3GPP TSG_CN **Tdoc NP-000460**
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Title: **Status Report CN3**

Agenda item: **6.3.1**

Document for: **APPROVAL**

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1. General

1.1 Last Meetings

Two CN3 meetings have taken place since last TSG-CN plenary:

- CN3#11 10.07. - 14.07.00 in Oslo, Norway hosted by Ericsson
- CN3#12 28.08. - 01.09.00 in Seattle, USA hosted by the "North American Friend of 3GPP"

The main goal of these meetings were

- to improve R99 issues
- to start with Work Items for R00
- to review project management for R00

The reports are contained in NP-000461 and NP-000462. This status report summarises the results.

1.2 Overall Description of Work

The work in CN3 has been concentrated on improvements and error corrections of the specifications for R99 Work Items. CN3 provides Change Requests for corrections

- to simplify the provision of transparent data services at 32 kbit/s UDI
- to align the RAB parameter settings with RAN's work
- to clarify the negotiation and mapping of parameters for circuit switched data services
- to clarify the use of the different RLP versions for UMTS and GSM/EDGE
- to provide multimedia at 32 kbit/s UDI/RDI for EDGE with one TCH/F32
- to improve the use of 33.6 kbit/s for 3.1 kHz audio multimedia calls
- to delete of UMTS NT facsimile from R99 specifications

The work for R00 in CN3 is varying depending on the Work Items:

- Whereas "Real-time NT facsimile" has been finished,
- N3 is waiting for stable stage 1 and 2 specifications (e.g. for Global Text Telephony") or
- is just providing Work Item Description sheets (e.g. for IM domain).

1.3 Organisation

Graham Heaton, one of CN3's Vice Chairmen, has changed his job and joined a new company that is currently not member of ETSI and 3GPP. Therefore, he resigned from the Vice Chairman of CN3, from the Chair of the Packet Switched Subgroup in CN3 and from the rapporteur of 29.061 and 27.060. Graham started his work in ETSI / 3G as a delegate of SMG2 / 3 GPRS in 1994 and he progressed to be chair of SMG4 GPRS and Chair of SMG6 GPRS, as well as vice chair of SMG4 and SMG6. I personally, appreciate him as a expert for packet switched networks and transmissions. On behalf of CN3 I want to thank him for the work he has done in CN3 and I want to wish him all the best in his new Job.

Last meeting election for a new Vice Chairman should take place. But there were not any nomination.

1.4 Administrative Work

CN3 has reviewed and commented the project plan. Comments were sent to MCC.

New Terms of Reference are agreed in CN3 that are provided in NP-000464.

Meeting dates for 2001 are committed as follows:
- CN3#15: 19 – 23/02/01
- CN3#16: 23 – 27/04/01
- CN3#17: 09 – 13/07/01
- CN3#18: 03 – 07/09/01
- CN3#19: 12 – 16/11/01

2. R99 Work Items

Significant work of CN3 was dedicated to correct R99 specifications.

2.1 Technical Enhancements and Improvements

Corrections were necessary for the following issues:
- Circuit switched bearers in UMTS
- GPRS
- Multimedia

2.1.1 Circuit Switched Bearers in UMTS

CN3 presents 25 CRs to correct specifications for the circuit switched bearer services.

It was decided to improve the provision of transparent bearer services with 32 kbit/s data rate by using the I.460 rate adaptation instead of the A-TRAU' frame format for the handover between GSM and UMTS (and vice versa). This solution is now identical as for 64 kbit/s. The CRs are provided in document NP-000468.

Document NP-000469 comprises some CRs providing some corrections needed to improve the text or to avoid misinterpretations:

- The RLP distinguishes single-link and multi-link versions. It was clarified that in UMTS the same version has to be used as it would be used in GSM due to handover reasons between UMTS and GSM. It was further clarified that for EDGE always the multi-link version has to be used. This was necessary because in some configurations the same connection is considered by the MS as single-link whereas the MSC sees this as multi-link connection.
- Another CR changes the negotiation rules for the additional BC parameters, originally specified for HSCSD. Now, the MS may send the extended BC-IE (containing octets 6d-6g) in the CALL CONFIRMED message even when no BC is received from the MSC. This change is needed in order to allow PSTN originated mobile terminated calls in case of single numbering in UMTS.
- Another correction was made regarding the use of the RCR (radio channel requirement) parameter in the MSC. This aligns 29.007 and 27.001 with 24.008.

Modifications were made for asynchronous terminal where V.25bis procedures were replaced by V.250 procedures or procedures defined in 27.007. V.25bis is outdated for those terminals. These changes are provided in document NP-000470.

Corrections related to the setting of RAB parameters were necessary to align the specifications with the work within the RAN groups. These CRs are contained in NP-000471.

2.1.2 GPRS

One CR against 29.061 was agreed by CN3 to correct the PDP activation procedure when using MobileIPv4 for GPRS Mobile IP interworking in NP-000472. Clarifications on the PPP connection phase are added to ensure consistency with other section of the specification.

2.1.3 Multimedia

Multimedia at 32 kbit/s for UDI/RDI is only possible for UMTS but not for GSM. This service could also be provided for GSM if some "artificial" barriers will be removed to allow the use of one TCH/F32 for this service in GSM/EDGE. NP-000473 contains CRs against specifications that are under the responsibility of CN3. Other CRs will be provided by SA1 or are already approved by GERAN. One CR is still outstanding to be agreed in CN1. However, CN1 will receive a related LS by CN3 only in their next meeting.

NP-000474 comprises a set of CRs for multimedia at 33.6 kbit/s for 3.1 kHz audio. These CR improve the network behaviour for those cases when the fixed network terminal is not able to support 33.6 kbit/s but negotiated a lower user rate with the modem in the MSC/IWF. For this solution a modified Modify procedure is necessary. A related CR is provided by CN1.

3. R00 Work

CN3 has dealt with the following R00 work items:

- Facsimile
- Service Modification without pre-notification
- Circuit switched multimedia swap and fall back
- Text telephony
- Interworking between the IM subsystem with fixed networks
- Bearer independent circuit switched core network

3.1 Facsimile

The work item "real-time non-transparent Fax" was postponed from R99 to R00. CN3 was requested to provide CRs that remove those text from R99 version of impacted specifications. These CRs are summarised in document NP-000475.

Another document (NP-000476) comprises CRs that are necessary to improve R00 specifications for real-time non-transparent facsimile in UMTS.

3.2 Service modification without pre-notification

Some LSs were exchanged between SA1 and CN3. Now we have a common understanding about the features that have to be specified by CN3. The WI rapporteur presented information on the time

schedule showing how the goal will be reached. Also document that will be presented to CN1 were on the input list for CN3. These documents have not been presented in CN3 because they do neither deal with issues that CN3 is responsible for nor they contains agreed output of any other group. Unfortunately, no input was presented for CN3 relevant issues.

3.3 Circuit switched multimedia swap and fall back

There were no input document to the meetings. However, the WI rapporteur reported that the intention is not to specify a separate swat mechanism beside this one that will be specified for the service modification without pre-notification feature. For the fall back solution exit some technical problems. It is unclear until when a solution can be presented. It is proposed not to change the WID sheet for the time being.

3.4 Text telephony

CN3 has to provide the specification for interworking with fixed networks. At the moment the stage 1 is under e-mail approval in SA1 and the stage 2 is not mature enough to start work on stage 2 issues. CN3 is waiting for mature stage 1 and stage 2 specifications. Ericsson will contribute to CN3's work.

3.5 Interworking between the IM Subsystem and fixed networks

CN3 has agreed two WID sheets on their work for the IM subsystem, one for the "Interworking of the IM CN subsystem with circuit switched networks" (NP-000465) and another one for the "Interworking of the IM CN subsystem with IP networks" (NP-000466). Both of the WID sheets are presented to CN#9 for approval. They cover all work that CN3 has to do for the IM subsystem.

3.6 Bearer independent circuit switched Core Network

In a joint session CN3 and CN4 have agreed their work split related to this work item. The WID sheet issued by CN4 also covers CN3's work. CN4 is responsible for the stage 2 specifications of the Mc, Nc, Nb reference points. They are also responsible for the stage 3 for the protocols over the Nc and Mc reference points. CN3 is responsible for stage 3 of the protocols over the Nb reference point. CN3 will check whether the information provided via the Mc reference point are sufficient for the provision of the circuit switched data services. This work has also some impact on CN3's specification 29.007.

3.7 IWF at the CN Border to fixed network

CN3 participated in the joint workshop on TrFO. The meeting found that it is of benefit to co-locate the IWF needed for the provision of for circuit switched data services with the transcoder, i.e at the border to the fixed network. CN3 was asked to study the impacts. A Work Item should be issued. The WID sheet was provided after the CN3#12 meeting, agreed per e-mail in CN3 and presented here for approval in document NP-000467.

4. Output Documents

4.1 Change Request

TDoc #	Spec	CR #	Rel	Tdoc Title	CAT	C_Version	WI
N3-000456	03.10		R99	32kbit/s UDI/RDI multimedia	F	8.1.0	T.E.I
N3-000474	04.21		R99	32kbit/s UDI/RDI multimedia	F	8.0.0	T.E.I
N3-000455	08.20		R99	32kbit/s UDI/RDI multimedia	F	8.1.0	T.E.I
N3-000380	23.146		R00	Correction of SDL Diagrams	F	3.0.0	Facsimile
N3-000381	23.146		R00	Modification from V.25bis to V.250	A	3.0.0	Facsimile
N3-000302	23.910		R99	Deletion of UMTS NT-RT FAX from R99	F	3.2.0	Facsimile
N3-000358	23.910		R99	Transparent 32 kbit/s data rate with I.460 rate adaptation	F	3.2.0	T.E.I
N3-000359	23.910		R00	Transparent 32 kbit/s data rate with I.460 rate adaptation	A	3.2.0	T.E.I
N3-000368	23.910		R99	Clean-up of RAB parameter settings	F	3.2.0	T.E.I
N3-000369	23.910		R00	Clean-up of RAB parameter settings	A	3.2.0	T.E.I
N3-000480	23.910		R99	3.1kHz multimedia at 33.6kbit/s	F	3.2.0	T.E.I
N3-000481	23.910		R00	3.1kHz multimedia at 33.6kbit/s	A	3.2.0	T.E.I
N3-000427	23.910		R00	Delivery of erroneous SDUs parameter value	A	3.1.0	TEI
N3-000426	23.910		R99	Delivery of erroneous SDUs parameter value	F	3.1.0	TEI
N3-000450	24 022		R99	Relevance of GSM specific BC-IE parameters for negotiating RLP version in UMTS	F	3.3.0	TEI
N3-000303	27 001		R99	Deletion of UMTS NT-RT FAX from R99	F	3.5.0	Facsimile
N3-000370	27 001		R99	Clean-up of RAB parameter settings	F	3.5.0	TEI
N3-000371	27 001		R00	Clean-up of RAB parameter settings	A	3.5.0	TEI
N3-000366	27 001		R99	Relevance of GSM specific BC-IE parameters for negotiating RLP version in UMTS	F	3.5.0	TEI
N3-000372	27 001		R00	Relevance of GSM specific BC-IE parameters for negotiating RLP version in UMTS	A	3.5.0	TEI
N3-000441	27 001		R00	UMTS clean-up	A	3.5.0	TEI
N3-000440	27 001		R99	UMTS clean-up	F	3.5.0	TEI
N3-000453	27.001		R99	32kbit/s UDI/RDI multimedia	F	3.5.0	T.E.I
N3-000459	27.001		R00	32kbit/s UDI/RDI multimedia	A	3.5.0	T.E.I
N3-000479	27.001		R00	3.1kHz multimedia at 33.6kbit/s	A	3.5.0	T.E.I
N3-000478	27.001		R99	3.1kHz multimedia at 33.6kbit/s	F	3.5.0	T.E.I
N3-000424	27.001		R99	Delivery of erroneous SDUs parameter value	F	3.5.0	TEI
N3-000425	27.001		R00	Delivery of erroneous SDUs parameter value	A	4.0.0	TEI
N3-000428	27.001		R00	Clarification related to RCR	D	4.0.0	TEI
N3-000430	27.001		R99	Modification from V.25bis to V.250	F	3.5.0	TEI
N3-000431	27.001		R00	Modification from V.25bis to V.250	A	4.0.0	TEI
N3-000327	27 002		R99	Deletion of UMTS NT-RT FAX from R99	F	3.4.0	Facsimile
N3-000432	27.002		R99	Modification from V.25bis to V.250	F	3.4.0	TEI
N3-000491	27.002		R00	Modification from V.25bis to V.250	A	3.4.0	TEI
N3-000433	27.003		R99	Modification from V.25bis to V.250	A	3.4.0	TEI
N3-000300	29 007		R99	Deletion of UMTS NT-RT FAX from R99	F	3.6.0	Facsimile
N3-000329	29 007		R00	Correction of incomplete part related to the introduction of UMTS NT-RT FAX	F	3.6.0	Facsimile
N3-000356	29 007		R99	Transparent 32 kbit/s data rate with I.460 rate adaptation	F	3.6.0	T.E.I
N3-000357	29 007		R00	Transparent 32 kbit/s data rate with I.460 rate adaptation	A	3.5.0	TEI
N3-000477	29 007		R00	3.1kHz multimedia at 33.6kbit/s	A	3.6.0	T.E.I
N3-000476	29 007		R99	3.1kHz multimedia at 33.6kbit/s	F	3.6.0	T.E.I
N3-000429	29.007		R00	Clarification related to RCR	D	3.5.0	TEI
N3-000458	29.007		R00	32kbit/s UDI/RDI multimedia	A	3.5.0	T.E.I
N3-000452	29.007		R99	32kbit/s UDI/RDI multimedia	F	3.5.0	T.E.I
N3-000394	29.061		R00	GPRS Mobile IP Interworking	F	3.3.0	T.E.I

4.2 Liaison Statements

The Liaison Statements are contained in NP-000463.

DOC N3-00	Subject	To	Cc	Attachment
N3-000373	32 kbit/s UDI/RDI multimedia	SA1 SMG2/GERAN		none
N3-000389	3.1 kHz multimedia calls at 33.6 kbit/s data rate	N1		
N3-000390	Specifying IuUP PDU Type in 3G TS 26.102	R3	S4	none
N3-000486	Updated Iu UP CR on selection of PDU Type 1 for NT CS data services	R3	S4	N3-000424 N3-000425 N3-000426 N3-000427
N3-000487	Multimedia 32 kbit/s UDI/RDI in GSM/EDGE	N1		GP-000384 N3-000452 N3-000453 N3-000455 N3-000456 N3-000474
N3-000488	DHCP lease renewal	T2		N3-000401 N3-000411 N3-000457

4.3 Work Items

DOC	DOC	Subject	Release	1st Respo.	2nd Respo.
NP-000465	N3-000469	Interworking between IM CN subsystem and circuit switched networks	R00	N3	N1, S4
NP-000466	N3-000470	Interworking between IM CN subsystem and IP networks	R00	N3	N1, S4
NP-000467	N3-000471	IWF at the CN Border to fixed networks	R00	N3	N4

4.4 New TRs TSs

none

5. Next Meetings

Next CN3 meetings are schedules as follows:

- CN3#13 16/10/00 – 20/10/00 Alcatel, Stuttgart, Germany
- CN3#14 13/11/00 – 17/11/00 ETSI, Sophia Antipolis, France