

3GPP
Technical Specification Group Core Networks
Meeting #2, Fort Lauderdale, 2-4 March 1999

Document **NP-99077**
supersedes NP-99070

Source: **TSG-CN Secretary**
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Title: **Report of TSG-CN #2**

Document for: **Decision**

Attention: **Agenda item 15**

1 Opening of meeting

The second meeting of 3GPP TSG CN was held from 2 to 4 March 1999 in Fort Lauderdale, USA, at the invitation of Bellsouth, Nokia Americas, Omnipoint, Ericsson, Lucent Technologies, Nortel Networks, Siemens and Pacific Bell Wireless. The meeting was chaired by the CN Convenor, Mr Stephen Hayes.

2 Welcome address by host

On behalf of the hosts, the CN Convenor, Mr Stephen Hayes, welcomed the delegates and gave a short briefing of the results of the PCG meeting held the previous day. The PCG had elected the following officials:

Chairman: Mr Karl Heinz Rosenbrock (ETSI)
Vice-Chairman: Dr Akio Sasaki (ARIB)
Vice-Chairman: Dr Asok Chatterjee (T1)

who would hold office for one year.

The PCG had spent considerable time discussing the election process and logistics of the forthcoming elections for the TSG officials, and a satisfactory conclusion had been reached. TSG Chairs would be elected in the first round and vice-chairs would be elected in the second round.

3 Adoption of the agenda

The agenda (NP-99001) was adopted, and the present report follows the structure of that agenda.

4 Meeting report of TSG-CN meeting #1

The report (NP-99015) was approved. It was noted that the previous agreement that the basis for the CN work would be the GSM release 98 technical specifications should be made explicit. There was concern that there could be a difficulty with an intermediate release of the CN specifications since the baseline specifications may not be formally available until after April. It was not agreed that an intermediate release was necessary.

5 Convenor's report and objectives for meeting #2

The Convenor indicated that this second meeting of TSG CN should aim to:

approve its own Terms of Reference and those of its Working Groups;

decide on which work items and GSM specifications should be transferred from ETSI SMG to CN and indicate its intention to accept them once formally offered;

arrive at a meeting schedule for TSG CN during 1999, aligned with the output of 3GPP specifications.

6 Election of TSG Chairman and Vice-Chairmen

The rules governing the election of TSG officials was briefly reviewed.

There was only one candidate for the position of Chairman, and in consequence, Mr Harald Dettner (Siemens, ETSI) was appointed by acclamation as Chairman.

In view of the appointment of an ETSI representative as Chairman, two candidate vice-chairmen from members of the same partner organization, Mr Ian Park (Vodafone) and Mr Ermmano Berruto (Telecom Italia - CSELT) magnanimously withdrew their candidatures. Hence the two remaining candidates, Dr Masami Yabusaki (NTT DoCoMo) and Mr Stephen Hayes (Ericsson, T1) were appointed by acclamation as Vice-Chairmen.

The officials would take over their roles following the end of the present meeting.

Document NP-99055 is addressed under agenda item 11.

[Secretary's note: These positions were later ratified by the PCG.]

7 TSG Working Group reports (including approval of WG ToRs, WI transfer)

7.1 WG1 MM/CC/SM

Mr Hannu Hietalahti, WG CN1 convenor, presented the report of the first meeting (NP-99017) and a follow-on ad hoc meeting of CN1 (NP-99019), drawing attention to a few topics of particular note, such as §3.1 on layer 3 message segmentation, where improvement was required; §3.2 on code points, where obsolete code points for low data rates could be excised; §3.12 on MM/RR functions, where a joint meeting

with SMG9 was required concerning the modifications needed to handle the change of SIM data; §7.5 on the need to split GSM 04.08.

New work items appeared in NP-99029, NP-99030 and NP-99031. Of these, the first had probably been superseded by the discussions of the CN2 proposed work items (which discussion in fact preceded that on CN1). Mr Fukuda presented NP-99030; with the proviso that the effects on charging were for further study, this WI was approved. The WI in NP-99031 was left in abeyance pending the conclusions on the CN2 equivalent on variable length security parameters. A liaison (NP-99056) was drafted to SA3 on the matter.

The Terms of Reference for CN1 were presented in NP-99020 (specifically, annex A), later superseded by NP-99059 and then by NP-99075, but it was stressed by the CN1 Convenor that this document had not yet been agreed by the participants in CN1. NP-9905 was approved as the ToR for CN1.

7.2 WG2 CAMEL/MAP

Mr Ian Park, WG CN2 co-convenor, presented the report of the first meeting of CN2 (NP-99042).

NP-99028 listed the GSM specifications which were being considered as the baseline for 3GPP CN work, and the list was analysed in some depth.

Document NP-99022 presented some proposed work items for CN2, and these were discussed at length. The new WIs were as follows:

- 1 The Gateway Location Register
- 2 Pre-paging for GSM R99
- 3 Variation of authentication parameter length
- 4 Bearer services and teleservices negotiation
- 5 Bearer services and teleservices modification during a call
- 6 Out-of-band transcoder control
- 7 Maximum call number of multiple call
- 8 QoS control for asymmetric bearer for packet services.

It was noted that some of the new work items (numbers 1, 2 and 6 at least) would initially take the form of feasibility reports (and thus be published as TRs). Depending on the conclusions of those reports, it might be appropriate to produce new specifications or Change Requests to existing TSs. Numbers 4 and 5 would produce CRs directly. A drafting group was set up to refine the proposed new work items, and the results were provided in NP-99069; lack of time precluded a detailed review of this document. Dr Yabusaki (WG CN2 co-convenor) stressed the need for obtaining precise and stable stage 1 and stage 2 specifications from TSG SA in time for stage 3 specifications to be produced by CN2; this applied particularly to numbers 7, 8 and 3. Concerning number 2, it was noted that coordination with CN1 would be required. It was noted that in general, the level of detail across the WIs was not consistent. A lengthy discussion ensued, the conclusions of which were as follows:

1 and 2: Approved; feasibility study report to be produced May 99.

3 and 8: Awaiting input from SA3, to whom a liaison was drafted (NP-99056); result would probably be Change Requests, but scope could be much wider than presently proposed; meanwhile, WI not approved.

4, 5 and 7: These were considered as an ensemble, and would be reworked. A new, more comprehensive work item was generated on 3G call control model and protocols (NP-99069). This will be initially addressed with SA2.

6: As 1 and 2; it was stressed that the WI concerned out-of-band control, but it was well accepted that in-band control would continue to be useful. A stage 2 analysis would be done, however it would contain a benefits analysis section.

Action 1: Mr Ian Park to draft liaison to SA3 requesting stage 1 / 2 input for WIs 3,

It was agreed that the complexities of writing interworking specifications between 3GPP core networks and ISUP v3 rendered such a task futile; neither the option of choosing the ETSI-specific ISUP nor the global ITU-T ISUP was appropriate, since one would be too restrictive and the other too general. It was agreed, therefore, not to take on GSM 09.14 in 3GPP.

The scope of CN2 was further elaborated in NP-99025, presented by Dr Yabusaki.

CN2 had already sent some liaison statements to other committees (NP-99041), and a principle was agreed that approval by TSG CN of liaisons produced by Working Groups was not be required. However, liaisons should not be emitted directly by any subgroups of WGs. It was noted that the PCG would establish a list of organizations with which 3GPP TSGs could establish liaisons; according to the Working Procedures (NP-99040), ITU was explicitly excluded from this list.

It was confirmed that Quality of Service issues would be concentrated in the working group established within TSG SA for the purpose, and it was emphasised that CN2 was coordinating well with that group.

NP-99052 proposed a method of organizing the work within TSG CN, as did NP-99065 (supersedes NP-99053). WG CN2 decided to establish two subgroups (SWGs):

CN2A	Basic call stage 2 CAMEL
CN2B	MAP GTP Subscriber data management MNP maintenance Mobility management stage 2

according to NP-99024, which also cited several areas of joint responsibility. (The precise scopes of the work addressed in each subgroup was modified by the discussions on supplementary services reported under agenda item 11.) It was hoped that two vice-chairmen of CN would in due course be appointed, and that these persons would chair the SWGs.

It was noted (NP-99026) that SMG3 WP-C had arranged a series of joint meetings with ETSI SPS3 on CAMEL matters. It was confirmed that non-ETSI 3GPP members' delegates would be invited to these meetings, including those "hosted" by SPS3.

Action 2: Mr Meredith to ensure SPS3 meeting invitations on CAMEL were extended to CN2 delegates as well as SMG3c delegates.

Following discussion of NP-99023 and NP-99057, a revised set of Terms of Reference appeared in NP-99076. NP-99076 was approved as the ToR for CN2.

[Secretary's note: CN2's proposal to hold meetings mid-week to mid-week is reported under agenda item 11.]

7.3 WG3 Interworking with external networks

Mr Klehn, co-convenor of WG CN3, presented a report of the first CN3 meeting (NP-99004). There was only one identified new work item so far, but the second meeting of the WG would address the matter of WIs. This work item was approved.

The Terms of Reference for CN3 appeared in NP-99068 (superseding NP-99062), following discussions on NP-99005. NP-99068 was approved as the ToR for CN3.

The GTP (GSM 09.60) was discussed with a view to determining in which WG - CN2 or CN3 - the tunnelling protocol should best be handled. It was concluded that the matter should in fact reside with CN2; however aspects related to the transport of network interface data would remain in CN3

8 TSG CN work programme

The GSM TSs proposed to be transferred to CN were listed in NP-99019 (CN1), NP-9928 (CN2) and NP-99058 (CN3). It was noted that the GPRS work items did not appear in any of these lists, but that they were of interest to CN1. A proposed liaison to SMG3 and SMG containing a consolidated list of WIs and TSs was generated but there was insufficient time to review the list (NP-99074). This list was to be sent out for electronic comment by the secretariat. Responses were expected by 1999-03-10 as the results had to be sent to SMG#28 bis.

An additional aspect of the work programme was the allocation of TSs to working groups. Mr. Dettner would generate a preliminary allocation list (TSs to WG) for discussion and agreement by e-mail.

Action 3: Mr Dettner to maintain the list describing the allocation of TSs to WGs.

It would fall to the 3GPP Support Group to ensure that no GSM specifications were overlooked by the four TSGs.

Action 4: 3GPP Support Group to ensure complete transfer of TSs from SMG to 3GPP TSGs.

NP-99050 had been covered under other discussions, and was not formally addressed.

9 Relationship with SMG3/SMG4

Mr Dettner proposed some modalities of work transfer from SMG3 to CN (NP-99043). With the exception of GSM 09.12 and 09.14, it seemed that all the deliverables of SMG3 were common to CN. The meeting expressed its agreement to taking on the maintenance of GSM specifications in the context of CN; the method of working via joint meetings would render this relatively easy. However, it was emphasised that approval of an output document by CN did not necessarily imply automatic approval by SMG3; normally, it was to be expected that the final session of a joint CN / SMG3 meeting would be SMG3-only, and would be largely dedicated to approving the output CRs.

For joint SMG3 / CN meetings, it was agreed that contributions would be numbered according to the 3GPP conventions; there seemed to be no desire from SMG3 delegates to double-number contributions with SMG3 numbers as well (though this possibility was not excluded if some need for it was found). Moreover, it was concluded that the e-mail exploders (with their membership) for SMG3 would be copied to 3GPP TSG CN analogues, and that these latter should be used for all future business. (The SMG3 lists would not be closed straight away, but their use was expected to be almost entirely eliminated.) It was also observed that a corresponding exploder in 3GPP need not be created if the SMG3 exploder were dormant.

Action 5: 3GPP Support Group to create e-mail exploders analogous to the SMG3 exploders under the 3GPP.
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10 System coordination aspects (relationship with TSG SA)

It was confirmed that, although the work programme of TSG CN would be reviewed and coordinated by TSG SA, no formal approval of work items or deliverables would be required by SA. Similarly, the role of PCG was to intervene only by exception. No explicit approval from PCG would be required.

The role of the TSG-CN plenary was discussed. It was agreed that the primary role of the TSG-CN plenary was coordination between the WGs and dealing with inter-CN WG issues.

For the penultimate meeting session (Thursday morning, 08:00 to 10:00), CN (and T) recessed so that interested delegates could attend an expanded TSG SA meeting where matters of coordination were further discussed. *[Secretary's note: this discussion can be found in the report of the TSG SA meeting.]*In the absence of any representative from TSG T or its working groups, Mr Dettner introduced NP-99002 concerning the development process for 3GPP specifications. The document's precepts were accepted, except that TSG CN stated that it had no intention of producing PICSs for its specifications. A liaison to this effect was returned to TSG T (NP-99071). In response to a further question from TSG T (NP-99003), it was confirmed that testing of mobility procedures, call control and supplementary services could be based on GSM 11.10 however, there was reluctance to state that 11.10 was entirely adequate to test UMTS CN capabilities

NP-99037 gave the methods by which coordination could be achieved by TSG SA, but this document had been overtaken by the results within that TSG. It was being proposed that all TSG and WG chairmen should attend TSG SA meetings. Dr Yabusaki (NP-99054) proposed that a session of each SA meeting perform this coordination role. It was noted that SA would normally meet in conjunction with ETSI SMG plenary, and that this should render coordination relatively easy. There was general endorsement of the principle of having TSG-SA perform the coordination role and the general principles of coordination as outlined in NP-99037.

11 TSG-CN working methods

It was noted that ETSI SMG had not yet formally release its GSM specifications to 3GPP, and that in fact the post-SMG#28 release versions were not yet available. ETSI would not relinquish its copyright on these documents, but would nevertheless supply them as input to the 3GPP work. There was some discussion over the modalities of maintenance of older releases of GSM specifications, and it was concluded that meetings convened jointly between CN and SMG3 (and between SA and SMG) could solve the logistics of this problem. TSG CN would confirm its willingness to accept responsibility for those GSM specifications appearing in a list prepared following the working group discussions (agenda item 7).

Some modalities of cooperation between CN and SMG3c were presented by Mr Dettner in NP-99043.

Further to the discussions reported under agenda item 7.2, it was concluded that the list of bodies with whom liaison was to be permitted would be provided by PCG based on recommendations of the TSGs. To avoid unnecessary bureaucracy, CN would recommend that the list be declared as "non-exhaustive", allowing contact with other bodies if the need should arise. However, a caveat was placed upon "non-prescribed" liaisons that the CN chairman's permission would be sought prior to dispatch of any such outgoing liaison statement. Apart from this proviso, WGs could receive and issue liaison statements

directly, without going via the TSG CN itself; however, this did not apply to SWGs, which should always operate under the auspices of the WGs.

[Secretary's note: This request denied by PCG, but electronic approval of extensions to the list will be used to speed the process.]

CN therefore resolved to convey a verbal response to the liaison from the ITU-T SGa 11, 4 and 7 chairmen (NP-99045) to the PCG, stating that CN understood that the liaison addressed internetwork aspects, but that at the present time, TSG CN was not addressing interworking between IMT-2000 families, but only between members of the same family (i.e. GSM-3GPP); however, this did not exclude such work at some future date, and that if the TSG CN scope changed to include such topics, then the interested ITU-T SGs would be informed.

Action 6: Mr Hayes to convey to PCG a verbal response to the liaison from ITU-T SGs 11, 4 and 7 chairman.
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In various contributions, a variety of terms had been used for the same concept of the core network for 3GPP. Following a proposal by Dr Yabusaki, it was agreed that the term "UMTS core network" would be used in all cases.

Siemens proposed (NP-99052) to establish a fourth working group within CN, or possibly a third subgroup within CN2, on supplementary services, equivalent to SMG3 WP-B. After a long discussion, it was concluded that the matter would best be handled by an ad hoc group under CN, convened by Mr Seffan Habermann. The ad hoc group would meet in conjunction with SMG3 WP-B, and would complete the work necessary for release 99.

Mr Ian Park (NP-99027) presented further operating methods for CN and its WGs. It was agreed that "paperless" meetings was impractical (especially where SDL diagrams were involved), but that CN should strive towards "low-paper" meetings. The Secretary reported on the favourable results experienced in some ETSI committees where, for documents available on the file server prior to the start of a meeting, paper copies were made only on explicit request to the host; otherwise, delegates were expected to download the documents (and make their own paper copies if they wished, before coming to the meeting). For the benefit of hosts, it was proposed to add a field to the meeting document header to indicate whether copies should be made for all delegates or a subset of delegates. A further proposal was that the document list on the file server should make it clear whether a document contained SDL diagrams, and delegates could then decide whether or not to download them. *[Secretary's note: whilst understandable, this request may not always be easy to respect, since it would require that the responsible person in the 3GPP Support Group open every document to check whether or not SDL diagrams were included; however, it is the intention always to have an up to date document list on the server, and it may be possible for delegates to decide whether or not to download a given document based on its file size and its title.]*

In view of the decision to convert all GSM specifications from release 97 onwards to MS Word v8 (Office 97), it was agreed that CN and its WGs would use this version of Word for all future work.

ETSI had established the practice of loaning out licenses for Telelogic SDT, the preferred (rather expensive) SDL tool. The PCG would be asked to propose that the other partner standards organizations do the same for their members. For other graphics, requirements were less stringent, and the ETSI preferred software (Micrografx Designer v6) was relatively inexpensive to purchase.

It was (more or less) agreed that CN2 and its subgroups would operate a unified numbering document numbering system as described in NP-99027. AT&T proposed (NP-99032) setting a deadline by which contributions to a meeting should be available on the server. The deadline date relative to the meeting was debated, as was the rigour of guillotining all late contributions. It was concluded that a meeting chairman would use his discretion on whether or not to admit a late contribution, recognizing that it was sometimes unavoidable that a contribution proposing counter-arguments to earlier contributions was late. However, a chairman could be expected to give higher priority to contributions which had been made earlier rather than

later. The document handling principles of NP-99027 were felt to be generally consistent with NP-99032, but less harsh. For this reason, the principles of NP-99027 were adopted.

To allow for exceptional circumstances, each meeting announcement will indicate the deadline for document submission. The default deadline was to be three weekdays (M,Tu, W, Th, F) before the meeting.

Documents NP-99038, NP-99039, NP-99040 and NP-99068 addressed issues under this agenda item, but time precluded detailed examination. Delegates were encouraged to raise any questions relating to them on the e-mail exploder within two weeks.

Document NP-99050 suggesting incorporation of GSM work into the 3GPP was briefly discussed. It was noted that this proposal was consistent with the manner in which TSG-CN hoped to work. The document was noted.

Document NP-99054 concerning the need for a TSG plenary was noted.

Mr Noël Crespi (France Telecom) wished it to be recorded that, although France Telecom shared the concerns expressed in NP-99055 relating to an apparent unbalance in voting rights favouring a small number of large manufacturers within a limited geographical area, it did *not* support the proposed solution (weighting as a function of revenue in land mobile business). With that clarification, the document was noted.

WG CN2 had proposed holding meetings from mid-week to mid-week to avoid disruption of two weekends for those travelling long distances. After discussion of the merits and disadvantages of this idea, it was concluded that most delegates were in favour of the "traditional" start-week to end-week meeting. Thus CN would meet Monday-to-Friday only. This principle also applied as guidance to all working groups and subgroups.

12 Project support requirements

The Convenor introduced NP-99072, which identified the secretarial support required for the smooth running of CN and its WGs. The six identified roles did not amount to six individual people, and it would be a useful exercise to estimate the total resource required in man.months per year. The importance of continuity of support for each group was stressed. It was noted that the CN Secretary would step down after the present meeting, that the Secretary of CN1 (who also supported SMG3) would also leave shortly, and that there was clearly a shortfall of resource.

13 Future meeting schedule

The meeting schedule was presented in NP-99044, but was revised to take account of the coordination function of TSG SA. Mr Dettner would circulate a revised version after the meeting.

Action 7: Mr Dettner to circulate revised meeting schedule.
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14 Any other business

None.

15 Close meeting #2

Mr Dettner, Chairman Elect, thanked Mr Hayes for managing TSG CN during the establishment phase, and looked forward to working with him and Dr Yabusaki as vice-chairmen in the future. Mr Hayes thanked the participants, the host personnel and the Secretary, and closed the meeting.