TSG RAN Meeting #18 **RP-020756**
New Orleans, Louisiana, USA, 3 - 6 December, 2002

Title   **CRs (Rel-4 and Rel-5 Category A) to TS 25.402 and 25.433 on Node B**
                  Synchronisation for 3.84Mcps TDD
Source   **TSG RAN WG3**
Agenda Item   **7.3.4**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-022382	25.402	4.5.0	4.6.0	REL-4	038	-	F	Node B Synchronisation for 3.84Mcps TDD	RANimp-NBsync
R3-022555	25.433	4.6.0	4.7.0	REL-4	768	1	F	Node B Synchronisation for 3.84Mcps TDD	RANimp-NBsync

CR-Form-v7

CHANGE REQUEST

⌘ **25.402** CR **038** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network **X** Core Network ☐

Title: ⌘	Node B Synchronisation for 3.84Mcps TDD	
Source: ⌘	RAN WG3	
Work item code:⌘	RANimp-NBsync	***Date:*** ⌘ 11/11/2002
Category: ⌘ **F**		***Release:*** ⌘ Rel-4

Use <u>one</u> of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can
be found in 3GPP <u>TR 21.900</u>.

Use <u>one</u> of the following releases:
2   (GSM Phase 2)
R96   (Release 1996)
R97   (Release 1997)
R98   (Release 1998)
R99   (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘	The Rel-4 Work Item "Node B synchronisation for TDD" should be clarified that it is only for 3.84Mcps TDD.
Summary of change:⌘	All respective chapter heading are tagged with 3.84Mcps TDD.
Consequences if not approved: ⌘	If this CR is not approved, Node B synchronisation for 3.84Mcps TDD can erroneously be used for 1.28Mcps TDD. Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because Node B Synchronisation for TDD only is affected. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Clauses affected: ⌘	6.1.2.2

	Y	N		
Other specs affected: ⌘	X		Other core specifications ⌘	25.433 v4.6.0 CR768
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <u>ftp://ftp.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

6.1.2.2 TDD Inter Node B Node Synchronisation procedure [3.84Mcps TDD]

The Node B synchronisation procedure is an optional procedure based on transmissions of cell synchronisation bursts in predetermined PRACH time slots according to an RNC schedule. Such soundings between neighbouring cells facilitate timing offset measurements by the cells. The measured timing offset values are reported to the RNC for processing. The RNC generates cell timing updates that are transmitted to the Node B and cells for implementation.

/* partly omitted */

CR-Form-v7

CHANGE REQUEST

⌘	**25.433** CR	**768**	⌘ **rev**	**1**	⌘	Current version:	**4.6.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network **X** Core Network ☐

Title: ⌘	Node B Synchronisation for 3.84Mcps TDD	
Source: ⌘	RAN WG3	
Work item code: ⌘	RANimp-NBsync	***Date:*** ⌘ 11/11/2002
Category: ⌘ **F**		***Release:*** ⌘ Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change: ⌘	The Rel-4 Work Item "Node B synchronisation for TDD" should be clarified that it is only for 3.84Mcps TDD.
Summary of change: ⌘	All respective chapter heading are tagged with 3.84Mcps TDD.
Consequences if not approved: ⌘	If this CR is not approved, Node B synchronisation for 3.84Mcps TDD can erroneously be used for 1.28Mcps TDD. Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because Node B Synchronisation for TDD only is affected. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Clauses affected: ⌘	7, 8.1, 8.2.20, 8.2.21, 8.2.22, 8.2.23, 8.2.24, 8.2.25, 9.1.75, 9.1.76, 9.1.77, 9.1.78, 9.1.79, 9.1.80, 9.1.81, 9.1.82, 9.1.83, 9.1.84, 9.1.85, 9.1.86, 9.3.3

	Y	N		
Other specs affected: ⌘	X		Other core specifications ⌘	25.402 v4.5.0 CR038
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

7   Functions of NBAP

The NBAP protocol provides the following functions:

- Cell Configuration Management. This function gives the CRNC the possibility to manage the cell configuration information in a Node B.

- Common Transport Channel Management. This function gives the CRNC the possibility to manage the configuration of Common Transport Channels in a Node B.

- System Information Management. This function gives the CRNC the ability to manage the scheduling of System Information to be broadcast in a cell.

- Resource Event Management. This function gives the Node B the ability to inform the CRNC about the status of Node B resources.

- Configuration Alignment. This function gives the CRNC and the Node B the possibility to verify and enforce that both nodes have the same information on the configuration of the radio resources.

- Measurements on Common Resources. This function allows the CRNC to initiate measurements on common resources in the Node B. The function also allows the Node B to report the result of the measurements.

- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a Node B.

- Radio Link Supervision. This function allows the CRNC to report failures and restorations of a Radio Link.

- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.

- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements on dedicated resources in the Node B. The function also allows the Node B to report the result of the measurements.

- DL Power Drifting Correction [FDD]. This function allows the CRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links.

- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.

- Physical Shared Channel Management [TDD]. This function allows the CRNC to manage physical resources in the Node B belonging to Shared Channels (USCH/DSCH).

- DL Power Timeslot Correction [TDD]. This function enables the Node B to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.

- Cell Synchronisation [3.84Mcps TDD]. This function allows the synchronisation of cells or Node Bs via the air interface.

- Information Exchange. This function allows the CRNC to initiate information provision from the Node B. The function also allows the Node B to report the requested information.

The mapping between the above functions and NBAP elementary procedures is shown in the table below.

Table 1: Mapping between functions and NBAP elementary procedures

Function	Elementary Procedure(s)
Cell Configuration Management	a) Cell Setup b) Cell Reconfiguration c) Cell Deletion
Common Transport Channel Management	a) Common Transport Channel Setup b) Common Transport Channel Reconfiguration c) Common Transport Channel Deletion
System Information Management	System Information Update
Resource Event Management	a) Block Resource b) Unblock Resource c) Resource Status Indication
Configuration Alignment	a) Audit Required b) Audit c) Reset
Measurements on Common Resources	a) Common Measurement Initiation b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure
Radio Link Management.	a) Radio Link Setup b) Radio Link Addition c) Radio Link Deletion d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation h) Radio Link Pre-emption
Radio Link Supervision.	a) Radio Link Failure b) Radio Link Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup b) Radio Link Addition c) Compressed Mode Command d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation
Measurements on Dedicated Resources	a) Dedicated Measurement Initiation b) Dedicated Measurement Reporting c) Dedicated Measurement Termination d) Dedicated Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
Reporting of General Error Situations	Error Indication
Physical Shared Channel Management [TDD]	Physical Shared Channel Reconfiguration
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control
Cell Synchronisation [3.84Mcps TDD]	a) Cell Synchronisation Initiation b) Cell Synchronisation Reconfiguration c) Cell Synchronisation Reporting d) Cell Synchronisation Termination e) Cell Synchronisation Failure f) Cell Synchronisation Adjustment
Information Exchange	a) Information Exchange Initiation b) Information Reporting c) Information Exchange Termination d) Information Exchange Failure

8 NBAP Procedures

8.1 Elementary Procedures

NBAP procedures are divided into common procedures and dedicated procedures.

- NBAP common procedures are procedures that request initiation of a Node B Communication Context for a specific UE in Node B or are not related to a specific UE. NBAP common procedures also incorporate logical O&M [1] procedures.

- NBAP dedicated procedures are procedures that are related to a specific Node B Communication Context in Node B. This Node B Communication Context is identified by a Node B Communication Context identity.

The two types of procedures may be carried on separate signalling links.

In the following tables, all EPs are divided into Class 1 and Class 2 EPs:

Table 2: Class 1

Elementary Procedure	Message	Successful Outcome Response message	Unsuccessful Outcome Response message
Cell Setup	CELL SETUP REQUEST	CELL SETUP RESPONSE	CELL SETUP FAILURE
Cell Reconfiguration	CELL RECONFIGURATION REQUEST	CELL RECONFIGURATION RESPONSE	CELL RECONFIGURATION FAILURE
Cell Deletion	CELL DELETION REQUEST	CELL DELETION RESPONSE	
Common Transport Channel Setup	COMMON TRANSPORT CHANNEL SETUP REQUEST	COMMON TRANSPORT CHANNEL SETUP RESPONSE	COMMON TRANSPORT CHANNEL SETUP FAILURE
Common Transport Channel Reconfiguration	COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST	COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE	COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
Common Transport Channel Deletion	COMMON TRANSPORT CHANNEL DELETION REQUEST	COMMON TRANSPORT CHANNEL DELETION RESPONSE	
Physical Shared Channel Reconfigure [TDD]	PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST	PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE	PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE
Audit	AUDIT REQUEST	AUDIT RESPONSE	AUDIT FAILURE
Block Resource	BLOCK RESOURCE REQUEST	BLOCK RESOURCE RESPONSE	BLOCK RESOURCE FAILURE
Radio Link Setup	RADIO LINK SETUP REQUEST	RADIO LINK SETUP RESPONSE	RADIO LINK SETUP FAILURE
System Information Update	SYSTEM INFORMATION UPDATE REQUEST	SYSTEM INFORMATION UPDATE RESPONSE	SYSTEM INFORMATION UPDATE FAILURE
Common Measurement Initiation	COMMON MEASUREMENT INITIATION REQUEST	COMMON MEASUREMENT INITIATION RESPONSE	COMMON MEASUREMENT INITIATION FAILURE
Radio Link Addition	RADIO LINK ADDITION REQUEST	RADIO LINK ADDITION RESPONSE	RADIO LINK ADDITION FAILURE
Radio Link Deletion	RADIO LINK DELETION REQUEST	RADIO LINK DELETION RESPONSE	
Synchronised Radio Link Reconfiguration Preparation	RADIO LINK RECONFIGURATION PREPARE	RADIO LINK RECONFIGURATION READY	RADIO LINK RECONFIGURATION FAILURE
Unsynchronised Radio Link Reconfiguration	RADIO LINK RECONFIGURATION REQUEST	RADIO LINK RECONFIGURATION RESPONSE	RADIO LINK RECONFIGURATION FAILURE
Dedicated Measurement Initiation	DEDICATED MEASUREMENT INITIATION REQUEST	DEDICATED MEASUREMENT INITIATION RESPONSE	DEDICATED MEASUREMENT INITIATION FAILURE
Reset	RESET REQUEST	RESET RESPONSE	
Cell Synchronisation Initiation [3.84Mcps TDD]	CELL SYNCHRONISATION INITIATION REQUEST	CELL SYNCHRONISATION INITIATION RESPONSE	CELL SYNCHRONISATION INITIATION FAILURE
Cell Synchronisation Reconfiguration [3.84Mcps TDD]	CELL SYNCHRONISATION RECONFIGURATION REQUEST	CELL SYNCHRONISATION RECONFIGURATION RESPONSE	CELL SYNCHRONISATION RECONFIGURATION FAILURE
Cell Synchronisation Adjustment [3.84Mcps TDD]	CELL SYNCHRONISATION ADJUSTMENT REQUEST	CELL SYNCHRONISATION ADJUSTMENT RESPONSE	CELL SYNCHRONISATION ADJUSTMENT FAILURE
Information Exchange Initiation	INFORMATION EXCHANGE INITIATION REQUEST	INFORMATION EXCHANGE INITIATION RESPONSE	INFORMATION EXCHANGE INITIATION FAILURE

Table 3: Class 2

Elementary Procedure	Message
Resource Status Indication	RESOURCE STATUS INDICATION
Audit Required	AUDIT REQUIRED INDICATION
Common Measurement Reporting	COMMON MEASUREMENT REPORT
Common Measurement Termination	COMMON MEASUREMENT TERMINATION REQUEST
Common Measurement Failure	COMMON MEASUREMENT FAILURE INDICATION
Synchronised Radio Link Reconfiguration Commit	RADIO LINK RECONFIGURATION COMMIT
Synchronised Radio Link Reconfiguration Cancellation	RADIO LINK RECONFIGURATION CANCEL
Radio Link Failure	RADIO LINK FAILURE INDICATION
Radio Link Restoration	RADIO LINK RESTORE INDICATION
Dedicated Measurement Reporting	DEDICATED MEASUREMENT REPORT
Dedicated Measurement Termination	DEDICATED MEASUREMENT TERMINATION REQUEST
Dedicated Measurement Failure	DEDICATED MEASUREMENT FAILURE INDICATION
Downlink Power Control [FDD]	DL POWER CONTROL REQUEST
Compressed Mode Command [FDD]	COMPRESSED MODE COMMAND
Unblock Resource	UNBLOCK RESOURCE INDICATION
Error Indication	ERROR INDICATION
Downlink Power Timeslot Control [TDD]	DL POWER TIMESLOT CONTROL REQUEST
Radio Link Pre-emption	RADIO LINK PREEMPTION REQUIRED INDICATION
Cell Synchronisation Reporting [3.84Mcps TDD]	CELL SYNCHRONISATION REPORT
Cell Synchronisation Termination [3.84Mcps TDD]	CELL SYNCHRONISATION TERMINATION REQUEST
Cell Synchronisation Failure [3.84Mcps TDD]	CELL SYNCHRONISATION FAILURE INDICATION
Information Reporting	INFORMATION REPORT
Information Exchange Termination	INFORMATION EXCHANGE TERMINATION REQUEST
Information Exchange Failure	INFORMATION EXCHANGE FAILURE INDICATION

/* partly omitted */

8.2.20   Cell Synchronisation Initiation [3.84Mcps TDD]

8.2.20.1   General

This procedure is used by a CRNC to request the transmission of cell synchronisation bursts and/or to start measurements on cell synchronisation bursts in a Node B.

/* partly omitted */

8.2.21 Cell Synchronisation Reconfiguration [3.84Mcps TDD]

8.2.21.1 General

This procedure is used by a CRNC to reconfigure the transmission of cell synchronisation bursts and/or to reconfigure measurements on cell synchronisation bursts in a Node B.

/* partly omitted */

8.2.22 Cell Synchronisation Reporting [3.84Mcps TDD]

8.2.22.1 General

This procedure is used by a Node B to report the result of cell synchronisation burst measurements requested by the CRNC with the Cell Synchronisation Initiation or Cell Synchronisation Reconfiguration procedure.

/* partly omitted */

8.2.23 Cell Synchronisation Termination [3.84Mcps TDD]

8.2.23.1 General

This procedure is used by the CRNC to terminate a cell synchronisation burst transmission or measurement previously requested by the Cell Synchronisation Initiation procedure or Cell Synchronisation Reconfiguration procedure.

/* partly omitted */

8.2.24 Cell Synchronisation Failure [3.84Mcps TDD]

8.2.24.1 General

This procedure is used by the Node B to notify the CRNC that a synchronisation burst transmission or synchronisation measurement procedure can no longer be supported.

/* partly omitted */

8.2.25 Cell Synchronisation Adjustment [3.84Mcps TDD]

8.2.25.1 General

The purpose of Cell Synchronisation Adjustment procedure is to allow the CRNC to adjust the timing of the radio transmission of a cell within a Node B for time alignment.

/* partly omitted */

9.1.75 CELL SYNCHRONISATION INITIATION REQUEST [3.84Mcps TDD]

/* partly omitted */

9.1.76   CELL SYNCHRONISATION INITIATION RESPONSE [3.84Mcps TDD]

/* partly omitted */

9.1.77   CELL SYNCHRONISATION INITIATION FAILURE [3.84Mcps TDD]

/* partly omitted */

9.1.78   CELL SYNCHRONISATION RECONFIGURATION REQUEST [3.84Mcps TDD]

/* partly omitted */

9.1.79   CELL SYNCHRONISATION RECONFIGURATION RESPONSE [3.84Mcps TDD]

/* partly omitted */

9.1.80   CELL SYNCHRONISATION RECONFIGURATION FAILURE [3.84Mcps TDD]

/* partly omitted */

9.1.81   CELL SYNCHRONISATION REPORT [3.84Mcps TDD]

/* partly omitted */

9.1.82   CELL SYNCHRONISATION TERMINATION REQUEST [3.84Mcps TDD]

/* partly omitted */

9.1.83   CELL SYNCHRONISATION FAILURE INDICATION [3.84Mcps TDD]

/* partly omitted */

9.1.84   CELL SYNCHRONISATION ADJUSTMENT REQUEST [3.84Mcps TDD]

/* partly omitted */

9.1.85   CELL SYNCHRONISATION ADJUSTMENT RESPONSE [3.84Mcps TDD]

/* partly omitted */

9.1.86   CELL SYNCHRONISATION ADJUSTMENT FAILURE [3.84Mcps TDD]

/* partly omitted */

9.3.3   PDU Definitions

/* partly omitted */


```
-- ************************************************************
--
-- CELL SYNCHRONISATION INITIATION REQUEST 3.84Mcps TDD
--
-- ************************************************************

CellSynchronisationInitiationRequestTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container     {{CellSynchronisationInitiationRequestTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationInitiationRequestTDD-Extensions}}     OPTIONAL,
    ...
}

CellSynchronisationInitiationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```


/* partly omitted */


```
-- ************************************************************
--
-- CELL SYNCHRONISATION INITIATION RESPONSE 3.84Mcps TDD
--
-- ************************************************************

CellSynchronisationInitiationResponseTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container     {{CellSynchronisationInitiationResponseTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationInitiationResponseTDD-Extensions}}     OPTIONAL,
    ...
}

CellSynchronisationInitiationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationInitiationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics                       CRITICALITY    ignore    TYPE    CriticalityDiagnostics                       PRESENCE
    optional    },
    ...
}

-- ************************************************************
--
-- CELL SYNCHRONISATION INITIATION FAILURE 3.84Mcps TDD
```

```
--
-- ****************************************************************

CellSynchronisationInitiationFailureTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationInitiationFailureTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationInitiationFailureTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationInitiationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationInitiationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-Cause                            CRITICALITY    ignore    TYPE    Cause                                    PRESENCE mandatory
    }|
    { ID    id-CriticalityDiagnostics           CRITICALITY    ignore    TYPE    CriticalityDiagnostics       PRESENCE optional },
    ...
}

-- ****************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION REQUEST 3.84Mcps TDD
--
-- ****************************************************************

CellSynchronisationReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationReconfigurationRequestTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationReconfigurationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- ****************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION RESPONSE 3.84Mcps TDD
--
-- ****************************************************************

CellSynchronisationReconfigurationResponseTDD ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container    {{CellSynchronisationReconfigurationResponseTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{CellSynchronisationReconfigurationResponseTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

CellSynchronisationReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics              CRITICALITY   ignore   TYPE   CriticalityDiagnostics      PRESENCE optional },
    ...
}

-- ***************************************************************
--
-- CELL SYNCHRONISATION RECONFIGURATION FAILURE 3.84Mcps TDD
--
-- ***************************************************************

CellSynchronisationReconfigurationFailureTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container         {{CellSynchronisationReconfigurationFailureTDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{CellSynchronisationReconfigurationFailureTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-Cause                               CRITICALITY   ignore   TYPE   Cause                                     PRESENCE mandatory
    }|
    { ID   id-CriticalityDiagnostics              CRITICALITY   ignore   TYPE   CriticalityDiagnostics       PRESENCE optional },
    ...
}

-- ***************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT REQUEST 3.84Mcps TDD
--
-- ***************************************************************

CellSynchronisationAdjustmentRequestTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container         {{CellSynchronisationAdjustmentRequestTDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{CellSynchronisationAdjustmentRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationAdjustmentRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- ***************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT RESPONSE 3.84Mcps TDD
```

```
--
-- ************************************************************

CellSynchronisationAdjustmentResponseTDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container   {{CellSynchronisationAdjustmentResponseTDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CellSynchronisationAdjustmentResponseTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationAdjustmentResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CellSynchronisationAdjustmentResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CriticalityDiagnostics          CRITICALITY   ignore   TYPE   CriticalityDiagnostics                PRESENCE optional },
    ...
}

-- ************************************************************
--
-- CELL SYNCHRONISATION ADJUSTMENT FAILURE 3.84Mcps TDD
--
-- ************************************************************

CellSynchronisationAdjustmentFailureTDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container   {{CellSynchronisationAdjustmentFailureTDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CellSynchronisationAdjustmentFailureTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationAdjustmentFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- ************************************************************
--
-- CELL SYNCHRONISATION TERMINATION REQUEST 3.84Mcps TDD
--
-- ************************************************************

CellSynchronisationTerminationRequestTDD ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container   {{CellSynchronisationTerminationRequestTDD-IEs}},
    protocolExtensions     ProtocolExtensionContainer {{CellSynchronisationTerminationRequestTDD-Extensions}}    OPTIONAL,
    ...
}

CellSynchronisationTerminationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
CellSynchronisationTerminationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                          CRITICALITY   ignore    TYPE    C-ID                                          PRESENCE mandatory  }|
    { ID   id-CSBTransmissionID             CRITICALITY   ignore    TYPE    CSBTransmissionID                             PRESENCE optional   }|
    { ID   id-CSBMeasurementID              CRITICALITY   ignore    TYPE    CSBMeasurementID                              PRESENCE optional   },
    ...
}


-- ***************************************************************
--
-- CELL SYNCHRONISATION FAILURE INDICATION 3.84Mcps TDD
--
-- ***************************************************************

CellSynchronisationFailureIndicationTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSynchronisationFailureIndicationTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{CellSynchronisationFailureIndicationTDD-Extensions}}    OPTIONAL,
    ...
}


CellSynchronisationFailureIndicationTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


CellSynchronisationFailureIndicationTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-C-ID                          CRITICALITY   ignore    TYPE    C-ID                                          PRESENCE mandatory  }|
    { ID   id-CSBTransmissionID             CRITICALITY   ignore    TYPE    CSBTransmissionID                             PRESENCE optional   }|
    { ID   id-CSBMeasurementID              CRITICALITY   ignore    TYPE    CSBMeasurementID                              PRESENCE optional   }|
    { ID   id-Cause                         CRITICALITY   ignore    TYPE    Cause                                         PRESENCE mandatory  },
    ...
}


-- ***************************************************************
--
-- CELL SYNCHRONISATION REPORT 3.84Mcps TDD
--
-- ***************************************************************

CellSynchronisationReportTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CellSynchronisationReportTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer  {{CellSynchronisationReportTDD-Extensions}}    OPTIONAL,
    ...
}


CellSynchronisationReportTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}


CellSynchronisationReportTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID   id-CellSyncInfo-CellSyncReprtTDD          CRITICALITY ignore    TYPE    CellSyncInfo-CellSyncReprtTDD          PRESENCE mandatory  },
    ...
}
```
/* partly omitted */