

Technical Specification Group Radio Access Network
Marco Island, USA 4 - 7 June 2002

RP#16(02) 0411

TSG_Doc_Num	Specification	CR_Num	Revision_Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	New_Ver_Num	Tdoc_Num	WorkItem
RP-020411	25.430	031	1	R99	Definition of TFCI2 transport bearer in 25.430	F	3.7.0	3.8.0	R3-021553	TEI
RP-020411	25.430	032	1	Rel-4	Definition of TFCI2 transport bearer in 25.430	A	4.2.0	4.3.0	R3-021554	TEI
RP-020411	25.430	033	1	Rel-5	Definition of TFCI2 transport bearer in 25.430	A	5.0.0	5.1.0	R3-021555	TEI

3GPP TSG-RAN Working Group 3 Meeting #29
 Gyeongju, South Korea, 13th – 17th May 2002

Tdoc R3-021553

CR-Form-v5

CHANGE REQUEST

⌘ **25.430 CR 31** ⌘ ev **1** ⌘ Current version: **3.7.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Definition of TFCI2 signalling bearer		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI Date: ⌘ 04-2002		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> ⌘ F 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 TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: ⌘ R99 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) </td> </tr> </table>	⌘ F 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 TR 21.900 .	Release: ⌘ R99 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)
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Reason for change:	⌘ The TFCI2 bearer, used with a DSCH when UE is on a DRNC, currently has no definition in this specification.
Summary of change:	⌘ The TFCI2 transport bearer and TFCI2 Data Port is defined. The TFCI2 data stream is also added. R1: Small clarification indicate that there may be one TFCI2 data stream and data port per Node B communication context. Isolated Impact towards previous version of the specification: There is no impact, as it is purely an alignment to the other specifications.
Consequences if not approved:	⌘ The definition of the TFCI2 signalling bearer and the corresponding DSCH TFCI2 signalling control frame will remain ambiguous.

Clauses affected:	⌘ 4.4; 4.5.1; 6.1; 6.2.1; 6.2.3; 7						
Other specs affected:	<table style="width: 100%; border: none;"> <tr> <td style="width: 40%;"><input checked="" type="checkbox"/> Other core specifications</td> <td>⌘ 25.430 v4.2.0 (CR32) 25.430 v5.0.0 (CR33)</td> </tr> <tr> <td><input type="checkbox"/> Test specifications</td> <td></td> </tr> <tr> <td><input type="checkbox"/> O&M Specifications</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Other core specifications	⌘ 25.430 v4.2.0 (CR32) 25.430 v5.0.0 (CR33)	<input type="checkbox"/> Test specifications		<input type="checkbox"/> O&M Specifications	
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Other comments:	⌘						

How to create CRs using this form:

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4.4 Iub Interface Capabilities

4.4.x Iub FDD TFCI2 data stream

The Iub interface provides the means for transport of control frames between DRNC and Node B. An Iub TFCI2 data stream corresponds to the TFCI2 signalling for one Node B communication context that is using one or more DSCH transport channels. A Node B communication context may only be assigned up to one TFCI2 data stream.

4.5 Iub Interface Characteristics

4.5.1 Mapping of Iub data streams

- DCH** One Iub DCH data stream is carried on one transport bearer. For each DCH data stream a transport bearer must be established over Iub, except in the case of coordinated DCHs in which case a set of coordinated DCHs are multiplexed onto the same transport bearer.
- [FDD - CPCH]** One Iub CPCH data stream is carried on one transport bearer. For each CPCH in a cell, an Iub CPCH data stream must be established over the Iub interface.]
- RACH** One Iub RACH data stream is carried on one transport bearer. For each RACH in a cell, a transport bearer must be established over the Iub interface.
- FACH** One Iub FACH data stream is carried on one transport bearer. For each FACH in a cell, a transport bearer must be established over the Iub Interface.
- DSCH** One Iub DSCH data stream is carried on one transport bearer. For each DSCH data stream, a transport bearer must be established over the Iub interface.
- [FDD - TFCI2]** One Iub TFCI2 data stream is carried on one transport bearer.]
- [TDD - USCH]** One Iub USCH data stream is carried on one transport bearer. For each USCH data stream, a transport bearer must be established over the Iub interface.]
- PCH** One Iub PCH data stream is carried on one transport bearer.

6 Node B logical Model over Iub

6.1 Overview

The model described in figure 2 shows the Node B as seen from the controlling RNC. The model includes:

- The logical resources provided by Node B to UTRAN (via its Controlling RNC) - depicted as "cells" which include the physical channel resources DPCH, PDSCH, and PUSCH;
- The dedicated channels which have been established on Node B;
- The common transport channels that Node B provides to the RNC.

The procedures for controlling the connections between radio links and Iub DCH data ports are sent from the RNC to the Node B via the Communication Control Ports.

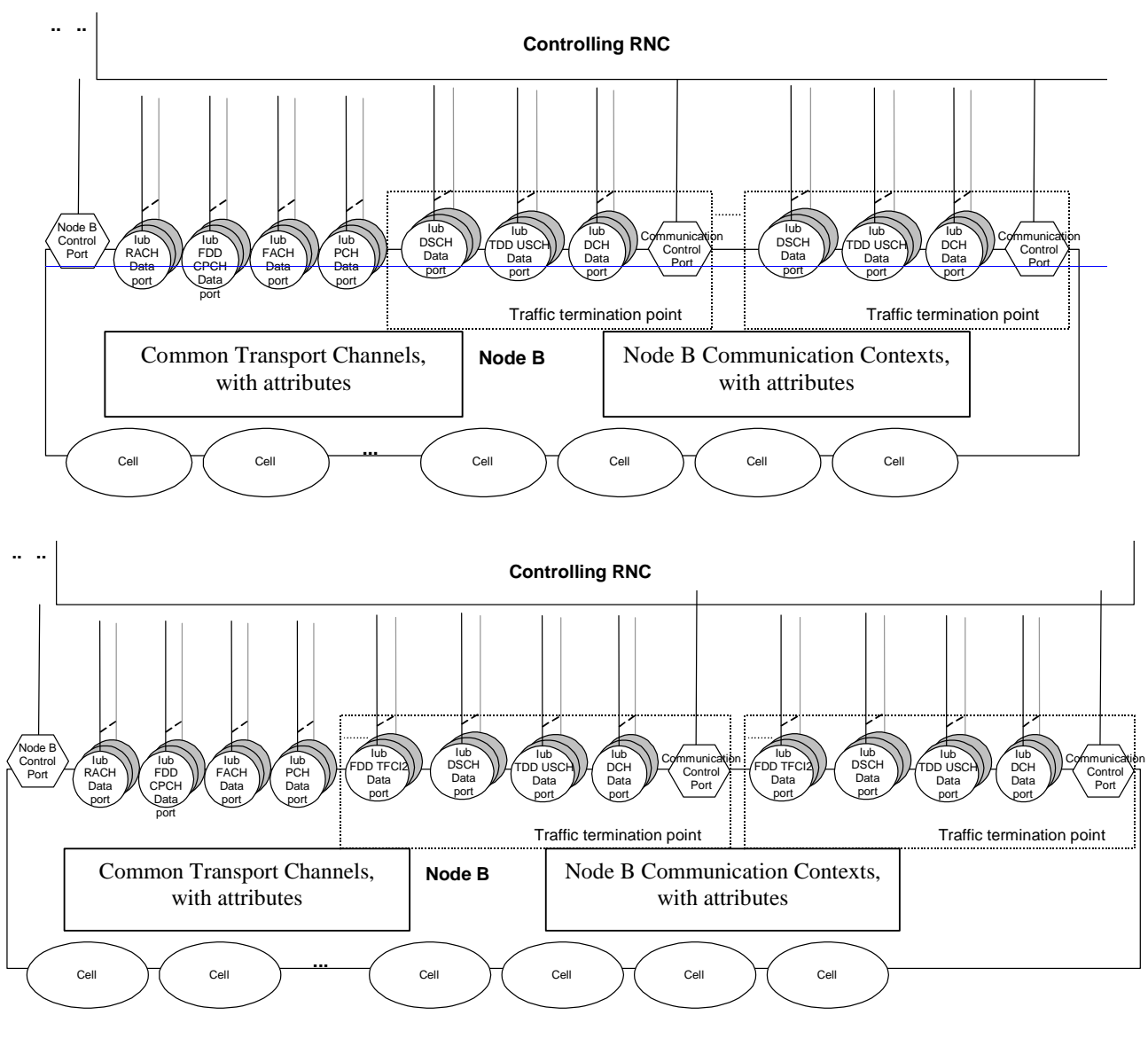


Figure 2: Logical Model of Node B

6.2 Elements of the logical model

6.2.1 Node B Communication Contexts for Dedicated and Shared Channels

A Node B Communication Context corresponds to all the dedicated resources that are necessary for a user in dedicated mode and using dedicated and/or shared channels as restricted to a given Node B. [TDD - The Node B Communication Context also exists for users in Cell_FACH mode (i.e. non-dedicated mode) provided a USCH and/or DSCH has been allocated to these users.]

There are a number of Node B Communication Contexts inside a given Node B.

The attributes to a Node B Communication Context shall include the following (not exhaustive):

- The list of Cells where dedicated and/or shared physical resources are used.
- The list of DCH which are mapped on the dedicated physical resources for that Node B Communication Context.
- The list of DSCH and USCH [TDD] which are used by the respective UE.

- The complete DCH characteristics for each DCH, identified by its DCH-identifier [4].
 - The complete Transport Channel characteristics for each DSCH and USCH, identified by its Shared Channel identifier [4].
 - The list of Iub DCH Data Ports.
 - —The list of Iub DSCH Data ports and Iub USCH data ports.
 - [\[FDD - Up to one Iub TFCI2 Data Port.\]](#)
 - For each Iub DCH Data Port, the corresponding DCH and cells which are carried on this data port.
 - For each Iub DSCH and USCH data port, the corresponding DSCH or USCH and cells which serve that DSCH or USCH.
 - Physical layer parameters (outer loop power control, etc).
-

6.2.3 Transport network logical resources

6.2.3.xx Iub FDD TFCI2 Data Port

An Iub TFCI2 Data Port represents a user plane bearer carrying the TFCI2 data stream between the Node B and the DRNC. For each individual Node B communication context, there ismay be up to one Iub TFCI2 Data Port.

7 Iub Interface Protocol Structure

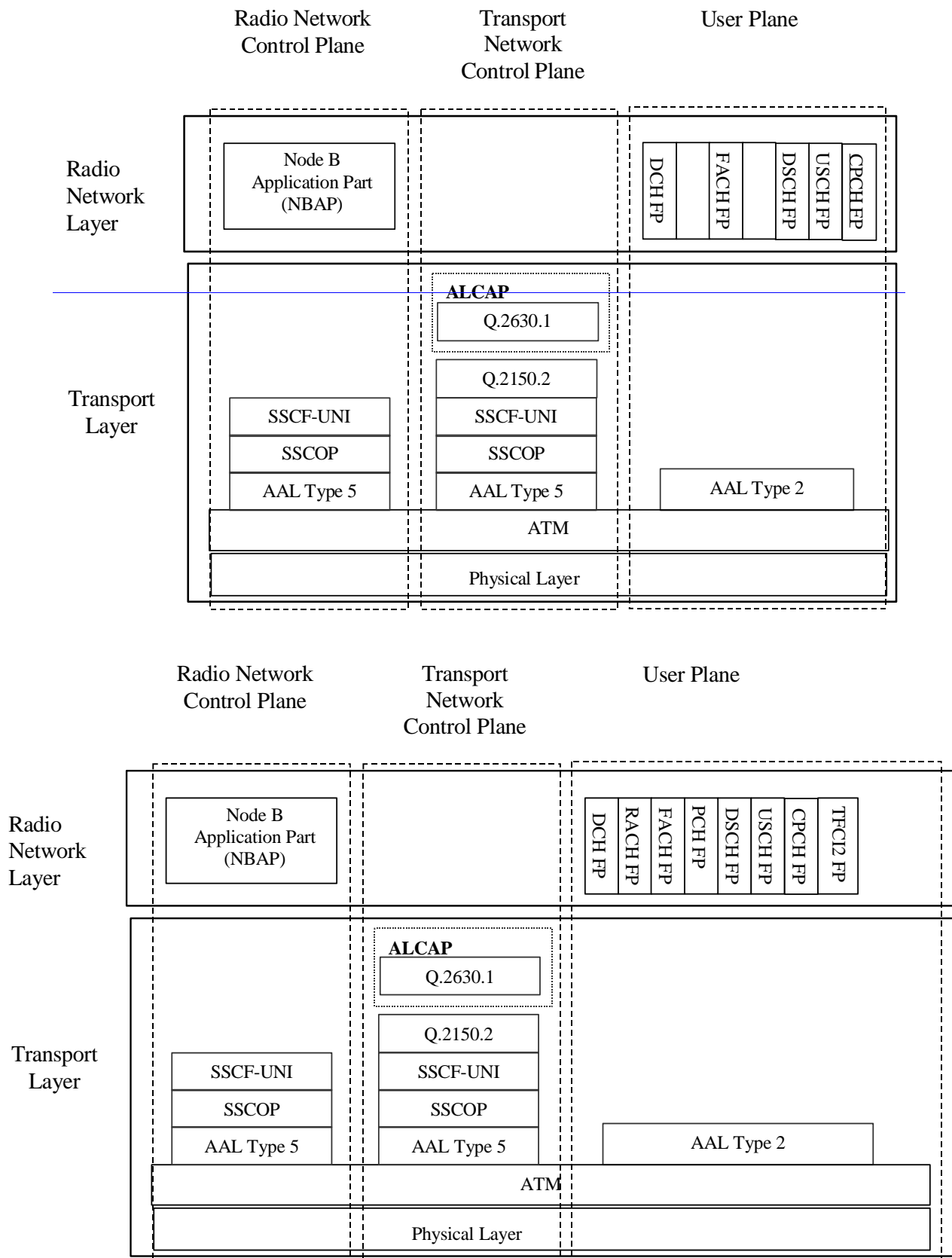


Figure 7: Iub Interface Protocol Structure.

The Iub interface protocol architecture consists of two functional layers:

1. Radio Network Layer, defines procedures related to the operation of Node B. The radio network layer consists of a radio network control plane and a radio network user plane.
2. Transport Layer, defines procedures for establishing physical connections between Node B and the RNC.

There shall be one dedicated AAL2 connection for each RACH, one for each FACH transport channel, and one for each CPCH [FDD].

3GPP TSG-RAN Working Group 3 Meeting #29
 Gyeongju, South Korea, 13th – 17th May 2002

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CHANGE REQUEST

⌘ **25.430 CR 32** ⌘ ev **1** ⌘ Current version: **4.2.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Definition of TFCI2 signalling bearer		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ 04-2002
Category:	⌘ A	Release:	⌘ R4
	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 TR 21.900 .		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)

Reason for change:	⌘ The TFCI2 bearer, used with a DSCH when UE is on a DRNC, currently has no definition in this specification.		
Summary of change:	⌘ The TFCI2 transport bearer and TFCI2 Data Port is defined. The TFCI2 data stream is also added. R1: Small clarification indicate that there may be one TFCI2 data stream and data port per Node B communication context. Isolated Impact towards previous version of the specification: There is no impact, as it is purely an alignment to the other specifications.		
Consequences if not approved:	⌘ The definition of the TFCI2 signalling bearer and the corresponding DSCH TFCI2 signalling control frame will remain ambiguous.		

Clauses affected:	⌘ 4.4; 4.5.1; 6.1; 6.2.1; 6.2.3; 7		
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	25.430 v3.7.0 (CR31) 25.430 v5.0.0 (CR33)
Other comments:	⌘		

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DCH One Iub DCH data stream is carried on one transport bearer. For each DCH data stream a transport bearer must be established over Iub, except in the case of coordinated DCHs in which case a set of coordinated DCHs are multiplexed onto the same transport bearer.

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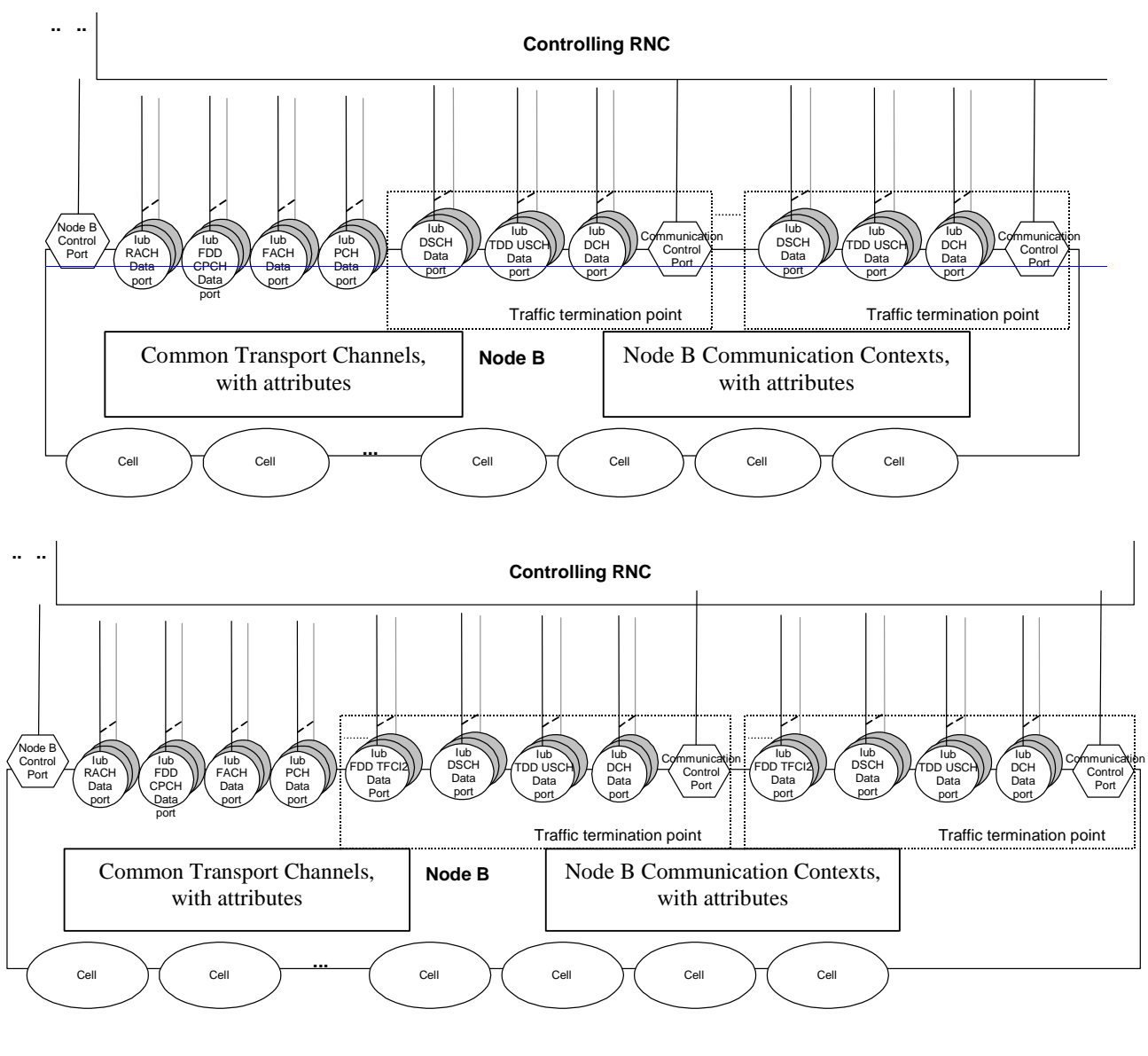


Figure 2: Logical Model of Node B

6.2 Elements of the logical model

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6.2.3 Transport network logical resources

[6.2.3.xx Iub FDD TFCI2 Data Port](#)

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7 Iub Interface Protocol Structure

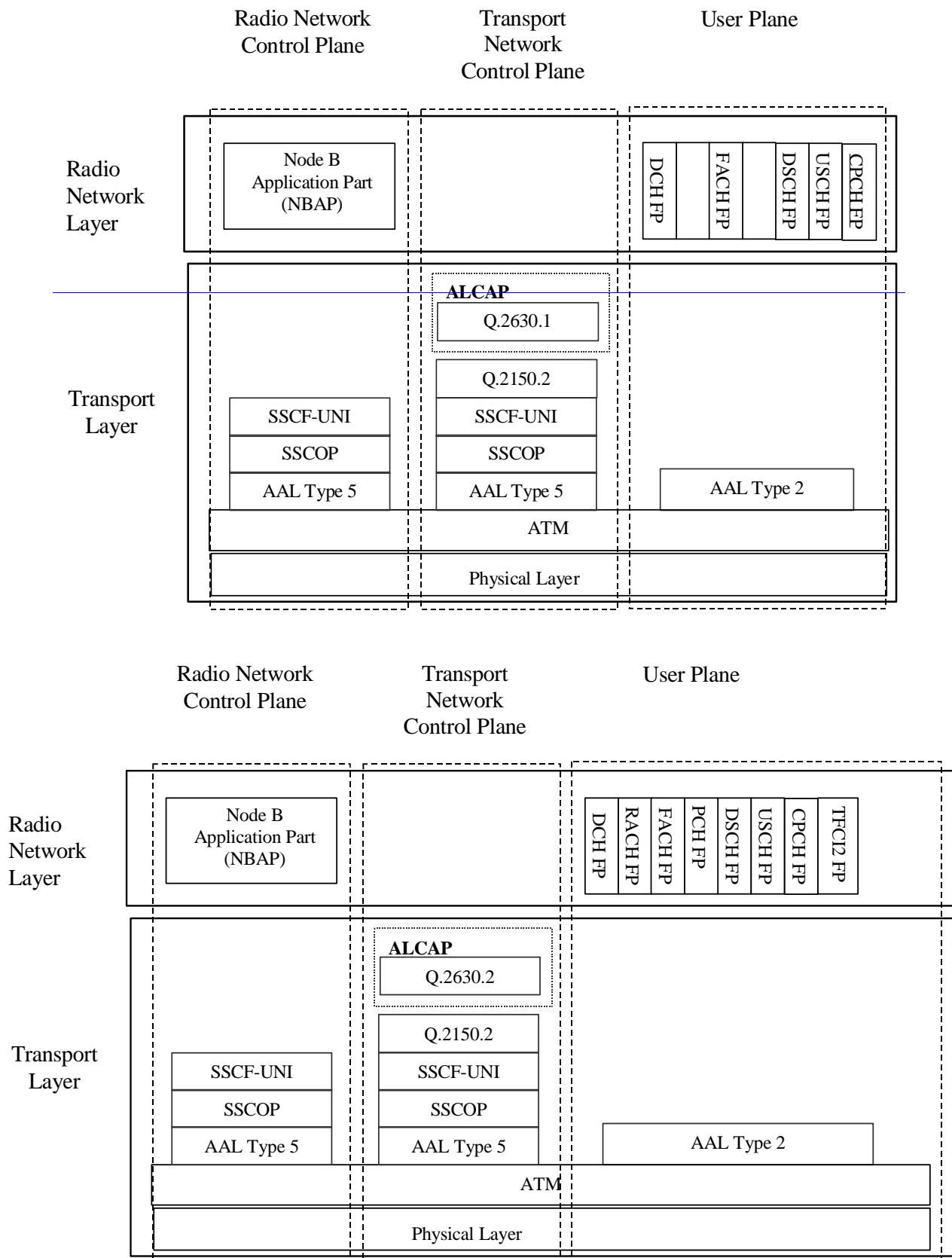


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Tdoc R3-021555

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CHANGE REQUEST

⌘ **25.430 CR 33** ⌘ ev **1** ⌘ Current version: **5.0.0** ⌘

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Work item code:	⌘ TEI	Date:	⌘ 05-2002
Category:	⌘ A	Release:	⌘ R5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
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6 Node B logical Model over Iub

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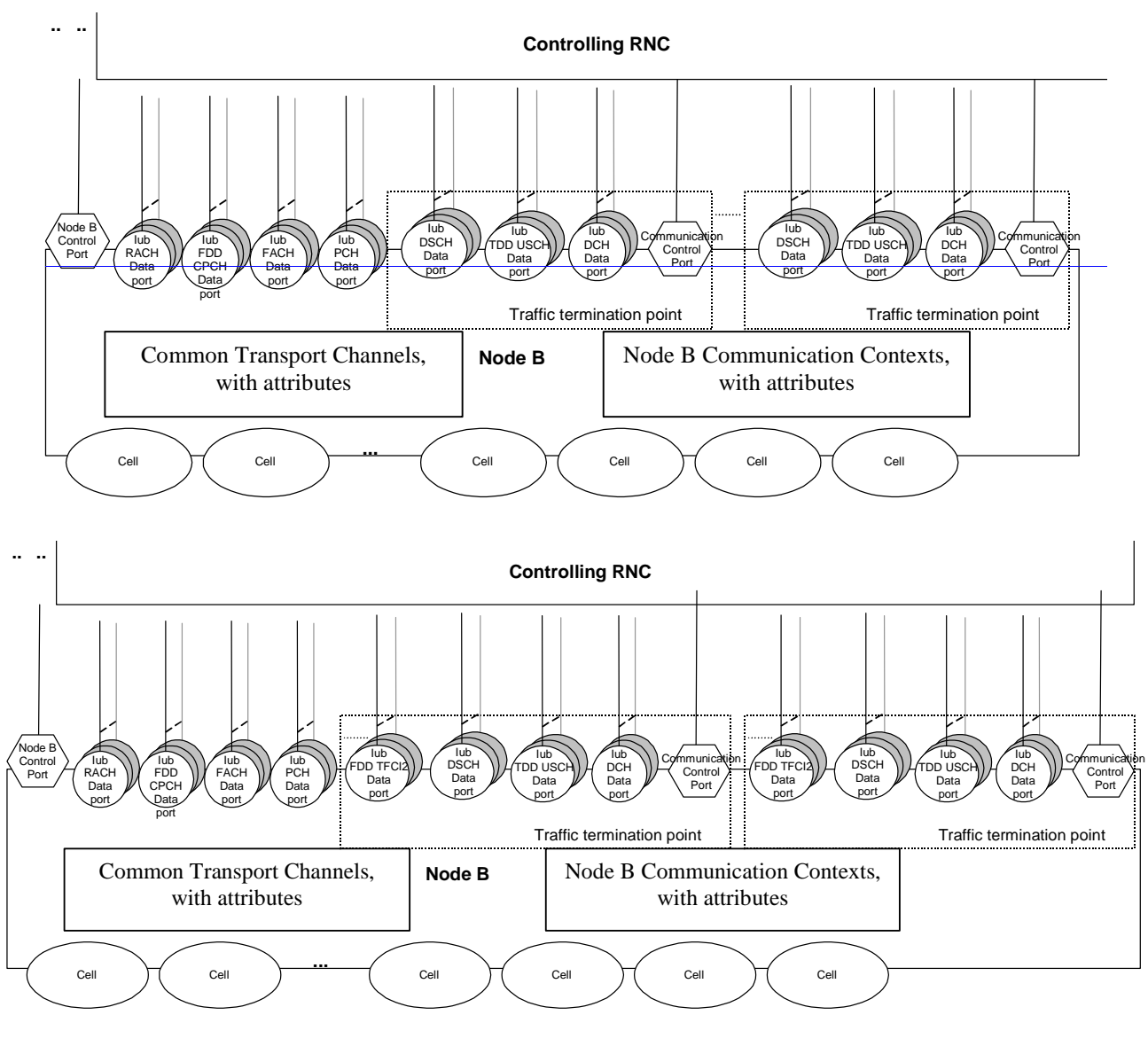


Figure 2: Logical Model of Node B

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6.2.3.xx Iub FDD TFCI2 Data Port

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7 Iub Interface Protocol Structure

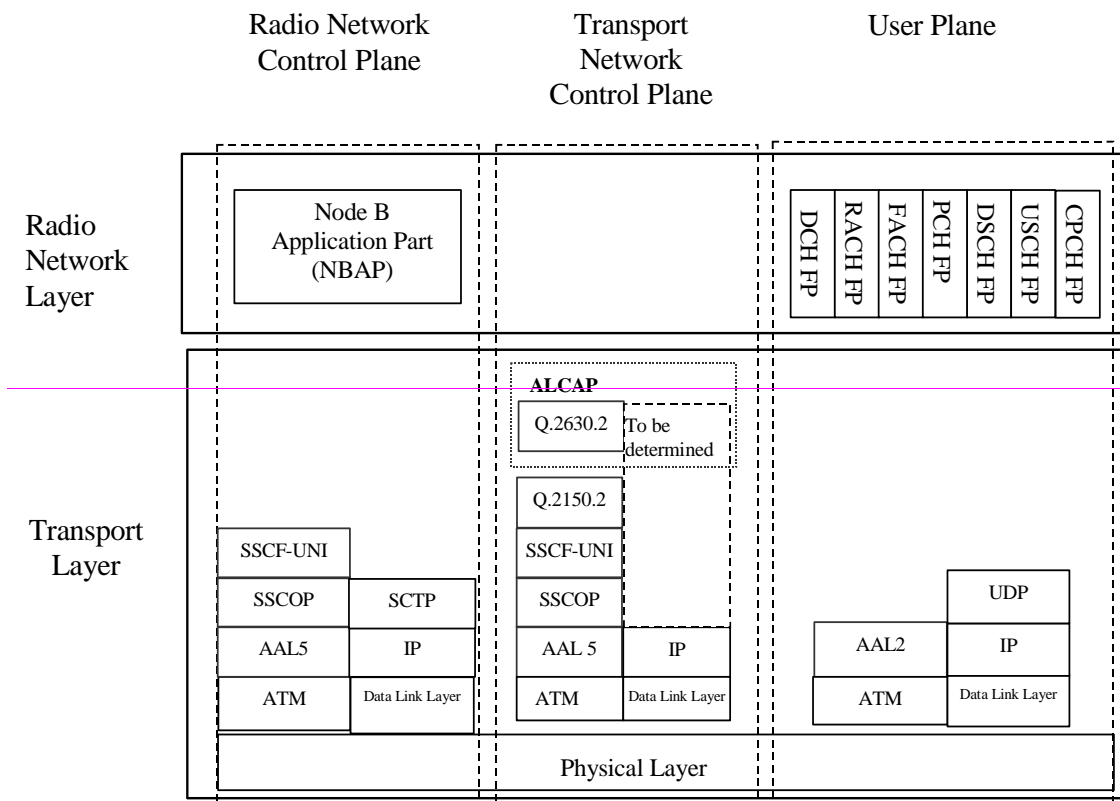
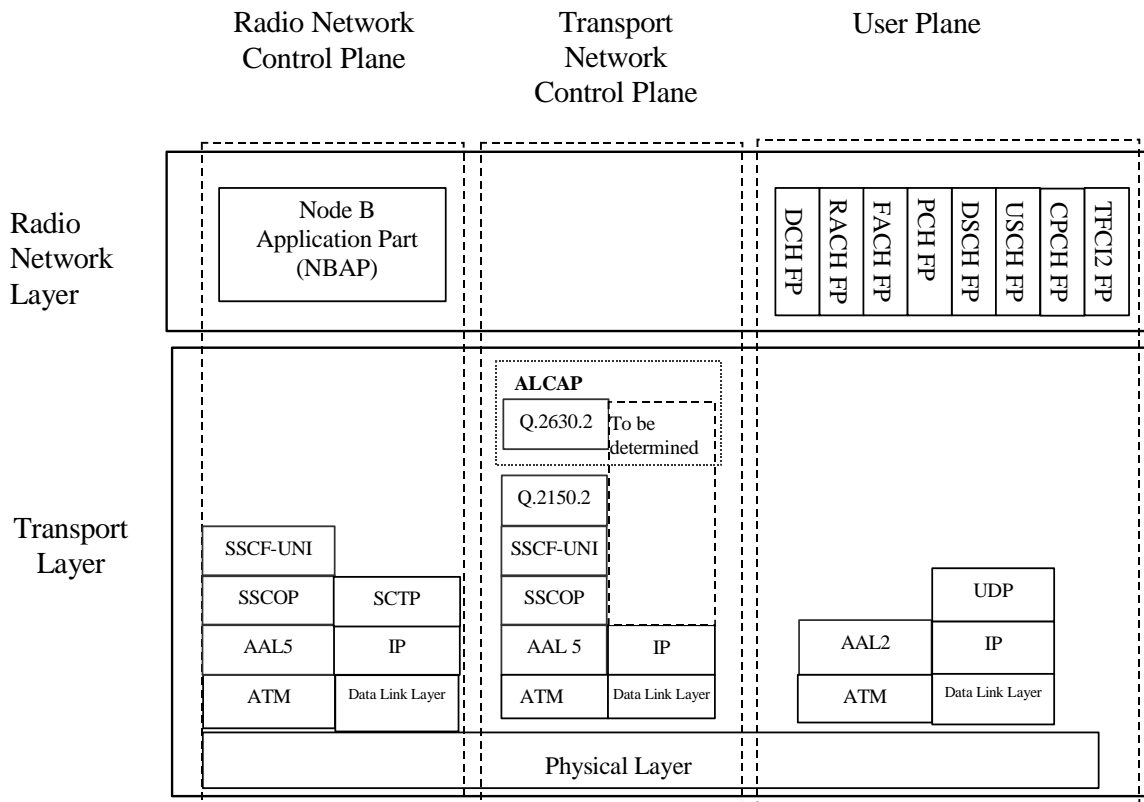


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