequest,

 XnSetupResponse,

 XnSetupFailure,

 NGRANNodeConfigurationUpdate,

 NGRANNodeConfigurationUpdateAcknowledge,

 NGRANNodeConfigurationUpdateFailure,

 E-UTRA-NR-CellResourceCoordinationRequest,

 E-UTRA-NR-CellResourceCoordinationResponse,

 ActivityNotification,

 CellActivationRequest,

 CellActivationResponse,

 CellActivationFailure,

 ResetRequest,

 ResetResponse,

 ErrorIndication,

 PrivateMessage,

 DeactivateTrace,

 TraceStart,

 HandoverSuccess,

 ConditionalHandoverCancel,

 EarlyStatusTransfer,

 FailureIndication,

 HandoverReport,

 ResourceStatusRequest,

 ResourceStatusResponse,

 ResourceStatusFailure,

 ResourceStatusUpdate,

 MobilityChangeRequest,

 MobilityChangeAcknowledge,

 MobilityChangeFailure,

 AccessAndMobilityIndication,

 CellTrafficTrace,

 RANMulticastGroupPaging,

 ScgFailureInformationReport,

 ScgFailureTransfer,

 F1CTrafficTransfer,

 IABTransportMigrationManagementRequest,

 IABTransportMigrationManagementResponse,

 IABTransportMigrationManagementReject,

 IABTransportMigrationModificationRequest,

 IABTransportMigrationModificationResponse,

 IABResourceCoordinationRequest,

 IABResourceCoordinationResponse,

 CPCCancel,

 PartialUEContextTransfer,

 PartialUEContextTransferAcknowledge,

 PartialUEContextTransferFailure,

 RachIndication,

 DataCollectionRequest,

 DataCollectionResponse,

 DataCollectionFailure,

 DataCollectionUpdate,

 ULWUSConfigurationProvisionRequest,

 ULWUSConfigurationProvisionResponse,

 ULWUSConfigurationProvisionFailure,

 ULWUSConfigurationProvisionStatus

FROM XnAP-PDU-Contents

 id-handoverPreparation,

 id-sNStatusTransfer,

 id-handoverCancel,

 id-notificationControl,

 id-retrieveUEContext,

 id-rANPaging,

 id-xnUAddressIndication,

 id-uEContextRelease,

 id-secondaryRATDataUsageReport,

 id-sNGRANnodeAdditionPreparation,

 id-sNGRANnodeReconfigurationCompletion,

 id-mNGRANnodeinitiatedSNGRANnodeModificationPreparation,

 id-sNGRANnodeinitiatedSNGRANnodeModificationPreparation,

 id-mNGRANnodeinitiatedSNGRANnodeRelease,

 id-sNGRANnodeinitiatedSNGRANnodeRelease,

 id-sNGRANnodeCounterCheck,

 id-sNGRANnodeChange,

 id-activityNotification,

 id-rRCTransfer,

 id-xnRemoval,

 id-xnSetup,

 id-nGRANnodeConfigurationUpdate,

 id-e-UTRA-NR-CellResourceCoordination,

 id-cellActivation,

 id-reset,

 id-errorIndication,

 id-privateMessage,

 id-deactivateTrace,

 id-traceStart,

 id-handoverSuccess,

 id-conditionalHandoverCancel,

 id-earlyStatusTransfer,

 id-failureIndication,

 id-handoverReport,

 id-resourceStatusReportingInitiation,

 id-resourceStatusReporting,

 id-mobilitySettingsChange,

 id-accessAndMobilityIndication,

 id-cellTrafficTrace,

 id-RANMulticastGroupPaging,

 id-scgFailureInformationReport,

 id-scgFailureTransfer,

 id-f1CTrafficTransfer,

 id-iABTransportMigrationManagement,

 id-iABTransportMigrationModification,

 id-iABResourceCoordination,

 id-retrieveUEContextConfirm,

 id-cPCCancel,

 id-partialUEContextTransfer,

 id-rachIndication,

 id-dataCollectionReportingInitiation,

 id-dataCollectionReporting,

 id-uLWUSConfigurationProvision,

 id-uLWUSConfigurationProvisionStatus

FROM XnAP-Constants;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Interface Elementary Procedure Class

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

XNAP-ELEMENTARY-PROCEDURE ::= CLASS {

 &InitiatingMessage ,

 &SuccessfulOutcome OPTIONAL,

 &UnsuccessfulOutcome OPTIONAL,

 &procedureCode ProcedureCode UNIQUE,

 &criticality Criticality DEFAULT ignore

}

WITH SYNTAX {

 INITIATING MESSAGE &InitiatingMessage

 [SUCCESSFUL OUTCOME &SuccessfulOutcome]

 [UNSUCCESSFUL OUTCOME &UnsuccessfulOutcome]

 PROCEDURE CODE &procedureCode

 [CRITICALITY &criticality]

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Interface PDU Definition

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

XnAP-PDU ::= CHOICE {

 initiatingMessage InitiatingMessage,

 successfulOutcome SuccessfulOutcome,

 unsuccessfulOutcome UnsuccessfulOutcome,

 ...

}

InitiatingMessage ::= SEQUENCE {

 procedureCode XNAP-ELEMENTARY-PROCEDURE.&procedureCode ({XNAP-ELEMENTARY-PROCEDURES}),

 criticality XNAP-ELEMENTARY-PROCEDURE.&criticality ({XNAP-ELEMENTARY-PROCEDURES}{@procedureCode}),

 value XNAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ({XNAP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

SuccessfulOutcome ::= SEQUENCE {

 procedureCode XNAP-ELEMENTARY-PROCEDURE.&procedureCode ({XNAP-ELEMENTARY-PROCEDURES}),

 criticality XNAP-ELEMENTARY-PROCEDURE.&criticality ({XNAP-ELEMENTARY-PROCEDURES}{@procedureCode}),

 value XNAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ({XNAP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

UnsuccessfulOutcome ::= SEQUENCE {

 procedureCode XNAP-ELEMENTARY-PROCEDURE.&procedureCode ({XNAP-ELEMENTARY-PROCEDURES}),

 criticality XNAP-ELEMENTARY-PROCEDURE.&criticality ({XNAP-ELEMENTARY-PROCEDURES}{@procedureCode}),

 value XNAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({XNAP-ELEMENTARY-PROCEDURES}{@procedureCode})

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Interface Elementary Procedure List

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

XNAP-ELEMENTARY-PROCEDURES XNAP-ELEMENTARY-PROCEDURE ::= {

 XNAP-ELEMENTARY-PROCEDURES-CLASS-1 |

 XNAP-ELEMENTARY-PROCEDURES-CLASS-2 ,

 ...

}

XNAP-ELEMENTARY-PROCEDURES-CLASS-1 XNAP-ELEMENTARY-PROCEDURE ::= {

 handoverPreparation |

 retrieveUEContext |

 sNGRANnodeAdditionPreparation |

 mNGRANnodeinitiatedSNGRANnodeModificationPreparation |

 sNGRANnodeinitiatedSNGRANnodeModificationPreparation |

 mNGRANnodeinitiatedSNGRANnodeRelease |

 sNGRANnodeinitiatedSNGRANnodeRelease |

 sNGRANnodeChange |

 xnRemoval |

 xnSetup |

 nGRANnodeConfigurationUpdate |

 e-UTRA-NR-CellResourceCoordination |

 cellActivation |

 reset |

 resourceStatusReportingInitiation |

 mobilitySettingsChange |

 iABTransportMigrationManagement |

 iABTransportMigrationModification |

 iABResourceCoordination |

 partialUEContextTransfer |

 dataCollectionReportingInitiation |

 uLWUSConfigurationProvision,

 ...

}

XNAP-ELEMENTARY-PROCEDURES-CLASS-2 XNAP-ELEMENTARY-PROCEDURE ::= {

 sNStatusTransfer |

 handoverCancel |

 rANPaging |

 xnUAddressIndication |

 uEContextRelease |

 sNGRANnodeReconfigurationCompletion |

 sNGRANnodeCounterCheck |

 rRCTransfer |

 errorIndication |

 privateMessage |

 notificationControl |

 activityNotification |

 secondaryRATDataUsageReport |

 deactivateTrace |

 traceStart |

 handoverSuccess |

 conditionalHandoverCancel |

 earlyStatusTransfer |

 failureIndication |

 handoverReport |

 resourceStatusReporting |

 accessAndMobilityIndication |

 cellTrafficTrace |

 rANMulticastGroupPaging |

 scgFailureInformationReport |

 scgFailureTransfer |

 f1CTrafficTransfer |

 retrieveUEContextConfirm |

 cPCCancel |

 rachIndication |

 dataCollectionReporting |

 uLWUSConfigurationProvisionStatus,

 ...

}

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Interface Elementary Procedures

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

handoverPreparation XNAP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE HandoverRequest

 SUCCESSFUL OUTCOME HandoverRequestAcknowledge

 UNSUCCESSFUL OUTCOME HandoverPreparationFailure

 PROCEDURE CODE id-handoverPreparation

 CRITICALITY reject

}

sNStatusTransfer XNAP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE SNStatusTransfer

 PROCEDURE CODE id-sNStatusTransfer

 CRITICALITY ignore

}

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

dataCollectionReportingInitiation XNAP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE DataCollectionRequest

 SUCCESSFUL OUTCOME DataCollectionResponse

 UNSUCCESSFUL OUTCOME DataCollectionFailure

 PROCEDURE CODE id-dataCollectionReportingInitiation

 CRITICALITY reject

}

dataCollectionReporting XNAP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE DataCollectionUpdate

 PROCEDURE CODE id-dataCollectionReporting

 CRITICALITY ignore

}

uLWUSConfigurationProvision XNAP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE ULWUSConfigurationProvisionRequest

 SUCCESSFUL OUTCOME ULWUSConfigurationProvisionResponse

 UNSUCCESSFUL OUTCOME ULWUSConfigurationProvisionFailure

 PROCEDURE CODE id-uLWUSConfigurationProvision

 CRITICALITY reject

}

uLWUSConfigurationProvisionStatus XNAP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE ULWUSConfigurationProvisionStatus

 PROCEDURE CODE id-uLWUSConfigurationProvisionStatus

 CRITICALITY ignore

}

END

-- ASN1STOP

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 9.3.4 PDU Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- PDU definitions for XnAP.

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

XnAP-PDU-Contents {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) xnap (2) version1 (1) xnap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 ActivationIDforCellActivation,

 AMF-Region-Information,

 AMF-UE-NGAP-ID,

 AS-SecurityInformation,

 AssistanceDataForRANPaging,

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

 id-S-CPAC-Request,

 id-sk-Counter,

 id-Source-M-NG-RANnodeID,

 id-SourceSN-to-TargetSN-QMCInfo,

 id-RegistrationRequestForDataCollection,

 id-ReportCharacteristicsForDataCollection,

 id-ReportingPeriodicityForDataCollection,

 id-NodeAssociatedInfoResult,

 id-SLPositioning-Ranging-Services-Info,

 id-PDUSessionsListToBeReleased-UPError,

 id-UserPlaneFailureIndication,

 id-SRSPositioningConfigOrActivationRequest,

 id-NRPPaPositioningInformation,

 id-RequestType,

 id-OD-SIB1-Cell,

 id-ProvisionStatus,

 maxnoofCellsinNG-RANnode,

 maxnoofDRBs,

 maxnoofPDUSessions,

 maxnoofQoSFlows,

 maxnoofServedCellsIAB,

 maxnoofTrafficIndexEntries,

 maxnoofTLAsIAB,

 maxnoofBAPControlPDURLCCHs,

 maxnoofServingCells,

 maxnoofSSBAreas

FROM XnAP-Constants;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- HANDOVER REQUEST

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- DATA COLLECTION UPDATE

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

DataCollectionUpdate ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{DataCollectionUpdate-IEs}},

 ...

}

DataCollectionUpdate-IEs XNAP-PROTOCOL-IES ::= {

 { ID id-NGRAN-Node1-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-NGRAN-Node2-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-CellMeasurementResultForDataCollection-List CRITICALITY ignore TYPE CellMeasurementResultForDataCollection-List PRESENCE optional }|

 { ID id-UEAssociatedInfoResult-List CRITICALITY ignore TYPE UEAssociatedInfoResult-List PRESENCE optional }|

 { ID id-NodeAssociatedInfoResult CRITICALITY ignore TYPE NodeAssociatedInfoResult PRESENCE optional },

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- OD-SIB1 CONFIGURATION PROVISION REQUEST

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ULWUSConfigurationProvisionRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ULWUSConfigurationProvisionRequest-IEs}},

 ...

}

ULWUSConfigurationProvisionRequest-IEs XNAP-PROTOCOL-IES ::= {

 { ID id-RequestType CRITICALITY reject TYPE RequestTypeChoice PRESENCE mandatory}|

 { ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional },

 ...

}

RequestTypeChoice ::= CHOICE {

 Start ULWUSConfigurationInformation,

 Stop NR-CGI,

 choice-extension ProtocolIE-Single-Container { {RequestTypeChoice-ExtIEs} }

}

RequestTypeChoice-ExtIEs XNAP-PROTOCOL-IES ::= {

 ...

}

ULWUSConfigurationInformation ::= SEQUENCE {

 uLWUSConfiguration OCTET STRING,

 oD-SIB1-Cell NR-CGI,

 assisting-Cell NR-CGI OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {ULWUSConfigurationInformation-ExtIEs} } OPTIONAL,

 ...

}

ULWUSConfigurationInformation-ExtIEs XNAP-PROTOCOL-EXTENSION ::= {

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- OD-SIB1 CONFIGURATION PROVISION RESPONSE

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ULWUSConfigurationProvisionResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ULWUSConfigurationProvisionResponse-IEs}},

 ...

}

ULWUSConfigurationProvisionResponse-IEs XNAP-PROTOCOL-IES ::= {

 { ID id-OD-SIB1-Cell CRITICALITY reject TYPE NR-CGI PRESENCE mandatory}|

 { ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional },

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- OD-SIB1 CONFIGURATION PROVISION FAILURE

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ULWUSConfigurationProvisionFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ ULWUSConfigurationProvisionFailure-IEs}},

 ...

}

ULWUSConfigurationProvisionFailure-IEs XNAP-PROTOCOL-IES ::= {

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory}|

 { ID id-OD-SIB1-Cell CRITICALITY ignore TYPE NR-CGI PRESENCE mandatory}|

 { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }|

 { ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional },

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- OD-SIB1 CONFIGURATION PROVISION STATUS

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ULWUSConfigurationProvisionStatus ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ULWUSConfigurationProvisionStatus-IEs}},

 ...

}

ULWUSConfigurationProvisionStatus-IEs XNAP-PROTOCOL-IES ::= {

 { ID id-OD-SIB1-Cell CRITICALITY ignore TYPE NR-CGI PRESENCE mandatory}|

 { ID id-ProvisionStatus CRITICALITY ignore TYPE ProvisionStatus PRESENCE mandatory}|

 { ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional },

 ...

}

ProvisionStatus ::= ENUMERATED {stopped, ...}

END

-- ASN1STOP

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 9.3.7 Constant definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Constant definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

XnAP-Constants {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-Access (22) modules (3) xnap (2) version1 (1) xnap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

 ProcedureCode,

 ProtocolIE-ID

FROM XnAP-CommonDataTypes;

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Elementary Procedures

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

id-handoverPreparation ProcedureCode ::= 0

id-sNStatusTransfer ProcedureCode ::= 1

id-handoverCancel ProcedureCode ::= 2

id-retrieveUEContext ProcedureCode ::= 3

id-rANPaging ProcedureCode ::= 4

id-xnUAddressIndication ProcedureCode ::= 5

id-uEContextRelease ProcedureCode ::= 6

id-sNGRANnodeAdditionPreparation ProcedureCode ::= 7

id-sNGRANnodeReconfigurationCompletion ProcedureCode ::= 8

id-mNGRANnodeinitiatedSNGRANnodeModificationPreparation ProcedureCode ::= 9

id-sNGRANnodeinitiatedSNGRANnodeModificationPreparation ProcedureCode ::= 10

id-mNGRANnodeinitiatedSNGRANnodeRelease ProcedureCode ::= 11

id-sNGRANnodeinitiatedSNGRANnodeRelease ProcedureCode ::= 12

id-sNGRANnodeCounterCheck ProcedureCode ::= 13

id-sNGRANnodeChange ProcedureCode ::= 14

id-rRCTransfer ProcedureCode ::= 15

id-xnRemoval ProcedureCode ::= 16

id-xnSetup ProcedureCode ::= 17

id-nGRANnodeConfigurationUpdate ProcedureCode ::= 18

id-cellActivation ProcedureCode ::= 19

id-reset ProcedureCode ::= 20

id-errorIndication ProcedureCode ::= 21

id-privateMessage ProcedureCode ::= 22

id-notificationControl ProcedureCode ::= 23

id-activityNotification ProcedureCode ::= 24

id-e-UTRA-NR-CellResourceCoordination ProcedureCode ::= 25

id-secondaryRATDataUsageReport ProcedureCode ::= 26

id-deactivateTrace ProcedureCode ::= 27

id-traceStart ProcedureCode ::= 28

id-handoverSuccess ProcedureCode ::= 29

id-conditionalHandoverCancel ProcedureCode ::= 30

id-earlyStatusTransfer ProcedureCode ::= 31

id-failureIndication ProcedureCode ::= 32

id-handoverReport ProcedureCode ::= 33

id-resourceStatusReportingInitiation ProcedureCode ::= 34

id-resourceStatusReporting ProcedureCode ::= 35

id-mobilitySettingsChange ProcedureCode ::= 36

id-accessAndMobilityIndication ProcedureCode ::= 37

id-cellTrafficTrace ProcedureCode ::= 38

id-RANMulticastGroupPaging ProcedureCode ::= 39

id-scgFailureInformationReport ProcedureCode ::= 40

id-ProcedureCode41-NotToBeUsed ProcedureCode ::= 41

id-scgFailureTransfer ProcedureCode ::= 42

id-f1CTrafficTransfer ProcedureCode ::= 43

id-iABTransportMigrationManagement ProcedureCode ::= 44

id-iABTransportMigrationModification ProcedureCode ::= 45

id-iABResourceCoordination ProcedureCode ::= 46

id-retrieveUEContextConfirm ProcedureCode ::= 47

id-cPCCancel ProcedureCode ::= 48

id-partialUEContextTransfer ProcedureCode ::= 49

id-rachIndication ProcedureCode ::= 50

id-dataCollectionReportingInitiation ProcedureCode ::= 51

id-dataCollectionReporting ProcedureCode ::= 52

id-uLWUSConfigurationProvision ProcedureCode ::= 5x

id-uLWUSConfigurationProvisionStatus ProcedureCode ::= 5y

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Lists

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

id-CPAC-Preparation-Type ProtocolIE-ID ::= 468

id-UserPlaneFailureIndication ProtocolIE-ID ::= 469

id-MN-only-MDT-collection ProtocolIE-ID ::= 470

id-BarringExemptionforEmerCallInfo ProtocolIE-ID ::= 471

id-Transmission-Bandwidth-asymmetric ProtocolIE-ID ::= 472

id-SRSPositioningConfigOrActivationRequest ProtocolIE-ID ::= 473

id-NRPPaPositioningInformation ProtocolIE-ID ::= 474

id-RequestType ProtocolIE-ID ::= 4xx

id-OD-SIB1-Cell ProtocolIE-ID ::= 4xx+1

id-ProvisionStatus ProtocolIE-ID ::= 4xx+3

END

-- ASN1STOP

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of TP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***