TSG-RAN Working Group 3 meeting #4
Warwick, UK, 1st- 4th June 1999

TSGR3#4(99)530

Agenda Item:

Source: Editor

Title: Editor's proposal for changes to 25.420 UTRAN I_{ur} Interface: General Aspects and Principles

Document for:

Find attached editor's proposal for changes to v0.1.1 of TS 25.420 'Iur Interface : General Aspects & Principles'. This proposal incorporates the changes shown by revision bars in v0.1.1 of the same TS (re Tdoc 417).

The revision bars in this document denote editors' proposed changes, namely:

Inclusion of text for Abbreviation section (Section 3.3).

Removal of editors' notes throughout TS, which were used in v0.1.1 to denote changes agreed at Kawasaki.

Addition of text to the beginning of chapter 7 introducing the Protocol Stack.

Removal of BISUP from Transport Network Control Plane of the Protocol Stack (fig 3).

TS 25.420 V0.1.1+ (1999-05)

Technical Specification

3rd Generation Partnership Project (3GPP);
Technical Specification Group (TSG) RAN;

UTRAN I_{ur} Interface: General Aspects and Principles

UMTS <spec>

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Reference

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Keywords

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http://www.3gpp.org

Contents

Intellectual Property Rights

Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of this TS are subject to continuing work within 3GPP and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released with an identifying change of release date and an increase in version number as follows:

Version m.t.e

where:

- m indicates [major version number]
- x the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- y the third digit is incremented when editorial only changes have been incorporated into the specification.

Introduction

This clause is optional. If it exists, it is always the third unnumbered clause.

No text block identified

1 Scope

[Editor's note: The scope was proposed in Tdoc R3-99320 and agreed to be included subject to three changes (re highlighted text)]

The present document is an introduction to the TSG RAN TS 25.42x series of UMTS Technical Specifications that define the Iur Interface. It is a logical interface for the interconnection of two Radio Network Controller (RNC) components of the UMTS Terrestrial Radio Access Network (UTRAN) for the UMTS system.

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] 3GPP TS 25.427: UTRAN Iub/Iur Interface User Plane Protocol for DCH Data Streams

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:

AAL2 ATM Adaptation Layer type 2

AAL5 ATM Adaptation Layer type 5

ALCAP Access Link Control Application Part

ATM Asynchronous Transfer Mode

CRNC Controlling Radio Network Controller

CTP Common Transport Protocol

DCH Dedicated Transport Channel

DL Down-link

DRNC	Drift Radio Network Controller
DRNS	Drift Radio Network Subsystem
DSCH	Down-link Shared Channel
FACH	Forward Access Channel
FAUCH	Fast Uplink Signalling Channel
IP	Internet Protocol
MAC	Medium Access Control
MTP3-B	Message Transfer Part level 3 (for Q.2140)
PLMN	Public Land Mobile Network
QoS	Quality of Service
RACH	Random Access Channel
RF	Radio Frequency
RNC	Radio Network Controller
RNS	Radio Network Subsystem
RNSAP	Radio Network Subsystem Application Part
RRC	Radio Resource Control
SCCP	Signalling Connection Control Part
SRNC	Serving Radio Network Controller
SRNS	Serving Radio Network Subsystem
SS7	Signalling System N° 7
SSCF-NNI	Service Specific Co-ordination Function – Network Node Interface
SSCOP	Service Specific Connection Oriented Protocol
STC	Signalling Transport Converter
UE	User Equipment
UL	Up-link
UMTS	Universal Mobile Telecommunication System
URA	UTRAN Registration Area
UTRAN	UMTS Terrestrial Radio Access Network

4 General Aspects

4.1 UTRAN Architecture

[Editor´s note: This chapter should describe the UTRAN architecture from I_{ur} point of view. The RNS roles SRNS and DRNS are described to facilitate the description of functional split in chapter5.

In order to avoid inconsistency between documents, appropriate references should be included.]

~~*[Editor's note: The following text was proposed in Tdoc R3-99320 and agreed to be included subject to one change (re highlighted text)]*~~

The Iur interface connects two RNCs.

[Editor's note: The following paragraph needs revision, proposals welcome.]

From a logical stand point, the Iur interface is a point to point interface between the SRNS and all the DRNS, i.e. there is no deeper hierarchy of RNSs than the SRNS and DRNS. However, this point to point logical interface should be feasible even in the absence of a physical direct connection between the two RNSs.

4.2 I_{ur} Interface General Principles

4.2.1 General

~~*[Editor's note: The following text was proposed in Tdoc R3-99320 and agreed to be included. The highlighted text indicates proposed editorial changes.]*~~

This interface should be open.

The Iur interface enables the exchange of signalling information between two RNCs, one or more Iur Data stream may also exist.

The signalling information across the Iur interface is called Radio Network Subsystem Application Part (RNSAP).

The RNSAP is terminated at both ends of the Iur interface by an RNC.

There shall exist a clear separation between the Radio Network Layer and the Transport Layer. Therefore, the Data Transport resource and traffic handling are separated from the RNSAP (Figure 1.). This resource and traffic handling is controlled by the Transport Signalling. The Transport Signalling is carried by a Signalling Bearer over the Iur interface.

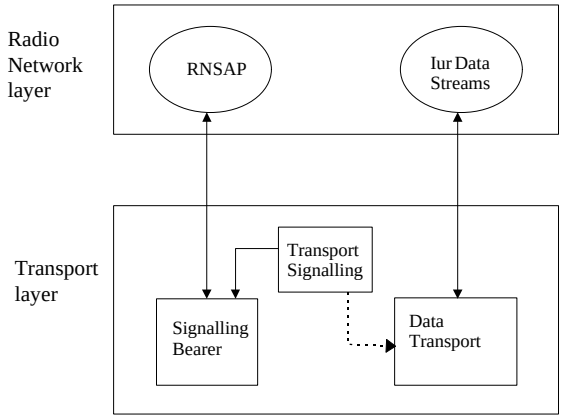

Figure 1. Separation of RNSAP and transport over Iur

4.2.2 RNSAP Procedures

Iur interface RNSAP procedures are divided into three modules as follows:

1. RNSAP Basic Mobility Procedures
2. RNSAP DCH Procedures
3. RNSAP Common Transport Channel Procedures

Basic Mobility Procedures module contains procedures used to handle the mobility within UTRAN. RNSAP Basic Mobility Procedures are mandatory.

DCH Procedures module contains procedures that are used to handle DCHs between two RNSs. If procedures from this module are not used in a specific Iur, then the usage of DCH traffic between corresponding RNSs is not possible. If this category is supported then the existence of Iur user plane for DCH is also assumed.

~~*[Editor's note: The highlighted text indicates a proposed editorial change.]*~~

Common Transport Channel Procedures module contains procedures that are used to control common transport channel data streams over Iur interface. If the procedures within this module are not used on a specific Iur, then the common transport channel data can not be transported between corresponding RNSs.

Note:

RNSAP DCH Procedures will be standardised but whether they become mandatory or optional is FFS.

RNSAP Common Transport Channel Procedures will be standardised but whether they become mandatory or optional is FFS.

4.3 I_{ur} Interface Specification Objectives

4.3.1 General

~~*[Editor's note: The highlighted text indicates a proposed editorial change.]*~~

The I_{ur} interface specifications shall facilitate the following:

- Inter-connection of RNCs from different manufacturers;
- Support of continuation between RNSs of the UTRAN services offered via the Iu interface.
- Separation of I_{ur} interface Radio Network functionality and Transport Network functionality to facilitate introduction of future technology.

4.3.2 Addressing of RNSs over the Iur Interface

~~*[Editor's note: The following text was proposed in Tdoc R3-99320 and agreed to be included (but in a different section to that originally proposed) subject to two changes (re- highlighted text).]*~~

- For an RRC connection using a dedicated channel, the Iur standard shall allow the addition / deletion of cells belonging to any RNS within the PLMN.
- The specification of the Iur interface shall allow an RNC to address any other RNC in the PLMN for establishing a signalling bearer over Iur.
- The specification of the Iur interface shall allow an RNC to address any other RNC within the PLMN for establishing user data bearers for Iur data streams.

Note : Connectionless RNSAP over Iur is for further studies.

RNSAP shall allow different kinds of addressing schemes to be used for the signalling bearer.

4.4 I_{ur} Interface Capabilities

~~*[Editor's note: The following text was proposed in Tdoc R3-99320 and agreed to be included.]*~~

The information transferred over the Iur reference point can be categorised as follows:

1. Radio application related signalling

The I_{ur} interface provides capability to support radio interface mobility between RNSs, of UEs having a connection with UTRAN. This capability includes the support of handover and radio resource handling between RNSs.

- Addition of Cells in the DRNS which may lead or not to the addition of an new Iur Data stream
- Removal of Cells in the DRNS
- Modify Radio link characteristics

Note: This list of procedures is not the full list over Iur interface.

2. Iub/Iur DCH data streams

The contents of the Iub/Iur DCH data streams include:

- Transport Block Sets
- Simple, commonly agreed Quality estimate
- Synchronisation information

For a more detailed description of the Iur/Iub DCH data stream refer to 'Iur & Iub Interface User Plane Protocol for DCH Data Streams' [1].

3. Iur RACH data streams

The contents of the RACH data streams are FFS.

4. Iur FACH data streams

The contents of the FACH data streams are FFS.

5. Iur DSCH data streams

The contents of the DSCH data streams are FFS.

6. Iur FAUSCH data streams

The FAUSCH is FFS.

4.5 I_{ur} Interface Characteristics

[Editor´s note: This chapter should shortly describe the I_{ur} -Interface Characteristics.]

5 Functions of the I_{ur} Interface Protocols

~~*[Editor's note: The highlighted text indicates proposed editorial changes.]*~~

5.1 Functional List

The list of functions on the Iur interface is the following:

1. Transport Network Management
2. Traffic management of Common Transport Channels
   - URA Paging
3. Traffic Management of Dedicated Transport Channels
   - Radio Link Setup/-Addition/-Deletion
   - Measurement Reporting
   - Dedicated Transport Channel Management

4. Traffic Management of Downlink Shared Channels

5.2 Functional Split over Iur

~~*[Editor's note: The following text was proposed in Tdoc R3-99320 and agreed to be included.]*~~

Note: This is only an initial list.

5.2.1 Macro-diversity Combining/Splitting

DRNS may perform macro-diversity combining/splitting of data streams communicated via its cells. SRNS performs macro-diversity combining/splitting of Iur data streams received from/sent to DRNS(s), and data streams communicated via its own cells.

The internal DRNS handling of the macro-diversity combining (respectively splitting) of Iub (respectively Iur) DCH frames is controlled by the DRNS.

5.2.2 Control of Macro-diversity Combining/Splitting Topology

When requesting the addition of a new cell for a UE-UTRAN connection, the RNC of the SRNS (i.e. the SRNC) can explicitly request to the RNC of the DRNS (i.e. the DRNC) a new Iur data stream, in which case the macro-diversity combining and splitting function within the DRNS is not used for that cell. Otherwise, the DRNS takes the decision whether macro-diversity combining and splitting function is used inside the DRNS for that cell i.e. whether a new Iur data stream shall be added or not.

5.2.3 Handling of DRNS Hardware Resources

Allocation and control of DRNS hardware resources, used for Iur data streams and radio interface transmission/reception in DRNS, is performed by DRNS.

5.2.4 Allocation of Downlink Channelisation Codes

Allocation of downlink channelisation codes of cells belonging to DRNS is performed in DRNS.

[Editor's note: Note that this does not imply that the signalling of the code allocation to the UE must be done from the DRNS].

5.2.5 UpLink Power Control

This group of functions controls the level of the uplink transmitted power in order to minimise uplink interference and keep the quality of the connections. If the connection involves both a SRNS and a DRNS the function UL Outer Loop Power Control (located in the SRNC) sets the target quality for the UL Inner Loop Power Control function (located in Node B). Additional quality information for the case when macro diversity combining is performed in DRNC is for further study.

Note : some additional function is needed for resource negotiation between the SRNS and the DRNS across the Iur. This is FFS.

5.2.6 Down-Link Power Control

This group of functions controls the level of the downlink transmitted power in order to correct the downlink power drifting between several radio links. SRNC regularly (or under some algorithms) sends the target down link power range based on the measurement report from UE.

5.2.7 Admission Control

Admission control in a DRNC is implicitly invoked during radio link setup/modify.

Information on UL ~~intreferences~~interference and DL power on cells controlled by the DRNC should be available across Iur.

Additional information exchanges between admission control functions located in different RNCs are for further study.

6 DRNS logical Model over Iur

~~*[Editor's note: The following text and figure was proposed in Tdoc R3-99320 and agreed to be included.]*~~

[Editor's note: The DRNS logical Model needs to be updated.]

6.1 Overview

The model in Figure 2. shows the Drift Radio Network System as seen from the SRNC. It is modelled as a «black box» with a set of Radio Links on the Uu side of the box and another set of User Plane access ports on the Iur side of the box. The Radio Links are connected to the Iur user ports via the internal transport mechanisms of the DRNS. Operations for controlling the connections between ports are sent from the SRNC to the DRNC via an Iur Control Plane port.

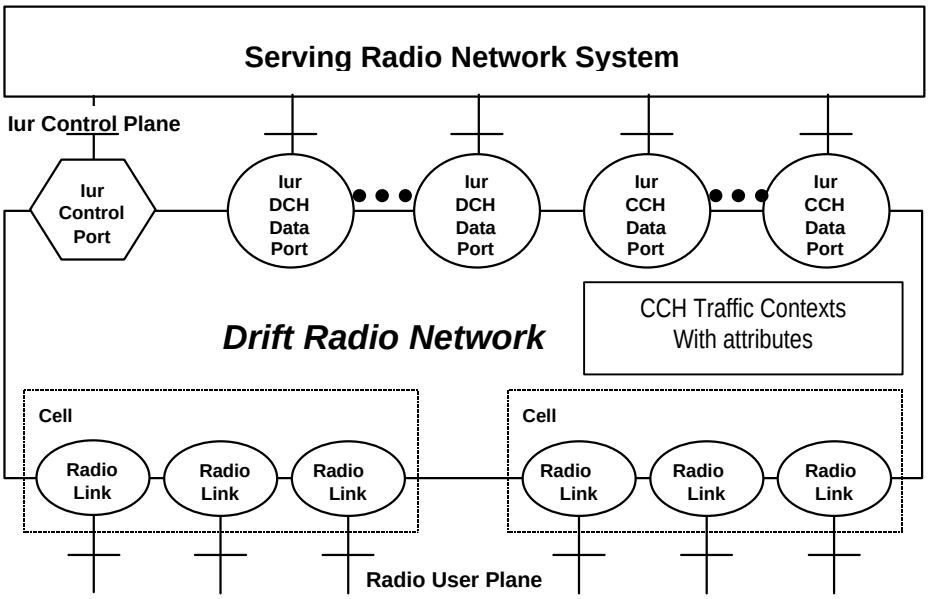

Figure 2. Drift RNS Logical Model

Note : This figure is the Radio Network layer view and not the transport layer one.

6.2 Logical Model Elements

6.2.1 Radio Link

A Radio Link represents a User Plane access point on the UTRAN side of the Uu interface between the User Equipment and the UTRAN. It is associated with :

- a Cell identifier.
- a Radio Frequency Carrier identifier.
- a Physical Channel identifier (spreading code).

The semantics of a Radio Link include the following:

- It is created and destroyed by administrative procedures when a cell site and/or RF carrier is added to, or deleted from, the RNS.
- It can be attached to one and only one Iur User Port at any given time.
- Its resources are allocated and controlled by the DRNS.

6.2.2 Cell

A Cell is a collection of Radio Links found at a specific location. It is defined by:

- a Cell identifier.

The semantics of a Cell include the following:

- It is created and destroyed by administrative procedures when a cell site and/or RF carrier is added to, or deleted from, the RNS.

6.2.3 Iur DCH Data Port

An Iur DCH Data Port represents a User Plane transport bearer, carrying one Iur DCH Data Stream, on the Iur interface between the SRNS and DRNS. The semantics of an Iur DCH Data Port include the following:

- It is created and destroyed by administrative procedures when transport facilities are added to, or deleted from, the Iur interface between the SRNS and DRNS. It can also be created and destroyed dynamically using dynamically setup transport bearers to add or remove transport facilities.
- It is assigned and released by the SRNC in reaction to requests for bearer services from the UE.
- It may be attached to one or more Radio Links. When attached to Radio Links in the downlink direction, it acts as a point-to-multipoint connection for diversity transmission. When attached to multiple Radio Links in the uplink direction, it acts as a multipoint-to-point connection for diversity reception.
- The transmit and receive diversity resources required to implement the point-to-multipoint and multipoint-to-point connections are controlled by the DRNS.
- The Iur DCH Data Stream emanating from the Iur DCH Data Port terminates in the SRNS connected to DRNS.

6.2.4 Iur CCH Data Port

Note : It is FFS whether an Iur CCH Data Port will be associated to a transport bearer or if multiple Iur CCH Data ports can be multiplexed over the same transport bearer.

6.2.5 Iur Control Port

An Iur Control Port represents the Control Plane access point on the Iur interface between the SRNS and the DRNS. It is defined by:

- a transport bearer channel identifier.

The semantics of an Iur Control Port include the following:

- It is created via administrative procedures when the Iur interface is created.

7 I_{ur} Interface Protocol Structure

[Editor's Note: The following text is an editor's proposal]

The Iur interface protocol architecture consists of two functional layers:

1. *Radio Network Layer, defines the procedures related to the interaction of two RNCs within a PLMN. 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 two RNCs within a PLMN.*

[Editor's Note; in the light of decisions made at TSG RAN WG3#3, the figure depicting the Iur interface Protocol Structure, which was agreed to be included (re Tdoc R3 99320), has been modified as follows:
- *The signalling bearer for RNSAP has been changed to show both SS7 and CTP/IP based solutions (with an accompanying note explaining that three alternatives are currently being considered, and that one alternative shall finally be selected for inclusion in the standard for release '99).*
- *The labels 'Q.aal2' & 'Q.sbcmtp' have been replaced with 'ALCAP (Q.2630.1)' & 'STC(Q.2150.1)'.*
- *AAL5 (and associated 'note 3') has been removed from the Data Transport bearer in the User Plane.]*
- *A note has been added stating that a signalling bearer solution for ALCAP based on CTP/IP maybe considered pending the outcome of RNSAP signalling bearer selection.]*

[Editor's Note: The protocol stack currently shows BISUP in the Transport Network Control Plane. This is not in line with the description of ALCAP in TS 25.424 & TS 25.426 (both at v2.0.0). The editor asks for guidance whether the protocol stack should be modified with the removal of BISUP and associated note 2: 'It is FFS which signalling protocol sets up AAL5 connection.']

[Editor's Note: To ensure consistency with the description of ALCAP as specified in TS 25.424 & TS 25.426 (both of which have been submitted to TSG RAN for approval), the editor proposes that BISUP be removed from the Transport Network Control Plane Protocol stack in figure 3, along with the associated note [Note 2: It is FFS which signalling protocol sets up AAL5 connection]. Figure 3 below illustrates the revised protocol stack.]

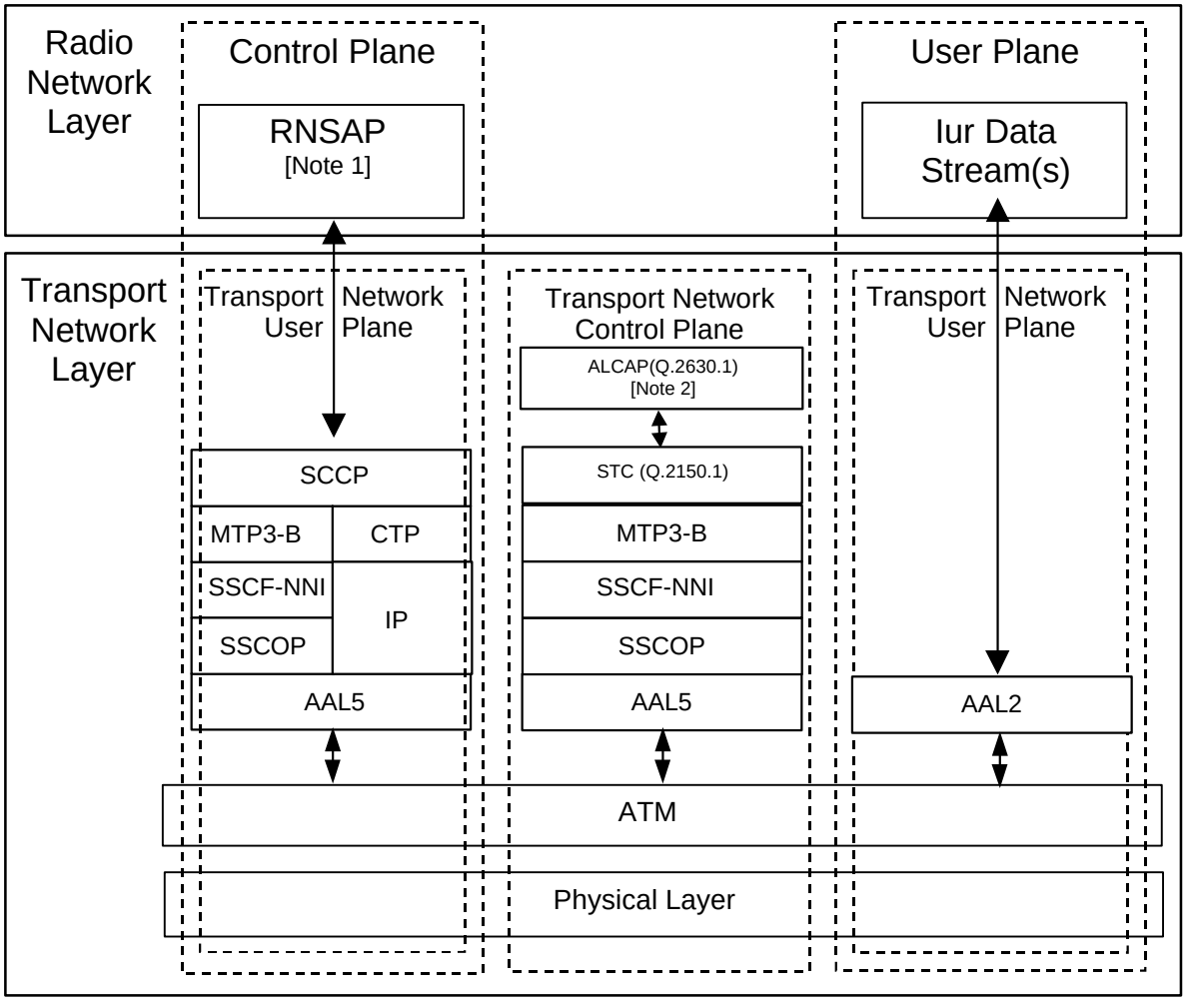

Figure 32. I_{ur} Interface Protocol Structure

[Note 1]: Three alternatives for RNSAP signalling bearer currently exist. These three alternatives are FFS. Only one alternative however shall finally be selected for release '99:

Alternative 1: SS7 only based solution.

Alternative 2: CTP/IP only based solution.

Alternative 3: Reference two options in the standard (one based on SS7 and the other CTP/IP), allowing operators to choose one out of two protocol suits for transport of SCCP messages.

In case CTP Protocol does not become ready, for reference, by September '99, TSG RAN WG3 will re-evaluate the protocol option of using CTP for release '99.

~~[Note 2]: It is FFS which signaling protocol sets up AAL5 connection.~~

[Note ~~3~~2]: A signalling bearer solution for ALCAP based on CTP/IP maybe considered pending the outcome of RNSAP signalling bearer selection.

8 Handling of Common Transport Channel Data Streams over Iur Interface

8.1 Basic Principles

~~*[Editor's Note: As agreed during WG3#3 (Kawasaki), the following text has been cut and paste from the Iur/Iub SWG report (Tdoc R3-99392). With the exception of the statement 'Whether to use AAL2 or AAL5 is FFS' (which has been removed inline with the decision to use AAL2 only in the User Plane), the highlighted text indicates editorial changes.]*~~

Note: First the principles for handling RACH and FACH over Iur shall be settled. This is then, together with the DCH mechanisms, a starting point for defining DSCH support over Iur.

- QoS: For RACH/FACH over Iur only best effort with priority handling is considered, due to complexity reasons on the Iur interface.
- In the case that UTRAN assigns RACH/FACH to the UE, the CRNC provides physical channel parameters.
- Regarding the level of interaction between MAC-c and MAC-d, the following is agreed:
  Need to minimise buffering in system
  Need to minimise the initial delay of the transmission over Iur for the first PDU
  Need to minimise signalling on Iur
  Need to reduce conditions of CRNC overload.
- No reservation mechanism is required for reservation of resources in the CRNC.
- When the UE changes cell within the CRNC, logically a new connection between MAC-d and the new MAC-c instance is established. Any flow control or similar mechanism over Iur must be reinitialised. The same transport bearer can be used.
- There is a frame protocol multiplexing of different UE on one transport bearer. One transport bearer can be used to connect multiple MAC-d instances in SRNC with multiple MAC-c instances in the CRNC. Whether to use one transport bearer per priority class, or a common, is FFS.
- Multiplexing of data streams for one UE is assumed to be done in MAC-d, but this needs WG2 confirmation. The relation to priority handling need to be clarified.

Note: The above conclusions shall be sent to WG2 for comments. Also WG3 shall request WG2 for a more detailed model of the split of MAC-d and MAC-c.

9 Other I_{ur} Interface Specifications

[Editor's note: Text containing a brief summary of each specification to be added]

9.1 UTRAN Iur Interface: Layer 1 (TS 25.421)

9.2 UTRAN Iur Interface: Signalling Transport (TS 25.422)

9.3 UTRAN Iur Interface: RNSAP Specification (TS 25.423)

9.4 UTRAN Iur Interface: Data Transport and Transport Signalling for Common Transport Channel Data Streams (TS 25.424)

9.5 UTRAN Iur Interface: User Plane Protocols for Common Transport Channel Data Streams (TS 25.425)

9.6 UTRAN Iur & Iub Interface: Data Transport and Transport Signalling for DCH Data Streams (TS 25.426)

9.7 UTRAN Iur & Iub Interface: User Plane Protocols for DCH Data Streams (TS 25.427)

10 Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

11 Annex A: Document Status

	Section	**% Complete**	**Comments / Outstanding issues**
1	**Scope**	Complete ?	
2	**References**	Empty	Editor to provide content.
3	**Definitions, symbols and abbreviations**		
3.1	Definitions	Empty	Editor to provide content.
3.2	Symbols	Empty	Editor to provide content.
3.3	Abbreviations	Empty	Editor to provide content.
4	**General Aspects**		
4.1	UTRAN Architecture	25% ?	WG3 Review Required. Editor requests proposals to revise second paragraph: 'From a logical stand point….'.
4.2	I_{ur} Interface General Principles		
4.2.1	General	50% ?	WG3 Review Required.
4.2.2	RNSAP Procedures	Complete ?	WG3 Review Required.
4.3	I_{ur} Interface Specification Objectives		
4.3.1	General	50% ?	WG3 Review Required.
4.3.2	Addressing of RNSs over the Iur Interface	75% ?	WG3 Review Required. Contains note 'Connectionless RNSAP over Iur is FFS'.
4.4	I_{ur} Interface Capabilities	50% ?	WG3 Review Required. Is the list complete? Text/references required content of (3) RACH data streams, (4) FACH data

			streams & (5) DSCH data streams. Contains note 'The FAUCH is FFS'.
4.5	I_{ur} Interface Characteristics	Empty	Proposals requested.
5	**Functions of the I_{ur} Interface Protocols**		
5.1	Functional List	25% ?	WG3 Review Required. Proposals requested to complete list. Is the 3rd bullet of (3) valid.
5.2	Functional split over Iur	50% ?	WG3 Review Required. Contributions required to complete list.
5.2.1	Macro-diversity Combining/Splitting	50% ?	WG3 Review Required.
5.2.2	Control of Macro-diversity Combining/Splitting Topology	50% ?	WG3 Review Required.
5.2.3	Handling of DRNS Hardware Resources	50% ?	WG3 Review Required.
5.2.4	Allocation of Downlink Channelisation Codes	50% ?	WG3 Review Required.
5.2.5	UpLink Power Control	50% ?	WG3 Review Required. Contains note 'some additional function is needed for resource negotiation between the SRNS & DRNS across Iur (FFS).'
5.2.6	Down-Link Power Control	50% ?	WG3 Review Required.
5.2.7	Admission Control	50% ?	WG3 Review Required.
6	DRNS Logical Model over Iur	50% ?	The Model & associated text needs to be updated – proposals requested.
6.1	Overview	50% ?	Revise diagram (inc. changing CCH to Common Transport Channel).
6.2	Logical Model Elements		
6.2.1	Radio link	50% ?	Revise/Check description
6.2.2	Cell	50% ?	Revise/Check description

6.2.3	Iur DCH Data Port	50% ?	Revise/Check description
6.2.4	Iur CCH Data Port	50% ?	Revise/Check description
6.2.5	Iur Control Port	50% ?	Revise/Check description
7	**Iur Interface Protocol Structure**	75% ?	The protocol stack has been revised according to decisions taken at RAN WG3#3. The protocol stack currently shows BISUP in the Transport Network Control Plane. This is not in line with the description of ALCAP in TS 25.424 & TS 25.426 (both at v2.0.0). The editor asks for guidance whether the protocol stack should be modified with the removal of BISUP and associated note 2: 'It is FFS which signalling protocol sets up AAL5 connection.' The stack may need to be revised pending the outcome of the RNSAP signalling bearer selection. Additional text required introducing the two layers/three planes of the model being used. References be included for the protocols shown in the stack.
8	**Handling of Common Transport Channel Data Streams over Iur Interface**		
8.1	Basic Principles	75% ?	WG3 Review Required. Principles related to the handling of DSCH over Iur need to be defined.
9	**Other I_{ub} Interface Specifications**		
9.1	Iur Interface: Layer 1 (TS 25.421)	Empty	Editor to provide brief summary
9.2	Iur Interface: Signalling Transport (TS 25.422)	Empty	Editor to provide brief summary

9.3	Iur Interface: RNSAP Specification (TS 25.423)	Empty	Editor to provide brief summary
9.4	Iur Interface: Data Transport & Transport Sifgnalling for Common Transport Channel Data Streams (TS 25.424)	Empty	Editor to provide brief summary
9.5	Iur Interface: User Plane Protocols for Common Transport Channel Data Streams (TS 25.425)	Empty	Editor to provide brief summary
9.6	Iur & Iub Interface: Data Transport & Transport Sifgnalling for DCH Data Streams (TS 25.426)	Empty	Editor to provide brief summary
9.7	Iur & Iub Interface: User Plane Protocls for DCH Data Streams (TS 25.427)	Empty	Editor to provide brief summary
10	**Bibliography**	Empty	Editor to provide content.
11	**Annex A (Document Status)**	Complete	Up to Date.
12	**History**	Complete	Up to Date.

12 History

Document history		
V0.0.1	1999-02	Initial Specification Structure
V0.0.2	1999-02	Inclusion of complete text from sections 6, 7 and 8 of the baseline specification entitled “Merged Description of Iur Interface, Version 0.0.2”
V0.0.3	1999-03	Revised document based on approved contributions/decisions taken at WG3#2 Nynäshamn: Text in Chapter 2 of R3-99175 included in section 4.2 (text revised as per discussion). Editor’s note added stating that RNSAP DCH and CCH procedures shall be standardised but whether they will become mandatory or optional is FFS.
V0.0.4	1999-04	Minor editorial changes.
V0.0.5	1999-04	Changes arising from comments received via e-mail reflector: Replace ‘CCH’ with ‘Common Transport Channel’ as agreed at WG3#2 Revise figure 6.2 to clearly show the two alternatives currently being considered in WG3 for the Radio Network Control Plane Signalling Bearer (namely TCP/IP and SCCP/MTP3/SAAL-NNI.
V0.1.0	1999-04	Approved by WG3
V0.1.1	1999-05	The following changes have been made (in-line with the editor’s proposal presented at the previous meeting [re R3-99320], but revised according to decisions taken at the meeting): • Text added to ‘Scope’ (re chapter 1) with agreed modifications. • Revised Iur interface protocol diagram included (re chapter 7) with modifications (reflecting decisions taken at meeting on RNSAP signalling bearer, ALCAP and removal of AAL5 in the user plane (which was originally FFS). • Sub-sections referring to other related specifications included (re chapter 9). • Relevant sections of S3.01 (v0.1.0) related to Iur cut & paste throughout specification (excluding the information relating to Iur transport bearers originally proposed by editor to be included). The following changes have also been made: A new chapter included containing agreed principles for handling of Common Transport Channels (re chapter 8). A status report has been included. Minor editorial changes.
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