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Foreword

This Technical Report has been produced by the 3GPP.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version 3.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the specification.

1 Scope

The scope of this Technical Report is to list technical features and functions of UTRAN (Study Items) that are currently assumed by TSG RAN WG3 to be outside the scope of UMTS Release 99, but that should be considered for future releases. Agreed technical descriptions of these features and functions are also included to the extent they are available.

2 References

The following documents contain provisions, which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] TS 25.433 UTRAN Iub interface NBAP Signalling Specification

[2]

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the [following] terms and definitions [given in ... and the following] apply.

3.2 Symbols

For the purposes of the present document, the following symbols apply:

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ARQ	Automatic Repeat reQuest
CORBA	Common Object Request Broker
CRNC	Controlling Radio Network Controller
DL	Downlink
DRNC	Drift Radio Network Controller
ID	Identity
NBAP	Node B Application Part
NE	Network Element
O&M	Operation and Maintenance
RL	Radio Link
RLC	Radio Link Control
RNC	Radio Network Controller
SDU	Service Data Unit

SRNC	Serving Radio Network Controller
UL	Uplink
<u>UMTS</u>	<u>Universal Mobile Telecommunication System</u>
<u>UP</u>	<u>User Plane</u>
UTRAN	UMTS Terrestrial Radio Access Network

4 Study item list

The study items outside the scope of UMTS Release 99 are the following (non exhaustive):

- Parallelism in the execution of NBAP procedures.
- Hybrid ARQ Type II / III techniques for RLC layer
- Object-oriented Logical O&M
- Use of CORBA for Iub Logical O&M

~~SSDT~~

- Capability Exchange
- Iu User Plane Support Mode for variable size SDUs

5 Parallelism in the execution of NBAP procedures

5.1 Feature/Function description and status

[Editor's Note: This section should include the description of the feature/function related to the study item and its status].

In release 99, it is a working assumption that, except for procedures listed hereafter, there is only one ongoing procedure per UE context i.e. one NBAP procedure cannot be executed as long as another NBAP procedure for the same UE is still on going.

Release 99 procedures that can be initiated in parallel with on-going procedures are the following:

1. DL POWER CONTROL, initiated by the CRNC
2. MEASUREMENT REPORTING PROCEDURE, initiated by the Node B

5.2 Impacts on specifications

In further releases, it will be possible to have more than one on going NBAP procedure for a given UE, depending on the on going and the new procedures. Benefits and details are to be clarified.

5.2.1 Impacted specifications

[Editor's Note: This section should list the TSG RAN WG3 specifications, which are impacted by the feature/function].

Impacted RAN WG3 specifications are:

- TS 25.433 (NBAP Specification) [1]

5.2.2 Impacts on TS 25.433 (NBAP Specification)

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

The following text is included in chapter 8.

8.x. Procedure management

Table x shows the support for parallel procedure execution by the NBAP protocol.

New procedure \ Ongoing procedure	RL-Setup	RL-Addition	RL-Reconf (unsync)	RL-Reconf (Sync)	RL-Deletion
RL-Setup	Not applicable	Not possible			
RL-Addition		Supported <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Not supported</div>			
RL-Reconf (unsync)					
RL-Reconf (sync)					
RL-Deletion					

Note: it is up to an implementation to actually support the parallelism offered by the NBAP protocol. Since all procedures are initiated by an RNC, this RNC can choose not to use the offered parallelism. A simple node_B implementation might choose to execute all procedures sequentially.

6 Hybrid ARQ Type II / III techniques for RLC layer

[Editor's Note: This section should include the description of the feature/function related to the study item and its status].

6.1 Impacts on specifications

6.1.1 Impacted specifications

[Editor's Note: This section should list the TSG RAN WG3 specifications which are impacted by the feature/function].

6.1.2 Impacts on specification 1

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

6.1.3 Impacts on specification 2

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

7 Object-oriented Logical O&M

[Editor's Note: This section should include the description of the feature/function related to the study item and its status. Contributions are invited].

7.1 Impacts on specifications

7.1.1 Impacted specifications

[Editor's Note: This section should list the TSG RAN WG3 specifications which are impacted by the feature/function].

7.1.2 Impacts on specification 1

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

7.1.3 Impacts on specification 2

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

8 Use of CORBA for Iub Logical O&M

[Editor's Note: This section should include the description of the feature/function related to the study item and its status. Contributions are invited].

8.1 Impacts on specifications

8.1.1 Impacted specifications

[Editor's Note: This section should list the TSG RAN WG3 specifications which are impacted by the feature/function].

8.1.2 Impacts on specification 1

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

8.1.3 Impacts on specification 2

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

~~9SSDT (Site Selection Diversity Transmit power control)~~

[Editor's Note: This section should include the description of the feature/function related to the study item and its status. Contributions are invited].

~~9.1 Impacts on specifications~~

~~9.1.1 Impacted specifications~~

[Editor's Note: This section should list the TSG RAN-WG3 specifications which are impacted by the feature/function].

~~9.1.2 Impacts on specification 1~~

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

~~9.1.3 Impacts on specification 2~~

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

~~109~~ Capability Exchange

[Editor's Note: This section should include the description of the feature/function related to the study item and its status].

~~10.19.1~~ Impacts on specifications

~~10.1.19.1.1~~ Impacted specifications

Only NBAP specification (TS 25.433) [1] is impacted.

~~10.1.29.1.2~~ Impacts on TS 25.433

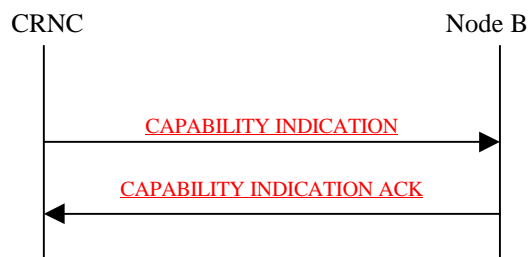
[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

The purpose of a capability exchange is to allow Network Elements (CRNC and Node B) to run unaligned versions of software. Customer rollout and upgrade strategies and differing Network Element (NE) software product release schedules may result in software releases with different functional content and capabilities within the same UTRAN.

A capability exchange is necessary in order to negotiate the software capabilities to be used between NEs. If a feature/functionality affects the interface between NEs, it is included in a capability exchange. If a feature/functionality is isolated to a particular NE, it is not controlled by a capability exchange.

Cross-NE functionality is only available when it is supported by NEs on both ends of an interface. Thus, only the greatest common capabilities between NEs are supported.

The Capability Exchange Procedure requires two message types, a Capability Indication and a Capability Indication Ack. The Node B may initiate the Capability Indication. CRNC-initiated case may be needed (FFS).



CAPABILITY INDICATION message contains:

- Transaction ID
- Feature set - NE feature set (FFS)

CAPABILITY INDICATION ACK message contains:

- Transaction ID
- Feature set - greatest common feature set (FFS)

A Capability Indication message contains a transaction id and the feature set (FFS) and protocol versions of the Network Element initiating the exchange. When a NE receives a Capability Indication, it responds with a Capability Indication Ack containing the transaction id from the received Capability Indication and the greatest common capabilities of itself and the originating NE. A NE uses the transaction id to distinguish between capability exchanges with different NEs or with a single NE.

40.1.39.1.3 Impacts on specification 2

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

10lu User Plane Support Mode for variable size SDUs

[Editor's Note: This section should include the description of the feature/function related to the study item and its status. Contributions are invited].

10.1 Impacts on specifications

10.1.1 Impacted specifications

[Editor's Note: This section should list the TSG RAN WG3 specifications which are impacted by the feature/function].

10.1.2 Impacts on specification 1

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

10.1.3 Impacts on specification 2

[Editor's Note: This subsection should include agreed modifications, text and figures needed for that specification].

11 History

Document history		
V0.0.1	1999-05	Initial Specification Structure
V0.0.2	1999-06	Addition of study item 1 "Parallelism in the execution of NBAP procedures" according to RAN WG3#4 meeting, based on tdoc R3-99449. This version has been agreed at RAN WG3#5 meeting and goes automatically to V0.1.0 without changes.
V0.1.1	1999-07	- <u>Addition of study item " Hybrid ARQ Type II / III techniques for RLC layer"</u> according to the decision taken at RAN#4 meeting. - <u>Addition of study item " Use of CORBA for Iub Logical O&M"</u> according to the decision taken at RAN#5 meeting.
V 0.1.2	1999-09	According to decisions taken at RAN3#6 meeting, inclusion of following study items: - Object-oriented logical O&M - SSDT - Capability Exchange: moving the text from TS 25.433 to TR 25.831
<u>V 0.1.3</u>	<u>1999-10</u>	- <u>According to approved RAN3#6 minutes, SSDT placeholders are removed.</u> - <u>According to RAN#7 decisions, a placeholder for Iu user plane Support Mode for variable size SDUs is added.</u>
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