3GPP TSG_CN Plenary #9 **NP-000430**
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Source: TSGN1 Chairman

Title: TSGN1 Status report

Agenda item: 6.1

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TSGN1 status report to TSGN plenary meeting #9

1 Introduction

This report summarises the progress of TSGN1 on the work items which have been active in the working group since TSGN plenary meeting #8. TSGN1 has had one regular meeting since TSGN plenary #7. TSGN1 #13 was held in Vancouver, Canada, kindly hosted by Motorola. There was a joint meeting with TSGS2 on SIP issues during TSGN1 #13 and also several informal inter-group meetings took place outside the official meeting hours. More detailed meeting report is available on the 3GPP server. TSGN1 #13 meeting report is also provided to this meeting in Tdoc NP-000431.

2 Main achievements

Several R99 items had to be reported to the previous plenary as controversial issues. These were especially discussed during the meeting and also outside the meeting via email in order to find an agreeable solution.

The old releases before R99 have stabilised now with 15 CRs agreed on all of the releases R98 and older.

A fairly large number of CRs were still raised by the delegates on R99. However, just like with the older releases most of the CRs are not proposing any new concepts but the majority of them are dealing with detailed corrections of problems which have only been spotted during the design and implementation phase.

More information on the status of each work item is given later in this report.

3 Information to be noted

3.1 Meeting schedule for year 2000

TSGN1 #10 11.-14.1.2000 (Abiko, Japan/NEC)
GPRS Ad-Hoc 19.-20.1.2000 (Oslo/ Motorola)
SMG#31 14.-18.2.2000
TSGN1 #11 28.2.-3.3.2000 (Umeå, Sweden/Telia)
TSGN#7 13.-15.3.2000
TSGS2 – TSGN1 Ad-hoc on CC and Architecture 11.-13.4.2000
TSGS2 – TSGN ad-hoc on R00 work planning 13.-14.4.2000
TSGN1 #12 22.-26.5.2000 (Hawaii, U.S./T1P1)
TSGS3 – TSGN R00 ad-hoc security requirements 13.-14.6.2000
TSGS2 – TSGN R00 work item drafing 14.-15.6.2000
SMG#32 19.-20.6.2000
TSGN#8 21.-23.6.2000

TSGN1 #13 14.-18.8.2000 (Hawaii, U.S./T1P1)
TSGN#9 20.-22.9.2000
TSGN1 ad-hoc on SIP issues 17.-19.10.2000 (Sophia Antipolis, France / ETSI)

TSGN1 #14 20. – 24.11.2000 (Cardiff, UK/Lucent)
TSGN#10 6.-8.12.2000
TSGN1 #15 15.-19.1.2001 (Host needed)
TSGN1 #16 27.2.-1.3.2001 (Host needed)
TSGN #11 14.-16.3.2001 (U.S.)
TSGN1 #17 14.-18.5.2001 (Host needed)
TSGN #12 13.-15.6.2001 (Europe)
TSGN1 #18 27.-31.8.2001 (Host needed)
TSGN #13 19.-21.9.2001 (China)
TSGN1 #19 22.-26.10.2001 (Host needed)
TSGN1 #20 20.-23.11.2001 (Host needed)
TSGN #14 12.-14.12.2001 (Japan)

The meeting dates for year 2001 give the minimum number of meetings that will be needed to finalise the TSGN1 input to each plenary meeting. This leaves time for ad-hoc meetings that will be needed particularly on SIP issues in between the scheduled meetings.

3.2 Liaison statements already sent

All agreed outgoing liaison statements from TSGN1 have been sent right after each meeting. The LSs from TSGN1 in NP-000432 are provided for information for TSGN plenary. Section 4.1 deals with documents N1-000971, N1-000997, N1-000998 and N1-001023 which are liaison statements sent to TSGN plenary.

3.3 TSGN1 work item list

R99 work items have moved to maintenance phase meaning that only CRs categorised as corrections or relating with correction on a older release are being discussed in the WG.

The R00 Feature / Building Block / Work Task list was reviewed by TSGN1 #13. Several discrepancies were found and these were listed during the meeting so that the secretary can provide the proposed corrections for the next version. The N1 changes are provided in tdoc NP-000433.

New R00 work item descriptions in section 4.5 are proposed for approval.

3.4 TSGN1 – TSGS2 joint meeting on SIP issues

One meeting day was dedicated for discussion on IP and SIP issues in a joint meeting with TSGS2 delegates who were having a meeting at the same location.

The meeting started the transfer of stage 2 knowledge from TSGS2 to TSGN1 by reviewing the Technical Report 23.821 which TSGS2 have drafted. It has been decided that this TR is to be split in CRs on existing technical specifications and to create a new TS 23.228. Other technical issues were proposals on call flow diagrams from several companies and some proposals on 3GPP enhancements to SIP protocol were also made.

It was agreed that some stage 2 responsibility will move from TSGS2 to TSGN1 once the stage 2 stabilises but this will not affect the TSGS2 responsibility of the overall architecture. Furthermore it was agreed that TSGN1 will draft a more detailed stage 2 to define the signalling procedures as call flows in an TSGN1 specification.

The discussion is still ongoing and there are no technical contributions which could be forwarded for plenary approval at this stage.

R00 work is just starting with SIP being the main focus of the WG in this area. Due to this an TSGN1 ad-hoc meeting on SIP issues has been agreed on the 17th – 19th October 2000 in Sophia Antipolis. The meeting is expected to focus on the architecture work which has been done in TSGS2 and on the call flows for different call scenarios.

The meeting was aware of a proposal to run SIP protocol not only over Gm reference point but also over Mw and Mg. No recommendations were made as the decision will be made by TSGS2. It was pointed out that as the UE is not a trusted network element the information to be transferred at different reference points will be somewhat different. It was agreed that the SIP enhancements should be all dealt with in single 3GPP working group which should be TSGN1.

Work item description and TSGN1 Terms of Reference for approval are in section 4.5.1.

3.5 TSGN1 – TSGS2 joint meeting on controversial R99 issues

An ad-hoc TSGN1-TSGS2 meeting to decide upon the controversial issues was arranged during the week. This meeting dealt with the TSGN1 related issues which could not be concluded in TSGN #8 and TSGS #8. The ad-hoc meeting only outlined the agreed approach to solve the problems while leaving the drafting of the documents for approval for each working group. The outcome is reported along with the other TSGN1 documents for approval.

4 Issues for action/decision by CN plenary

4.1 Liaison statements

The liaison statements from TSGN1 to TSGN plenary for decision.

Tdoc NP-000411 / N1-000971 on support of additional GPRS ciphering algorithms

The liaison informs the recipients that TSGN1 has agreed two CRs to introduce optional support of GEA2 to R97 and R98 mobiles. An explanation on how this can be done in a compatible way has also been included.

TSGN1 proposal is that with this explanation the CRs should be approved.

Tdoc NP-000413 / N1-000997 on R99 Terminology

TSGN1asks TSGN plenary to endorse the proposed terminology. See also section 4.2.2 of this report.

Tdoc NP-000414 / N1-000998 on their responsibility of 23.060

TSGN1 see that 23.060 maintenance responsibility correlates best with the PS domain architecture work and the PS domain stage 3 SM and GMM work. Consequently, TSGS2 is seen as correct home for this specification. But if there is need to transfer some architecturewise more stable work away from TSGS2 to avoid overloading the meetings then TSGN1 is the only right alternative.

TSGN1 would like to see if there are any other views on this issue in the TSGN plenary.

Tdoc NP-000412 / N1-001023 on the introduction of GEA2

While studying the early introduction of GEA2 ciphering algorithm to R97/R98 mobiles a compatibility issue was detected. The problem is related with the interworking of different GPRS releases but it it not caused by the introduction of the GEA2 to R97 and R98.

It was noted that a network will not be able to use GEA2 algorithm until the support for the algorithm is available throughout the PLMN. The reason is the compatibility problem in inter-SGSN RA update from an SGSN supporting GEA2 to a non-supporting SGSN. Hence there is a requirement to upgrade all SGSNs to R99 before GEA2 can be used safely.

TSGN1 proposal is that this design limitation is accepted as the intention was understood to allow rapid introduction of GEA2 mobiles to make it feasible for the operators to start using GEA2 as soon as the networks can support it.

4.2 Controversial issues for plenary decision

Last time TSGN1 had to report several issues. This time there is a proposed solution to all of the issues under this section of the report. These items are treated separately to provide feedback the plenary and to close the open items this time.

4.2.1 Removal of SERVICE ACCEPT message

The removal of SERVICE ACCEPT message was discussed between TSGN1 and TSGS2 in the ad-hoc meeting during TSGN1 #13. This led to a compromise that SERVICE ACCEPT message will not be removed but the usage will be limited to only those cases when it is received as a response to a SERVICE REQUEST in PMM-CONNECTED mode. In PMM-IDLE mode then implicit indication of service acceptance is given by initiation of a security procedure.

The related TSGN1 CR which are agreed in TSGN1 are in tdoc NP-000436 / N1-001001, N1-001031. A liaison statement was also sent to TSGS2 in tdoc NP-000432 / N1-000973. In this liaison TSGN1 proposes that tdoc N1-001031 which is a CR on 23.060 should be approved by TSGTSGS2.

N1-001001 is provided for TSGN #9 for approval.

4.2.2 R99 Terminology

TSGN #8 reported that TSGN1 is willing to provide the necessary CRs to improve the R99 terminology regarding the terms "In GSM" and "in UMTS". S1 and TSGS2 help was asked then and during the TSGN1 – TSGS2 joint meeting the following proposal was agreed:

R99

For R99 it is not possible to change the decision criteria now. So the serving radio network will still be taken as an indication of how the MS shall encode those parts of the signalling messages which are not common. But the terms can be changed to ones which are more applicable to R00:

- **In A/Gb mode,...** Indicates this paragraph applies only to GSM System. For multi system case this is determined by the current serving radio access network.
- **In Iu mode,...** Indicates this paragraph applies only to UMTS System. For multi system case this is determined by the current serving radio access network.

R00

For R00 the decision criteria for the MS will have to change as the serving radio network can not be taken as an indication of the network architecture behind it in all cases (GERAN).

So new decision criteria will need to be introduced:

- In A/Gb mode,... **indicates that this (sub)clause or paragraph applies only to a system or sub-system which operate in A/Gb mode of operation, i.e. with a functional division that is in accordance with the use of an A or a Gb interface between the radio access network and the core network.**
- In Iu mode,... **indicates that this (sub)clause or paragraph applies only to a system or sub-system which operate in Iu mode of operation, i.e. with a functional division that is in accordance with the use of an Iu-CS or Iu-PS interface between the radio access network and the core network.**

The first one means replacing one term with another, i.e. the CRs do not cause any design or implementation work. The later one for R00 will be an essential change of the functionality and some mechanism to signal the requirements to the MS will be needed.

A liaison statement has been sent to TSGN, TSGS1, TSGS2, TSGG2 and TSGR2 in tdoc NP-000413 / N1-000997 asking for confirmation of this approach and the rapporteurs of the TSGN1 specifications are committed to providing the necessary "almost editorial" R99 CRs at the first possible opportunity. The LS also asks the RAN and GERAN working groups for guidance on the appropriate indication of A- or Iu interface to the MS.

4.2.3 Support of GPRS ciphering algorithm GEA2 before R99

This issue was left open in TSGN #8 but a decision was made in TSGS #8 afterwards that the GEA2 ciphering algorithm will be applicable from R99 onwards. Additionally TSGN1 was asked to study the possibility of making the GEA2 support optional for earlier GPRS mobiles but not bringing this option to the R97/R98 networks.

TSGN1 has done this and the CRs for approval are in tdoc NP-000437 / N1-001028, N1-001029.

Two related liaisons in tdoc NP-000432 / N1-000971, N1-001023 was also sent (section 4.2 in this document).

4.2.4 Octet Stream Protocol for Internet Hosted Octet Stream Service

Code point for OSP:IHOSS has been deleted from Protocol Configuration Options IE in 24.008. This approach was seen as a dead end and N3 has already removed the interworking to ISDN and PSTN. Consequently TSGN1 has got strong reasons to believe that this PDP type has not been implemented by any manufacturer.

The reason for marking these rather straightforward CRs strategic is that the codepoint which was allocated earlier has now been only deleted and not marked as having been used by earlier versions of the protocol. Due to this the manufacturers are asked once more to check that they have not implemented the deleted code point.

CRs for approval are in tdoc NP-000438 / N1-000928, N1-000929.

4.3 GSM Maintenance

4.3.1 GPRS

GPRS correction CRs in tdoc NP-000439 are provided for TSGN #9 plenary for approval.

4.3.2 TEI

TEI correction CRs in tdoc NP-000440 are provided for TSGN #9 plenary for approval.

4.4 Release 99 work items

All R99 work items have been reported as completed in TSGN1. The following corrections on R99 specifications have been agreed by the working group and are provided for approval.

4.4.1 GPRS

This time the GPRS related changes include also CR to GSM only specifications 04.64 and 04.65.

GPRS related CRs are provided for approval in tdoc NP-000441.

4.4.2 Multimedia

Multimedia related CRs are provided for approval in tdoc NP-000442.

4.4.3 GSM-UMTS interworking and MM for UMTS

GSM – UMTS interworking related CRs are provided for approval in tdoc NP-000443.

4.4.4 Out-of-Band Transcoder Control (OoBTC)

OoBTC related CRs are provided for approval in tdoc NP-000444.

4.4.5 Security

Security related CRs are provided for approval in tdoc NP-000445.

S3 CR 095r2 on 33.102 was seen in tdoc N1-000991 / N3-000483. It was noted by the meeting that despite TSGN1 improved the text in 24.008 regarding the integrity checking of emergency calls this new 33.102 CR introduces new requirement which is still to be incoroporated in stage 3 by TSGN1.

4.4.6 MS Classmark

MS CM related correction CR for approval in tdoc NP-000446.

4.4.7 ASCI

ASCI related CRs are provided for approval in tdoc NP-000450.

4.5 Release 2000 work in TSGN1

TSGN1 is aware of the ongoing work to redefine the 3GPP specification release targets after R99. As no other appropriate terminology was available at the time of the meeting, all work items after R99 have been listed under R00 in this report.

The overall R00 schedule and release plan and the scheduling of TSGN1 related work items has been discussed in TSGN1. Particularly SIP work item has been in conflict with the schedule of R00 as the completion of the stage 3 work has been estimated to be as late as December 2001.

There are four new work items which have become active in TSGN1: SIP, Emergency call enhancements, Service modification without pre-notification and ASCI. Emergency call work has been split in CS and PS work items due to different state of maturity of the proposals. These were already approved in TSGN #8 in NP-000379 and NP-000380.

TSGN1 is proposing two new R00 work item descriptions for approval.

TSGN1 understands that asking for any potential IPR disclosures is becoming part of every WG meeting. The WG would like to get more guidance on this procedure.

4.5.1 SIP Call Control protocol over Gm reference point (CSCF – UE)

It was agreed in TSGN1 – TSGS2 joint meeting that the SIP enhancements and SIP at Gm reference point should be all dealt with in single 3GPP working group which should be TSGN1. The intention is to build SIP expertise in one working group and if further decisions to use SIP protocol at other reference points are made then the working procedures to bring non-radio interface related SIP enhancement requirements to TSGN1 need to be defined.

TSGS2 has estimated that they will get the stage 2 completed in November 2000. Clearly this does not leave enough time for completion of stage 3 work by December 2000. The schedule of SIP work item should be considered when deciding on 3GPP release 4 and 5.

The two documents that are provided for plenary approval are revised TSGN1 Terms of Reference in Tdoc NP-000435 / N1-000852 and proposed new work item SIP over Gm interface in tdoc NP-000434 / N1-000856.

For more details of SIP discussions, see section 3.4.

4.5.2 Emergency call enhancements

The work item description for PS based emergency calls was provided for TSGN1 for information. There are no documents for approval on this work item.

One CR on CS based emergency calls in tdoc NP-000447 / N1-001046 is provided for TSGN #9 plenary for approval.

4.5.3 SMWOP, Service Modification without pre-notification (between speech, modem, fax and multimedia)

Detailed CRs were discussed but could not be agreed yet. The following proposals were agreed in principle:

- The procedure applies to both GSM and UMTS.

- The trigger criteria for the MS to resume the user data transmission is needed for the case when no change of radio bearer takes place. In this case MODIFY COMPLETE triggers this on both sides of the radio interface.

- Network initated MODIFY procedure should be considered?

Additionally to these several detailed comments were made. TSGN1 continues the work in this area but there are no documents for TSGN plenary approval at this meeting.

4.5.4 TrFO

One CR in tdoc NP-000448 / N1-001005 is provided for TSGN #9 plenary for approval.

4.5.5 ASCI

ASCI CRs in tdoc NP-000449 are provided for TSGN #9 plenary for approval.

4.5.6 Withdrawal of 24.064 and 24.065

Specifications 24.064 and 24.065 were produced by mistake based on GSM only specifications 04.64 and 04.65.

New R00 specifications 44.064 and 44.065 will be created and hence the plenary is asked to withdraw the redundant two specifications 24.064 and 24.065.

5. Acknowledgements & encouragement

As usual I need to thank the delegates for their contribution to the meetings, the hosts for following the Olympic games practice of making each event bigger and better every time and the MCC for the expert support.

But this time also special thanks to the delegates are appropriate: our discussions have focused on the main issues thus speeding up the decisions. This has often saved the meeting time and kept the working hours at a reasonable level.

The very near future of TSGN1 will mean a major change for the working group and lots of learning for the individuals. If R99 was evolution of the existing CN, then R00 will mean the revolution but hopefully keeping some of the old tradition. But we have worked wonders before and I trust that we can do it again.