3GPP TSG CN Plenary Meeting #13 **Tdoc NP-010439**
Beijing, China, 19th – 21st September 2001

Source: **TSG CN WG3**

Title: **CRs on Rel-4 Work Item CSSPLIT**

Agenda item: **8.3**

Document for: **APPROVAL**

Introduction:

This document contains 2 CRs on Rel-4 Work Item ”CSSPLIT”, that have been agreed by TSG CN WG3, and are forwarded to TSG CN Plenary meeting #13 for approval.

Spec	CR	Rev	Doc-2nd-	Phase	Subject	Cat	C_Ver
29.415	001	1	N3-010302	Rel-4	Clarification on FQC handling and alignment with TS 25.415	F	4.0.0
29.414	003	2	N3-010341	Rel-4	Addition of media type "data"	F	4.1.0

3GPP TSG-CN3 Meeting #18 ***N3-010302***
Dresden, Germany. 9-13th July 2001

CR-Form-v4

CHANGE REQUEST

⌘ **29.415** **CR** **001** ⌘ ev **1** ⌘ Current version: **4.0.0** ⌘

*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: ⌘	Clarification on FQC handling and alignment with TS 25.415	
Source: ⌘	TSG_CN WG3	
Work item code: ⌘	Correction (CSSPLIT)	***Date:*** ⌘ 03.07.2001
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)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

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)*

Reason for change: ⌘	**First Change:** Alignment with TS 29.232: states that a MGW may ignore the settings of the "delivery of erroneous SDUs" property of the 3GUP package if the MGW passes frames transparently through the UP entities. In this case, a check is not required at that MGW, it may be performed at other FP UP terminations. **Next Change:** Double description of the upper layer SAPs in 25.415 and 29.415 is avoided. As RAN3 has pointed out in an LS recently sent to CN3, the SAP section 25.415 has been updated and is now also suitable for the Nb protocol.
Summary of change: ⌘	Alignment with TS 29.232 regarding "delivery of erroneous SDUs" property and with TS 25.415 regarding upper layer SAP
Consequences if not approved: ⌘	Inconsistency with TS 29.232

Clauses affected: ⌘			
Other specs affected: ⌘	☐ Other core specifications ☐ Test specifications ☐ 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/3G_Specs/CRs.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.

First modified section

6.4.4.1.2 Handling of FQC information

The handling of FQC shall be as specified in Table 1.

Table 1. FQC handling in Nb UP protocol, receiving side

Input			Action
Delivery of erroneous SDUs	**FQC in received PDU**	**Payload CRC**	
'yes' or 'no'	'good'	OK	Leave FQC unchanged. Forward SDU and FQC to upper layer
'yes'	'bad radio'	OK	Leave FQC unchanged. Forward SDU and FQC to upper layer
'yes'	'good' or 'bad radio'	Not OK	Set FQC to 'bad'. Forward SDU and FQC to upper layer
'yes'	'bad'	Any	Leave FQC unchanged. Forward SDU and FQC to upper layer
'no'	'good'	Not OK	Drop SDU
'no'	'bad' or 'bad radio'	Any	Not applicable. SDUs are dropped at a previous link.
'no-error-detection-consideration'	Any	Any	Leave FQC unchanged. Forward SDU and FQC to upper layer

The FQC handling in the Nb UP protocol entity on the sending side is as follows:

- When the upper layer indicates an FQC value in the Nb-UP-DATA-Request message, an FQC shall be set in the PDU as indicated by the upper layer. If the upper layer does not indicate an FQC value, the FQC in the PDU shall be set to 'good'.
- When the upper layer indicates an FQC with the value 'bad' to the Nb UP protocol layer, the Nb UP support functions may generate an erroneous payload CRC.

An MGW may ignore the settings of the "delivery of erroneous SDUs" property of the 3GUP package if the MGW passes frames transparently through the UP entities as described in TS 29.232 [3].

Next modified section

7 Communication Primitives for the Nb UP protocol layer

7.1 Modelling Principle

See the corresponding section in 3GPP TS 25.415 [2].

7.2 Primitives towards the upper layers at the CNL-SAP

~~7.2.1 General~~

~~The Nb UP protocol layer interacts with the upper layers. The interactions with the upper layers are shown in terms of primitives where these primitives represent the logical exchange of information and control between the upper layer and the Nb UP protocol layer. They do not specify or constrain implementations.~~

The following primitives are defined:

- Nb-UP-DATA;
- Nb-UP-STATUS;
- Nb-UP-UNIT-DATA.

Table 2: Nb UP protocol layer service primitives towards the upper layer at the CNL SAP

Primitive	Type	Parameters	Comments
Nb-UP-DATA	Request	Nb-UP-payload	
		Nb-UP-control	RFCI
			FQC
			Frame number
	Indication	Nb-UP-payload	
		Nb-UP-control	RFCI
			FQC
			Frame number
Nb-UP-Status	Indication	Nb-UP-Procedure-Control	Procedure indicator, ACK/NACK, Frame number, Nb UP mode version.
			Error Cause, Error Distance
			Initialisation
			Rate control, Rate control ACK/NACK
			Time Alignment Time Alignment ACK/NACK
	Request	Nb-UP-Procedure-Control	Procedure indicator, ACK/NACK, Frame number, Nb UP mode version.
			Error Cause
			Initialisation
			Rate control, Rate control ACK/NACK
			Time Alignment Time Alignment ACK/NACK
Nb-UP-UNIT-DATA	Request	Nb-UP-payload	
	Indication	Nb-UP-payload	

The Primitive usage is a function of the mode of operation of the Nb UP protocol. Table 2 provides the association between Nb UP primitives towards the upper layers and the Nb UP mode of operation.

Table 3: Nb UP protocol layer service primitives related to the Nb UP mode of operation and function within the mode of operation

Primitive	Type	Mode of Operation
Nb-UP-DATA	Request	SMpSDU
	Indication	SMpSDU
Nb-UP-Status	Request	SMpSDU
	Indication	SMpSDU
Nb-UP-UNIT-DATA	Request	TrM
	Indication	TrM

7.2.2 Nb-UP-DATA-REQUEST

See the corresponding section in 3GPP TS 25.415 [2].

7.2.3 Nb-UP-DATA-INDICATION

See the corresponding section in 3GPP TS 25.415 [2].

~~7.2.4 Nb-UP-STATUS-REQUEST~~

~~See the corresponding section in 3GPP TS 25.415 [2].~~

~~7.2.5 Nb-UP-STATUS-INDICATION~~

~~See the corresponding section in 3GPP TS 25.415 [2].~~

~~7.2.6 Nb-UP-UNIT-DATA-REQUEST~~

~~See the corresponding section in 3GPP TS 25.415 [2].~~

~~7.2.7 Nb-UP-UNIT-DATA-INDICATION~~

See the corresponding section in 3GPP TS 25.415 [2].

3GPP TSG-CN3 Meeting #18 ***Tdoc* N3-010341**
Dresden, Germany, 2001-07-09-2001-07-13

CR-Form-v4

CHANGE REQUEST

⌘ **29.414** **CR** **003** ⌘ ev **2** ⌘ Current version: **4.1.0** ⌘

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

Title:	⌘	Transport of data in the IuFP
Source:	⌘	TSG_CN WG3
Work item code:	⌘	CSSPLIT (Correction)
Date:	⌘	2001-07-25
Category:	⌘	**F**
Release:	⌘	REL-4

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R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Paragraph 6.3.3.4, " Media announcement" indicates that <media> shall be set to "audio". It is unclear if or how this covers data.
Summary of change:	⌘	Section 6.3 amended to express that unrestricted data is supported within <media> ="audio". Section 6.3.3.4 updated accordingly Chapter 3.2, "Abbreviations" is updated with new and/or missing abbreviations.
Consequences if not approved:	⌘	The support of Unrestricted Data will not be clearly stated.

Clauses affected:	⌘	3.2, 6.3 and 6.3.3.4.
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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First amended section

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

3.2 Abbreviations

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

AAL	ATM Adaptation Layer
AAL2	ATM Adaptation Layer ~~AAL~~ Type 2
AAL5	ATM Adaptation Layer Type 5
AESA	ATM End System Address
ALC	AAL2 Link Characteristics
ARP	Address Resolution Protocol
ATM	Asynchronous Transfer Mode
AVP	Audio Video Profile
BICC	Bearer Independent Call Control
CN	Core Network
CSRC	Contributing Source
~~DS~~	~~Differentiated Services~~
DSS2	Digital Subscriber Signalling 2
~~FIFO~~	~~First in first out~~
IANA	Internet Assigned Numbering Authority
IP	Internet Protocol
IPv4	Internet Protocol version 4
IPv6	Internet Protocol version 6
IPBCP	IP Bearer Control Protocol
ITU-T	International Telecommunications Union-Telecommunication sector
IuFP	Iu Framing protocol
MGW	Media GateWay
MIME	Multi purpose Internet Mail Extension
MTP3b	Message Transfer Part level 3 for Q.2140 [15]
NNI	Network Node Interface
NSAP	Network Service Access Point
PDU	Protocol Data Unit
PVC	Permanent Virtual Circuit
RFC	Request For Comment
RTP	Real-Time Transport Protocol
RTCP	Real-Time Transport Control Protocol
SAR	Segmentation and Reassembly
SCCF-NNI	Service Specific Coordination Function-Network Node Interface
SDP	Session Description Protocol
SDU	Service Data Unit
SPVC	Switched PVC
SSSAR	Service Specific Segmentation and Re-assembly sublayer
SSCOP	Service Specific Connection Oriented Protocol
SSCS	Service Specific Convergence Sublayer
SSRC	Synchronisation Source
SVC	Switched Virtual Circuit
UDP	User Datagram Protocol

UNI	User Network Interface
UP	User Plane
VC	Virtual Circuit

End of first amended section

Start of second amended section

6.3 Bearer Control Protocol

The ITU-T Recommendation Q.1970 “BICC IP Bearer Control Protocol” (IPBCP) (see 3GPP TS 29.205 [11]) shall be applied.

The use of Iu FP as RTP payload shall be indicated within IPBCP. IuFP shall transport either speech or data in a bearer independent way as described in 3GPP TS 23.205 and 3GPP TS 29.205. The negotiation of the type of payload within IuFP is outside the scope of IPBCP and described in the above specifications.

NOTE: The IuFP is registered with IANA as the MIME type ”VND.3GPP.IuFP”of the ”audio” category, however, this registration does not preclude the use of IuFP to transport ”data”.

End of second amended section

Third amended section

6.3.3.4 Media Announcement

<*media*> shall always be set to “audio irrespective of the payload type within IuFP.

<*port*> shall be set to the port number assigned to the RTP bearer on the source MGW of the present IPBCP message

<*transport*> shall be set to “RTP/AVP”.

<*fmt list*> shall be set to the chosen dynamic payload number. The MGW that initiates the bearer establishment may choose any value between 96 and 127. The peer MGW shall echo this value.

End of third and last amended section