Source:	**3GPP TSG N-4 Chairman**
Title:	**Status Report of TSG N-4**
Agenda item:	**5.4.1 (Report from N4)**
Document for:	**INFORMATION / APPROVAL**

1   Introduction

This report is an executive summary of the progress of TSG N-4 on the work items, which has been active in the working group since the TSG-N plenary meeting #06. Detailed meeting reports have been made available on the 3GPP server and they are also provided to this meeting as Tdocs *NP-000282* (Charleston) and *NP-000283* (Rotenburg).

TSG N-4 has had two meetings: 27-31 March in Charleston, USA, hosted by a number of USA companies and 22-26 May in Rotenburg a.d. Fulda, Germany, hosted by Siemens. Some N4 delegates participated to the CN/S2 #02 Workshop held on 13-14 April 2000 in Helsinki (Finland) hosted by Nokia. TSG N-4 also participated in a TrFO/TFO Workshop on the 8th of May in Stockholm, hosted by Ericsson. Some delegates participated to the CN/S3 #01 and CN/S2 #03 workshops held on 13-14 June and 14-15 June in Sophia Antipolis (France), both hosted by ETSI.

2   Main Results

Only one nomination for the N4 chairmanship was received at the TSG N-4#02 meeting and Yun-Chao Hu (LM Ericsson, ETSI) was voted as the new TSG N-4 Chairman by acclamation. No nominations for the vice-chairmanship have been received at the TSG N-4#02 meeting and therefore vice-chairman elections will take place at the next N4#03 meeting.

The N4 WG prioritised their work on the corrections for Release 99 and performed a substantial effort on the production of corrective CRs for the work items GPRS and GPT. Based on this effort it is believed that the GPRS Release 99 is considered stable.

The American Local Number Portability (LNP) has been introduced as part of the PCS1900 Harmonisation for Release 99. CRs on this issue has been made available to the Plenary for their approval.

Upon request from S5 an enhanced charging capability has been introduced for Release 99. The PDP context charging characteristics will complement the subscribed charging characteristics. This is introduced in order to enable GPRS charging dependent on both subscriber and APN.

N4 committed to provide the Core Network security CRs to the TSG CN#04 plenary as part of Release 2000. N4 provided the necessary CR for the required modifications to support MAP Security. From the other hand N4 has worked on the MAP based Layer 1 and 2 Core Network Security but requires input requirements from S3. Furthermore GTP Security has been addressed as well and again requires S3 requirements.

N4 is looking forward to work on the Release 2000 issues and is well prepared to do so.

3   Information to be noted

3.1   Meeting schedule for year 2000

1.	TSGN4#01	27-31 March 2000 (Charleston, USA)
2.	TSGN4#02	22-26 May 2000 (Rotenburg, Germany)
3.	TSGN4#03	17-21 July 2000 (Helsinki, Finland)
4.	TSGN4#04	28 Aug – 1 Sep 2000 (Seattle, USA)
5.	TSGN4#05	13-17 November (Paris, France)

3.2 Liaison Statements already sent

The list of Liaison Statements already sent by N4 is in **NP-000284.**

3.3 TSG N-4 Work Item List

N4 has reviewed Feature/Building Blocks/Work Tasks matrix and provided their comments to the CN/S2 #02 workshop. No companies have committed to draft the WI descriptions for the evolution of the core network bearers & transport, which was allocated to N4 to be produced. Concerning the WI description on the Layer 3 Segmentation, N4 considers themselves not involved into this issue.

4 Issues for Decisions/Actions

4.1 Liaison Statements

Three Liaison Statements from TSG N4 needs presentation and approval from the CN Plenary. These Liaison statements are in Tdocs **NP-000285**, **NP-000286** and **NP-000xxx**

4.2 Release 1999

All the listed CRs are submitted to the CN Plenary for endorsements and ratification.

4.2.1 Work Item CAMEL Phase 3 (Agenda 6.2.4)

A number of corrective CAMEL Phase 3 CRs are in Tdoc **NP-000289**. One CR is add functionality to the Release 99 and needs endorsement from the CN Plenary.

The Notify Subscriber Data Change operation sends an identifier which indicates call forwarding, call barring, ODB or CSI to the gsmSCF. The addition of an additional indicator "changed data" will improve the interaction between the HLR and the gsmSCF. This was requested by 3GPP N2 and accordingly implemented. This enhancement is considered as a modification of R'99 features and needs to be endorsed by the CN Plenary.

4.2.2 Work Item Security (Agenda 6.3.4)

The Security CRs addresses necessary corrections to the MAP message **Send-Authentication-Info** and editorial modifications to improve the description of the IMEISV on the handling of security requirements. These CRs are in Tdocs **NP-000295** (IMEI Security) and **NP-000xxx** (Security)

4.2.3 Work Item TEI (Agenda 6.6.4)

The TEI CRS addresses necessary corrections to the R'99 specifications (e.g. 23.003, 29.002, 29.060, etc). The main issues are version handling of MAP dialogues, handling of SMS dialogues, network Identifiers, etc.). These CRs are documented within Tdocs **NP-000302 (corrective).**

A number of TEI CRs addresses additional functionality to the Release 99 on the issues hexadecimal IMEIs, charging characteristics per PDP context, mandatory inclusion of IMSI within SGSN Context Response if P-TMSI Signature Mismatch, and UTRAN identifiers. These functional CRs are in Tdoc **NP-000301 (functional).**

The hexadecimal IMEI is an extension of the IMEI to support hexadecimal characters to enlarge the range of IMEI values. This modification addresses the assumed explosion of mobile terminals. *A specific cut-off date of the update of the old EIR platforms needs to be endorsed by the CN Plenary.*

The charging characteristics per PDP context introduce charging based per PDP Context in addition to the subscribed Charging Characteristics. This was requested by 3GPP S5 and accordingly implemented. However, this is considered as an additional functionality to Release 99 and needs to be endorsed by the CN Plenary.

The mandatory inclusion of the "IMSI within the SGSN Context Response if P-TMSI Signature Mismatch" will improve the Route Area Update (RAU) procedure. This enhancement is considered as a modification of an R'99 feature and needs to be endorsed by the CN Plenary.

The UTRAN identifiers are moved from 3GPP TS 25.401 to the TS 23.003. Although no technical change is contained in this move of UTRAN identifiers between 3GPP TSs, strictly speaking this change is still modification of feature to the particular TS (i.e. TS 23.003). Therefore, the CR is categorised, as C. This change is not reported in section 4.3

4.2.4 Work Item ASCI (Agenda 6.9.4)

The ASCI CRs are corrective CRs provided by the STF 139 ASCI Rapporteur group. These CRs are contained within Tdoc *NP-000287.*

4.2.5 Work Item Call Deflection (Agenda 6.10.4)

The Call Deflection CRs are corrective CRs and in Tdoc *NP-000288*.

4.2.6 Work Item CCBS (Agenda 6.11.4)

These CRs are corrective CRs and described in Tdoc *NP-000290*.

4.2.7 Work Item CF Enhancements (Agenda 6.12.4)

One CR addresses a functional change that needs to be endorsed by the CN Plenary. The remaining CRs are corrective CRs. The total set of CRs is in Tdoc *NP-000291*.

The functional CR addresses the interworking with networks that do not support the long-forwarded –to-number. This addresses specifically the GSM-UMTS interworking. This additional requirement needs to be endorsed by TSG SA as well.

4.2.8 Work Item GPRS (Agenda 6.13.4)

The GPRS CRs addresses corrections to the GPRS SMS related procedures and some editorial corrections. The GPRS CRs are corrective CRs and are in Tdoc *NP-000xxx*

4.2.9 Work Item GPT Enhancement (Agenda 6.14.4)

The GPT Enhancements are 21 corrective CRs with 2 editorial CRs. The corrective CRs are in Tdoc *NP-000293* and the editorial CRs are in Tdoc *NP-000292*.

4.2.10 Work Item Handover (Agenda 6.15.4)

The Handover CRs are corrective CRs and in Tdoc *NP-000294*.

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The Location Service CRs are corrective CRs and in Tdoc *NP-000296.*

4.2.12 Work Item Mobile Number Portability (Agenda 6.18.4)

The MNP CRs introduces functionality to the Release 99 in association with the PCS1900 Harmonisation. These CRs are in Tdoc *NP-000297*.

The MNP CRs addresses the necessary modifications to harmonise between the Mobile Number Portability with the American Local Number Portability. This additional functionality was requested by the previous TSG N#06 Plenary.

4.2.13   Work Item Multi Call (Agenda 6.19.4)

The MultiCall CRs are in Tdoc *NP-000298* and contains corrective CRs and one functional CR.

The previous 3GPP CN#06 raised the concern that MSC-A needs to know which one RAB has been selected in MSC-B in the subsequent handover from UMTS to GSM to release some calls not to be handed over after handover completion. This additional functionality solves this concern.

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The QoS Enhancement CRs are corrective CRs and in Tdoc *NP-000299*.

4.3   Release 2000

4.3.1   I.G.C – Call Control and Roaming (Agenda 7.3)

N4 could not progress very much on the issue of Transcoder Free Operation. A number of N4 delegates has participated to the TrFO/TFO Workshop (participated by S2, S4, R3, N1 and N4). Unfortunately, no immediate results were available after the workshop. Despite the urgency of the matter, no follow-up meeting could be agreed. Since no further workshops has been held the N4 meeting did not progress the TrFO issue.

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The SA/CN#06 Plenary assigned N4 to complete the MAP/GTP security for the Plenary #07. This was partially full filled. N4 completed the MAP Security Layer 3 CR with some open comments to be addressed as a successive CR to be submitted to the N4#03 meeting. N4 also discussed the MAP based Security Layer 1 & 2 for the administration and distribution of security keys. Before N4 can progress the work it needs to have further requirements from S3. Liaison Statements has been sent to S3 to retrieve these requirements.

N4 has not progressed the work on GTP Security since it is still waiting for the S3 requirements. Again a LS has been sent to S3 to remind an open standing LS from N4 (sent out as N2, predecessor of N4).

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5.   Acknowledgements

I would like to thank all delegates for their active participation to the discussions held during the N4 meeting. I am proud to mention that working environment is more bearable and we more social meeting hours per day.

My sincere thanks to Ian Park who has left a marvellous group to drive the standardisation activity with and I am sure that we need his expertise for a very looooong time.

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