

**Source:** Chairman CN3 ([ragnar.huslende@ericsson.com](mailto:ragnar.huslende@ericsson.com))  
**Title:** CN3 Status Report to CN Plenary  
**Agenda item:** 6.3.1  
**Document for:** INFORMATION

---

|        |  |    |
|--------|--|----|
| 1.     | General .....  | 3  |
| 1.1    | CN3 Officials.....   | 3  |
| 1.2    | CN3 Meetings.....  | 3  |
| 1.3    | Administrative Work .....                                      | 3  |
| 2.     | Work Items Rel-4 and earlier .....                             | 3  |
| 2.1    | Technical Enhancements and Improvements .....                  | 3  |
| 3.     | Work Items Rel-5 .....   | 3  |
| 3.1    | End-to-end Quality of Service: Go interface.....               | 3  |
| 4.     | Work Items Rel-6 .....   | 4  |
| 4.1    | Interworking between the IM CN Subsystem and IP networks ..... | 4  |
| 4.2    | Interworking between the IM CN Subsystem and CS networks ..... | 4  |
| 4.3    | Mn Interface .....   | 4  |
| 4.4    | End-to-end Quality of Service, Gq interface .....              | 4  |
| 4.5    | MBMS Gmb interface .....                                       | 5  |
| 4.6    | Support of Presence Capability, Pk interface .....             | 5  |
| 4.7    | WLAN .....   | 5  |
| 4.8    | Flow Based Charging .....                                      | 5  |
| 4.8.1  | Gx Interface .....   | 6  |
| 4.8.2  | Rx Interface .....   | 6  |
| 4.9    | Technical Enhancements and Improvements .....                  | 6  |
| 4.9.1  | Enhanced Radius Gi interface .....                             | 6  |
| 4.9.2  | IP spoofing.....   | 6  |
| 4.9.3  | Service Based Local Policy .....                               | 6  |
| 4.9    | Other Rel-6 WIs .....  | 7  |
| 4.10.1 | Circuit-switched Data Communication .....                      | 7  |
| 5.     | Work Items Rel-7 .....   | 7  |
| 5.1    | Diameter on the PDG Wi interface.....                          | 7  |
| 5.2    | Diameter on the GGSN Gi interface.....                         | 7  |
| 6.     | Output Documents.....  | 7  |
| 6.1    | Change Requests .....  | 7  |
| 6.2    | Liaison Statements.....  | 9  |
| 6.3    | Work Items .....   | 9  |
| 6.4    | Technical Reports and Technical Specifications.....            | 9  |
| 6.4.1  | Specifications for approval.....                               | 9  |
| 6.4.2  | Specifications for information.....                            | 10 |

7. Next Meetings ..... 10

8. Acknowledgements ..... 10

# 1. General

## 1.1 CN3 Officials

Chairman: Ragnar Huslende (Ericsson LM)

Vice-chairs: Juha Rönkä (NOKIA Corp.)

Thomas Belling (Siemens Ag)

Secretary: David Boswarthick (CN3#33bis) / Seung Don Han (CN3#34)(MCC)

## 1.2 CN3 Meetings

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

- CN3#33bis: 4<sup>th</sup> - 7<sup>th</sup> Oct-2004, Sophia Antipolis, France. Hosted by ETSI
- CN3#34: 15<sup>th</sup> - 19<sup>th</sup> Nov-2004, Seoul, Korea. Hosted by Samsung Electronics Co. Ltd.

The detailed meeting reports are contained in **NP-040552** and **NP-040553**. This status report (**NP-040589**) summarises the results from the meetings and presents the current status of work in CN3.

## 1.3 Administrative Work

CN3 has not reviewed the 3GPP work plan in detail, but has determined the status of work for every Rel-6 work item.

# 2. Work Items Rel-4 and earlier

## 2.1 Technical Enhancements and Improvements

None

# 3. Work Items Rel-5

## 3.1 End-to-end Quality of Service: Go interface

Some corrections for the Go interface are still necessary. Document **NP-040555** contains the following CRs for TS 29.208:

- N3-040814 (Rel-5): The "Authorize QoS resources" procedure applies at session establishment and modification. It is clarified that an authorization token is generated only at session establishment.
- N3-040815 (Rel-5) and N3-040893 (Rel-6): The conditions for triggering the "Removal of QoS commitment" procedure are clarified to ensure that the SBLP gates are closed correctly when a session is modified.
- N3-040864 (Rel-5) and N3-040865 (Rel-6): The conditions for triggering of "Authorization of PDP context modification" and "Indication of PDP context modification" procedures are clarified to cover all cases when the change is initiated either by the UE or by the network.

## 4. Work Items Rel-6

### 4.1 *Interworking between the IM CN Subsystem and IP networks*

TS 29.162 v2.0.0 is presented to CN#26 for approval in **NP-040588**. Since the previous plenary, the specification of IPv4/v6 interworking has been completed and a number of editorial changes have been made.

CN3 considers this work item as complete.

### 4.2 *Interworking between the IM CN Subsystem and CS networks*

Document **NP-040582** contains agreed CRs to TS 29.163, as follows:

- N3-040873 states that it is possible to send the 'Precondition met' indication in any SDP offer depending on when the continuity signal is received.
- N3-040834 makes some corrections to EFR codec parameters
- N3-040859 adds procedures for signaling out-of-band DTMF from the CS network towards the IMS in order to align with recent stage 2 requirement.
- N3-040792 is an editorial correction.

CN3 considers this work item as complete.

### 4.3 *Mn Interface*

Document **NP-040583** contains the following agreed CR to TS 29.163:

- N3-040874: This CR specifies how the MGCF should use the RTCP bandwidth modifiers during the call establishment and when media are put on hold or resumed. This ensures alignment with an agreed SA4 CR to their specification TS 26.236.

CN3 considers this work item as complete.

### 4.4 *End-to-end Quality of Service, Gq interface*

Document **NP-040586** contains the following CRs for the Gq interface:

CRs to TS29.208:

- N3-040700 clarifies the mapping tables considering cases where the service information is updated
- N3-040895 allows the use of Application Identifier for IMS when policy decisions are made in PDF
- N3-040825 gives some corrections to the mapping tables related to early media handling

CRs to TS29.209:

- N3-040897 provides a correction of the procedure for resource reservation at PDF
- N3-040896 provides a correction of the bandwidth information derived from SDP to align with RFC3264.
- N3-040678 clarifies the semantics of updated Flow Description AVPs

- N3-040679 completes the rules for the Flow Grouping AVP, in particular concerning modification of service information
- N3-040680 contains various minor corrections to the text
- N3-040890 is an editorial update to make the Gq protocol more generic

CN3 considers this work item as complete.

#### **4.5 MBMS Gmb interface**

CN3 is responsible for the standardisation of the Gmb interface for MBMS (Multimedia Broadcast and Multicast Service). The set of CRs in **NP-040585** has been agreed to complete the work on Gmb in TS 29.061, as follows:

- N3-040685 adds a table of reused AVPs with references to the specifications where these AVPs are defined.
- N3-040634 adds a new AVP in the session start message to indicate whether the actual service is a multicast or broadcast service.
- N3-040686, to align with Diameter rules, states that new error values for Gmb should be assigned to Experimental-Result-Code instead of Result-Code.
- N3-040687 clarifies that after an RAR-RAA exchange, no AAR is needed, to avoid confusion with the Nasreq specification.
- N3-040732 adds the serving network identity associated with the MSISDN (for a subscriber using MBMS) in signalling from the GGSN to the BM-SC for charging purposes. This fulfills a recent requirement received from SA2.
- N3-040731 The Gmb specific AVP codes and experimental error codes are introduced, using the number series assigned by CN4.

CN3 considers this work item as complete.

#### **4.6 Support of Presence Capability, Pk interface**

CN3 is responsible for the standardisation of the Pk interface for the support of the Presence Capability, but has not seen any contributions so far. CN3 assumes that very little work is required for this WI but no companies have been able to prioritize this work.

Companies are kindly encouraged to consider this work item and submit contributions. CN3 has not put a completion date on this WI.

#### **4.7 WLAN**

CN3 is responsible for a stage 3 description for the Wi interface that is required in scenario 3 of the WLAN interworking architecture. The TS 29.161 was approved at CN#25, and no further changes have been proposed.

CN3 considers this work item as complete.

#### **4.8 Flow Based Charging**

CN3 is responsible for the stage 3 specifications of the Gx and Rx interfaces for Flow Based Charging.

#### 4.8.1 Gx Interface

The protocol for the Gx reference point is being specified as both as a stand-alone interface and a combined Gx/Gy interface. For the latter option, CN3 has specified a set of AVPs that can be added to the Gy interface specifications developed by SA5.

The Gx specification is contained in TS29.210 v2.0.0 which is submitted to CN#26 for approval. Please see **NP-040566**.

CN3 considers this work item as complete.

#### 4.8.2 Rx Interface

The work on the Rx interface has been given high priority during the two recent CN3 meetings and the work has progressed well. A new TS29.211 v1.0.0 is submitted to CN#26 for information. Please see **NP-040567**.

*CN3 has estimated this WI to be 65% complete. Estimated completion date is March 2005 (CN#27). CN3 would like to ask for an exception to the Rel-6 freeze timescale accordingly.*

### 4.9 Technical Enhancements and Improvements

#### 4.9.1 Enhanced Radius Gi interface

At CN#24 two CRs proposing extensions to the Gi Radius interface were discussed. The CRs proposed to include either the TFT filters or both the TFT filters and SBLP filters in the Radius interface. No agreement was reached at CN#24, therefore the issue was referred back to CN3 for further discussion. At CN#25, after an LS exchange with SA2, the issue was still not resolved. At the recent CN3#34 meeting in Seoul, CN3 finally managed to reach a conclusion. The following enhancements to the Radius Gi interface were agreed, please see **N3-040584**:

- N3-040846 specifies that packet filters optionally may be added to the Radius Gi interface
- N3-040847 specifies that the DSCP optionally may be added to the Radius Gi interface

Interested delegates can find a further explanation and justification for these CRs in the CN3 discussion paper N3-040754.

#### 4.9.2 IP spoofing

CN3 has agreed the following CR aimed at preventing IP spoofing, please see **NP-040591**:

- N3-040869 states that if IP spoofing is to be prevented, the GGSN shall verify the source IP address of the IP packets from the UE and compare it against the address assigned during the PDP context activation procedure.

#### 4.9.3 Service Based Local Policy

CN3 has agreed two CRs related to new stage 2 requirements for Rel-6. Please see the following CRs in **NP-040560**:

- N3-040863: GGSN allows the establishment of a non-realtime PDP Context without an Authorization Token.
- N3-040894 (editorial revision of N3-040892): PDF procedures related to session release have been corrected.

## 4.9 Other Rel-6 WIs

### 4.10.1 Circuit-switched Data Communication

CN3 has previously developed a document, TR 23.910 that has been used as a stage 2 specification for circuit-switched data bearer services. CN3 has now transformed this TR into a proper TS for Rel-6. This has involved mainly editorial work, and removing some overlap with existing stage 3 specifications. The new specification, TS23.202 v1.0.0 is submitted to CN#26 for information and approval. Please see **NP-040565**.

CN3 agreed that TR23.910 is not to be carried over to Rel-6.

A new WID for this work is provided in **NP-040563**.

A corresponding CR to TS29.007 Rel-6 is provided in **NP-040587**:

- N3-040885: A general update of TS 29.007, e.g. it introduces a reference to the new TS23.202, and copies some normative text from TR23.910.

CN3 considers this WI as complete.

## 5. Work Items Rel-7

### 5.1 Diameter on the PDG Wi interface

This Work Item will introduce support for Diameter on the WLAN Wi interface. In Rel-6 the Wi interface is based on Radius. The work has not yet started.

Planned approval date: September 2005

### 5.2 Diameter on the GGSN Gi interface

This Work Item will introduce support for Diameter on the GPRS Gi interface. Currently, the Gi interface is based on Radius. The work has not yet started.

Planned approval date: September 2005

## 6. Output Documents

### 6.1 Change Requests

| CN#26 doc# | CN3 doc#  | Title   | Spec   | CR  | R | Cat | Rel   | Ver.   | Work Item |
|------------|-----------|---|--------|-----|---|-----|-------|--------|-----------|
| NP-040587  | N3-040885 | Transfer of information from TR 23.910  | 29.007 | 106 | 1 | B   | Rel-6 | 5.10.0 | [new WID] |
| NP-040555  | N3-040814 | Authorize QoS resources with no generation of authorization token at session modification | 29.208 | 077 | 1 | F   | Rel-5 | 5.8.0  | E2EQoS    |
|            | N3-040815 | Removal of QoS commit for session modification  | 29.208 | 081 | 1 | F   | Rel-5 | 5.8.0  |           |
|            | N3-040864 | Modification of PDP contexts  | 29.208 | 089 | 1 | F   | Rel-5 | 5.8.0  |           |

| CN#26 doc# | CN3 doc#  | Title  | Spec   | CR  | R | Cat | Rel   | Ver.  | Work Item    |
|------------|-----------|--|--------|-----|---|-----|-------|-------|--------------|
|            | N3-040865 | Modification of PDP contexts   | 29.208 | 090 | 1 | A   | Rel-6 | 6.1.0 |              |
|            | N3-040893 | Removal of QoS commit for session modification                                     | 29.208 | 082 | 3 | A   | Rel-6 | 6.1.0 |              |
| NP-040582  | N3-040792 | Editorial mistake in Table 12  | 29.163 | 059 |   | D   | Rel-6 | 6.4.0 | IMS-CCR-IWCS |
|            | N3-040834 | Corrections to EFR codec parameters  | 29.163 | 056 | 1 | F   | Rel-6 | 6.4.0 |              |
|            | N3-040859 | DTMF towards IM CN subsystem   | 29.163 | 057 | 2 | C   | Rel-6 | 6.4.0 |              |
|            | N3-040873 | Mapping of continuity signal   | 29.163 | 054 | 3 | F   | Rel-6 | 6.4.0 |              |
| NP-040583  | N3-040874 | Clarifications for Mn procedures for call hold                                     | 29.163 | 058 | 2 | F   | Rel-6 | 6.4.0 | IMS-CCR -Mn  |
| NP-040585  | N3-040634 | Gmb. New AVP to indicate Multicast or Broadcast service                            | 29.061 | 129 |   | F   | Rel-6 | 6.2.0 | MBMS         |
|            | N3-040685 | Gmb. Table with reused AVPs  | 29.061 | 128 | 1 | F   | Rel-6 | 6.2.0 |              |
|            | N3-040686 | Gmb. Correction to the Result-Code AVP   | 29.061 | 130 | 1 | F   | Rel-6 | 6.2.0 |              |
|            | N3-040687 | Gmb. General corrections and clarification on the use of RAR                       | 29.061 | 131 | 1 | F   | Rel-6 | 6.2.0 |              |
|            | N3-040731 | Gmb. Update of AVPs codes and permanent failures codes.                            | 29.061 | 133 |   | F   | Rel-6 | 6.2.0 |              |
|            | N3-040732 | Gmb. Serving Network identity  | 29.061 | 134 |   | F   | Rel-6 | 6.2.0 |              |
| NP-040586  | N3-040678 | semantics of updated Flow-Description AVP(s)                                       | 29.209 | 001 | 1 | F   | Rel-6 | 6.0.0 | QoS1         |
|            | N3-040679 | Flow grouping AVPs in modified service information                                 | 29.209 | 002 | 1 | F   | Rel-6 | 6.0.0 |              |
|            | N3-040680 | Smaller corrections to avoid misinterpretations                                    | 29.209 | 003 | 1 | F   | Rel-6 | 6.0.0 |              |
|            | N3-040700 | Clarification on Mapping Table 7.1.1.1   | 29.208 | 075 | 2 | F   | Rel-6 | 6.1.0 |              |
|            | N3-040895 | Allowing the use of Application identifier for IMS                                 | 29.208 | 076 | 3 | C   | Rel-6 | 6.1.0 |              |
|            | N3-040896 | Bandwidth attributes   | 29.209 | 009 | 1 | F   | Rel-6 | 6.0.0 |              |
|            | N3-040825 | Correcting Mapping Table[Update to existing CR 074 against 29.208]                 | 29.208 | 074 | 3 | F   | Rel-6 | 6.1.0 |              |
|            | N3-040897 | Resource reservation at PDF  | 29.209 | 008 | 3 | F   | Rel-6 | 6.0.0 |              |
|            | N3-040890 | Modifications to Gq protocol to make it more generic                               | 29.209 | 010 |   | D   | Rel-6 | 6.0.0 |              |
| NP-040584  | N3-040846 | RADIUS Enhancements on the Gi interface to enable QoS correlation (Packet Filters) | 29.061 | 139 | 1 | B   | Rel-6 | 6.2.0 | TEI6         |
|            | N3-040847 | RADIUS Enhancements on the Gi interface for QoS information (Negotiated DSCP)      | 29.061 | 138 | 1 | B   | Rel-6 | 6.2.0 |              |
| NP-040591  | N3-040869 | Prevention of IP spoofing  | 29.061 | 137 | 3 | F   | Rel-6 | 6.2.0 | TEI6         |
| NP-040560  | N3-040863 | SBLP and non-real-time PDP Contexts  | 29.207 | 138 | 2 | F   | Rel-6 | 6.1.0 | TEI6         |
|            | N3-040894 | QoS procedure at session release   | 29.207 | 142 | 3 | F   | Rel-6 | 6.1.0 |              |



## 6.2 Liaison Statements

The following Liaison Statements are contained in **NP-040554**:

| Tdoc               | Title   | LS To        | LS Cc                    | Attachments             |
|--------------------|---|--------------|--------------------------|-------------------------|
| N3-040681          | Clarifications on the Rx interface                            | SA2          |                          |                         |
| N3-040725          | LS on Diameter codes and identifiers                          | CN4          |                          | TS 29.210 V1.1.0        |
| N3-040849          | Reply LS on MBMS information Elements                         | RAN3, GERAN2 | SA2, SA4, CN1, CN4, RAN2 |                         |
| N3-040867          | LS on CN3 assumption on the scope of FBC for Rel6             | SA2          |                          |                         |
| N3-040868          | Reply on LS on completion of network initiated SCUDIF support | RAN3         | CN4, CN1, SA2            |                         |
| N3-040872          | Reply LS on Cooperation on TISPAN NGN                         | ETSI, TISPAN | SA1, SA2, CN1            |                         |
| N3-040884 (Note 1) | CN3 impacts on Early IMS security                             | SA3          | CN                       | N3-040881 and N3-040882 |

Note 1: N3-040884, which is copied for information to the CN plenary, deals with Early IMS Security. To ensure technical correctness, CN3 has reviewed two proposed CRs to TS29.061 on this topic, but has not agreed to adopt these CRs in TS29.061. CN3 has forwarded these CRs together with an LS to SA3 saying that CN3 has a preference for the inclusion of this information in TR33.878, but asks SA3 to decide where the documentation of GGSN interaction impacts as a result of Early IMS Security is best addressed.

## 6.3 Work Items

CN3 provides the following Work Item Description sheet to CN#26 for approval:

| Tdoc#            | Title  | Rapporteur     | Company | Status |
|------------------|--|----------------|---------|--------|
| <b>NP-040563</b> | Draft WID on Reorganization of CS data specifications. | Thomas Belling | Siemens | New    |

## 6.4 Technical Reports and Technical Specifications

### 6.4.1 Specifications for approval

CN3 provides the following technical specifications to CN#25 for approval:

| Tdoc #           | Number | Version | Rel   | Title  | Rapporteur     | Company |
|------------------|--------|---------|-------|--|----------------|---------|
| <b>NP-040565</b> | 23.202 | 1.0.0   | Rel-6 | Circuit switched data bearer services (for information and approval) | Thomas Belling | Siemens |
| <b>NP-040566</b> | 29.210 | 2.0.0   | Rel-6 | Charging rule provisioning over Gx interface                         | Juha Rönkä     | Nokia   |

|                  |        |       |       |  |               |    |
|------------------|--------|-------|-------|--|---------------|----|
| <b>NP-040588</b> | 29.162 | 2.0.0 | Rel-6 | Interworking between the IM CN subsystem and IP networks | Nigel Holland | O2 |
|------------------|--------|-------|-------|--|---------------|----|

## 6.4.2 Specifications for information

CN3 provides the following technical specification to CN#25 for information:

| <b>Tdoc #</b>    | <b>Number</b> | <b>Version</b> | <b>Rel</b> | <b>Title</b>                            | <b>Rapporteur</b>       | <b>Company</b>  |
|------------------|---------------|----------------|------------|---|-------------------------|-----------------|
| <b>NP-040567</b> | 29.211        | 1.0.0          | Rel-6      | Rx interface and Rx/Gx signalling flows | Javier Gonzalez Gallego | Nortel Networks |

## 7. Next Meetings

The next CN3 meetings are scheduled as follows:

| <b>Meeting</b> | <b>Date</b>  | <b>Location</b>   |
|----------------|--|-------------------|
| CN3#35         | 14 <sup>th</sup> ñ 18 <sup>th</sup> February, 2005 | Sidney, Australia |
| CN3#36         | 25 <sup>th</sup> ñ 29 <sup>th</sup> April, 2005    | Cancun, Mexico    |

## 8. Acknowledgements

I would like to thank the delegates for their contribution to the meeting and ETSI and Samsung Electronics for hosting the meetings. David Boswarthick, MCC, deserves special thanks for his long and faithful service for CN3. David's last meeting was CN3#33bis, but he has been helpful as always even in the transition period and in training the new secretary Mr. Seung Don Han. I would also like to thank Seung Don for very good work during his first meeting, the very busy CN3#34 meeting in Seoul.