

Nice, FRANCE**13 – 15 December 1999****Source: 3GPP TSG-N2 Chairman & Vice-Chairmen:****ian.park@vf.vodafone.co.uk****steffen.habermann@T-mobil.de****yun-chao.hu@era.ericsson.se****Title: Status report of TSG-N2 to TSG-N plenary meeting #6****Agenda item: 5.2.1****Document for: Information/approval**

1 Introduction

This report can be regarded as an executive summary of the work of N2, N2A and N2B since the last N plenary meeting. If you want the intimate details, please refer to the meeting reports, which are available on the 3GPP server as well as being documents for this meeting. TSG-N has had one meeting: 15 - 19 November in Phoenix, Arizona, USA, hosted by Lucent. In addition, N2A had a joint ad hoc meeting with ETSI SPAN3 on CAMEL phase 3, 20 - 21 October in Galway, Ireland, hosted by Eirtel, and N2B had an ad hoc meeting on several Release 99 work items, 19 - 21 October in Eton, UK, hosted by Nortel Networks.

2 Main achievements

We have taken note of the decision of the CN plenary meeting number 5, and there are now separate work item descriptions to cover the specification work, rather than extensions of the work items for feasibility studies.

The rest of this section summarises the status of the N2 work on each work item, ordered by work item name.

We have discussed proposals for changes to the MAP protocol to support **Call Forwarding Enhancements** (also known as long forwarded-to numbers); however further work on this is needed in both N2 and the SS ad hoc. We expect to complete this work in time for CN #7.

N2A have produced one corrective CRs to **CAMEL phase 2** for Release 98. The decision by CN plenary #5 has evidently been taken to heart!

N2A have produced a set of seven CRs for **CAMEL phase 3**: one against each of the specifications affected (23.008, 23.016, 23.018, 23.078, 23.079, 29.002 & 29.078). We have identified a number of open issues which will require some time to resolve; we expect that the resolution should be complete by CN #8. None is seen as contentious.

N2A have prepared a technical feasibility report for **CAMEL control of Voice Over IP services**. This is aimed at producing specifications as part of UMTS Release 2000. This report is presented for approval. N2 recommend that the specification work is undertaken as a work item for Release 2000.

We have discussed contributions on **Combined Mobility Management**, but there is still a substantial amount of work to be done in this area, and N2 propose that this work is done as part of UMTS Release 2000.

We have agreed a CR to 29.002 to support interworking between two HLRs for the **Follow Me** service. This completes the work in N2 for this work item.

The stage 2 and 3 specifications for the **Gateway Location Register** are presented for approval; some refinement of the SDL diagrams in the stage 2 is still needed. There is one open issue with the operation of CCBS in a GLR environment; this is expected to be resolved in time for CN #7.

The decision to be strict about corrective CRs to earlier releases has also borne fruit in **GPRS maintenance**. There is only one CR each against the Release 97 versions of GSM 09.02 and GSM 09.60, with the corresponding CRs against Release 98 and Release 99.

Work has continued on **GTP Evolution**, and the result is functionally stable, but unfortunately we still have more to do on the detail. An informal drafting meeting has been proposed for later this week; we hope that this will allow us to make more progress, with the aim of reaching agreement on the outstanding issues by CN #7. The outstanding issues which we have identified are the need to increase the length of the ciphering algorithm identifier, the need to extend QoS handling, the need for a new message to deal with hard handover, the handling of interworking between nodes which support different versions of the GTP protocol and the separation of GTP-U and GTP-C. The last of these is contentious. We should **certainly** be able to resolve these issues in time for CN #8, and **probably** in time for CN #7; we recognise the importance of providing support for packet mode operation in UMTS Release 99!

As reported at CN #5, the work on **Immediate Service Termination not using CAMEL** is complete.

We have reviewed and endorsed proposals from T1P1 for **Location Services** as part of GSM Release 98; the collocation of the N2 and T1P1 meetings was very helpful in this area. T1P1 will handle the approval of these CRs, and produce the corresponding CRs against UMTS Release 99 specifications.

N2B have completed the subscriber data management work for **Multicall**. However the impact on 23.018 (the basic call stage 2, "Ian's hobby spec" in the words of the CN Chairman!) still need some work. This, coupled with the concerns of the SS ad hoc over the interactions with supplementary services, leads us to propose that the multicall package should be presented for approval at CN #7.

The stage 2 specification for **Out of Band Transcoder Control** is presented for **information** here; unfortunately further work is needed before it can be presented for approval. We expect to be able to present the stage 2 for approval at CN #7. The dependency on the definition of the Bearer Independent Call Control protocol in ITU-T is also worthy of note; Yun-Chao Hu can give us more information on this.

N2 has completed its work on the review of T1P1 proposals for **PCS-1900 Harmonisation**; unless T1P1 have any nasty surprises for us, this work item can be regarded as complete in N2.

As reported at CN #5, the work on **Pre-paging** is complete.

We have agreed a CR to 29.002 to show a cutover date after which support for "White Book" **SCCP** in the destination node can be assumed. When we can realistically expect support at all intermediate nodes is a different story...

We have worked on several topics under the heading of **Security**. We present for approval the necessary CR to 29.002 for the UMTS authentication regime. The handling of encrypted user identities and the securing of sensitive MAP messages (by mutual authentication and encryption) still require further work; a joint meeting of S3 and N2 experts has been proposed for early next year, so that N2 can progress the work and present proposed solutions for approval at CN #7.

The stage 2 specification and the associated CRs to core specifications for the **Super-Charger** are presented for approval. There are two open issues: the release of TMSIs after purging, and the application of the Supercharger principle for GPRS mobility management. We expect to resolve these in time for CN #7.

We have a pair of CRs under the **Technical Enhancements and Improvements** category: these move the stage 2 material on location management from 29.002 to 23.012. This was done as foundation work for the Gateway Location Register and the Super-Charger, but it is also part of Ian's long-term project to reduce the size of 29.002 by making it a "proper" protocol specification and removing the stage 2 material!

To conclude this section, the majority of our work items are either complete or reasonably close to completion. We will have a busy 2½ months at the beginning of next year to deal with the outstanding issues, but the result will be a much better set of deliverables.

3 Information to be noted

For next year we have agreed the calendar of N2 meetings:

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|-------------|------------------------------------------------------|
| 17 – 21 Jan | Kyoto, Japan (NTT DoCoMo); |
| 27 – 31 Mar | Texas or California, USA (Pacific Bell Wireless); |
| 22 – 26 May | "Somewhere in Germany" (Siemens); |
| 17 – 21 Jul | "Somewhere in Europe, probably not Finland" (Nokia); |
| 11 – 15 Sep | "Somewhere in the USA" (Ericsson et al); |
| 13 – 17 Nov | Paris, France (Alcatel). |

Unfortunately Mannesmann were unable to host the May 2000 meeting in Düsseldorf, because a major fair there has grabbed all the hotel facilities, but Siemens have kindly taken over the burden of hosting that meeting.

4 Thanks

As always, I have to acknowledge the debt I owe to several people. Steffen Habermann and Yun-Chao Hu, the vice-chairmen of N2, have chaired respectively N2 subgroup A on CAMEL and N2 subgroup B on almost everything else which N2 handles. In particular, I also thank Yun-Chao Hu for stepping into the breach to chair the N2 meeting in Phoenix, when I

had to drop out at short notice because of the death of my mother. Monica Hellman and Franco Settimo, the MCC members, have given us an enviable level of support. My thanks also to the delegates, who have worked some extremely unsociable hours (I experienced some 13-hour days in Eton...) and provided a large number of good contributions, and to the hosts; I am pleased to report that we already have offers to host all our regular meetings next year, **and** offers of hosts for 3 meetings in 2001!

This meeting's quotation is from a fairly well-known British prime minister: "This is not the end; it is not even the beginning of the end. It is the end of the beginning."