3GPP
Technical Specification Group Core Networks

Meeting #2, Fort Lauderdale, 2-4 March 1999

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Attention: **Agenda item**

3GPP

Draft Report from the TSGN WG1 Work Item Ad-Hoc meeting

18-19 February 1999

London, UK

(19 February, 1999)

Chairman: **Hannu Hietalahti, Nokia**

Secretary: **Hannu Hietalahti, Nokia**

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1. Opening of the Meeting

The meeting took place in London, UK and was hosted by Fujitsu Europe. The meeting was chaired by the convenor of the 3GPP TSGN WG1, Hannu Hietalahti from Nokia.

The agenda for the meeting was agreed.

Due to heavy workload ETSI PT12 was unable to support this meeting and the meeting nominated Hannu Hietalahti the secretary for this meeting.

2. General

This ad-hoc meeting was not mandated or tasked to approve any new work items. The goal was to elaborate the most urgent work item proposals for the regular meetings to approve.

Several comments were made on the proposals and revisions were reviewed. It will be up to the originators to provide the proposals which were agreed in this meeting as input documents for future meetings. The tentatively agreed WI proposals will need to be approved at TSG level. The delegations are encouraged to distribute their proposals via email before the TSG meetings.

3. Analysis of the existing Rel. 99 work items

Tdoc N1H99012 Split of responsibilities between SMG and 3GPP

It was asked what the outcome of the discussion on this WOME proposal was in the SMG TC #28.

Furthermore on the substance of the document, it was challenged whether GSM WI derived from UMTS WI category will be needed at all, at least from the TSGN viewpoint.

About the question on GSM or UMTS work items. it was seen that at least for TSGN all new work items could be classified under one category, both GSM and UMTS Work Items on the same topic was not considered a feasible alternative. For the future work in TSGN a decision by 3GPP and SMG is urgently needed.

Tdoc N1H99018 Proposed TSGN responsibility of existing 1999 work items

The existing R99 and the work items whose status is to be determined were reviewed and at least the following work items were seen to require further study to clarify the interaction with the proposed new work items:

End to end QoS Management

New access Network to Core Network (BSS-NSS) interface

Idle mode classmark

Multimedia in UMTS

Support of non-realtime Multimedia Messaging service

Support of realtime Multimedia Messaging service

MSC upgrades for handling unexpected and out-of-sequence messages, GSM-UMTS HO impact on the BSSAP on the E interface and SMS upgrade and evolution were also proposed as items to look at when specifying the work items for Release 99.

Additionally CR category correction also on the older versions of CN specifications was discussed. The meeting support WOME in their proposal to allow the corrections (by TSGN) to the older versions of the specifications that are placed under its responsibility.

Tdoc N1H99021 Work Items for UMTS (from TSGS1#1(99)09

The TSGS proposed treatment of the new work items was reviewed.

4. Proposed new work items

4.1 MS Classmark

The MS CM split will have to be specified in a backwards compatible way so that a MS sending the new CM info does not get rejected by an old network.

It was pointed out that there are situations when also CN must be aware of RAN specific capabilities of the MS, such as the dual mode capability. Also a comment that these may be rather special cases. No conclusion was reached on this part of the CM discussion.

Does the MS need to send new CM every time it reselects a cell between GSM and UTRAN radio coverage? This needs to be studied for the support of GSM / UTMS multi mode operation.

Tdoc N1H99001, 02, 04 on MS Classmark restructuring

These tdocs describe the proposals for the split of the MS CM in RAN specific and CN specific parts. All documents were presented to understand the proposal. Discussions, see above.

Tdoc N1H99004 MS Classmark Restructuring for IMT-2000

This tdoc is a proposal to split the MS CM in RAN specific and CN specific parts.

Tdoc N1H99006 Annex E Format and IEI to MS CM for CN

MS CM part in Annex E: Several comments on the WI proposal. Terminal impact needs to be indicated. A requirement for changing the MS CM in a backwards compatible way. Also a requirement to consider the interworking between GSM and UMTS for handovers etc.

Proposed text for the Linked Work Items part of the WI proposal:

"The possibility of other Work Items impacting the MS Classmark such as MExE terminal capability needs to be studied. The status of Work Item Idle Mode Classmark needs to be studied as well."

Proposed text for the Justification part of the WI proposal:

"From UMTS point of view the need has been recognised to separate the RAN part of the CM from the CN in order to support the multiple RANs."

Proposed text for the Service Aspects part of the WI proposal:

The interworking of UMTS and GSM will need to be supported both in idle mode and for handovers according to the Stage 1 service requirements."

The necessity of the backwards compatibility of the CM with GSM should be investigated under this work item.

The specification should provide backwards compatibility to GSM. Both the case of a multi mode UMTS mobile being served by non-upgraded GSM network and an old GSM mobile being served by GSM BSS connected to UMTS Core Network.

Annex E is revised accordingly to Tdoc N1H99025.

Tdoc N1H99025 Separating RR and MM specific parts of the MS CM

This WI proposal is the revision of Annex E of Tdoc N1H99006. The comments of the meeting are incorporated and the meeting tentatively agreed the proposal. As this meeting was not mandated to approve any WIs, it will be the originators responsibility to provide it as an input document to the next TSGN meeting.

4.2 Multicalls

The current SS needs to change because of Multicall WI. UUS and USSD are special cases because in case of a bearer being shared by these Supplementary Services a simultaineous speech call would be degraded (at least in GSM RAN) due to the traffic channel capacity that is stolen for SS.

Negotiation of the traditional Call Control Bearer Capabilities is not enough for the support of handovers and congestion situations for multicall. QoS criteria like the relative priorities of the simultaneous multicall connections should be taken into account.

Does multicall mean just Circuit Switched multicall or should also packet switched traffic be considered under the proposed WI? VoIP, ViIP and Video downloading were given as examples of packet oriented user applications.

Tdoc N1H99022 is a CR on 22.00 defining the Multicall service requirements for CC connections. This is an input document for the next TSGS meeting.

Adding more user perspective on the multicall services to the Service Aspects was proposed.

There was two competing WI proposals on the Multicall in Tdocs N1H006 Annex A and N1H014. No agreement could be reached. The main question was on the scope of the WI, whether it should be CS only or CS and PS.

Tdoc N1H99006 Review request on Solutions of High Priority WIs

Multicall WI proposal part in Annex A. Revised together with N1H014 to N1H99027.

Tdoc N1H99007 Assumptions and Basic Control for Multicall service

Discussion paper on proposed Multicall Work Item.

Tdoc N1H99008 Proposal of New Parameter (BID) for the Multicall Control

Discussion paper on proposed Multicall Work Item.

Tdoc N1H99014 Multicall Work Item description - proposal

Multicall Work item proposal. Revised together with N1H99006 Annex A to N1H99027.

Tdoc N1H99023 Related Qs and As for BC parameter and Multicall

Discussion paper on the Multicall and Bearer Capability enhancement proposals. The document answers some of the questions that were asked earlier in the meeting when discussing these topics.

Tdoc N1H99027 Multicall Work Item proposal

Revised Multicall Work item proposal combines the principles in Tdoc N1H99006 Annex A and N1H99014.

The proposal was tentatively agreed by this meeting.

4.3 Bearer Capability enhancements

The partitioning and the scope of the proposed work item were questioned. What about the impact on interworking? Changes seem to be required in many TSGs. Hence the Bearer negotiation, ICM and the introduction of new services should be kept in manageable sized modular Work Items.

The interworking to other networks needs to be specified with great care as this has got to be made in a backwards compatible way.

Tdoc N1H99006 Annex B New parameters for BCs and TSs and QoS parameters

Are the proposed new services to be introduced in this WI proposal part of the document to be specified in a WI of their own or is there just one BC WI to do that?

To specify Teleservices or not to specify Teleservices? The current stage 1 is not suggesting that new TSs should be standardised. TSGS / SMG12 opinion to be checked.

The originator of the Tdoc was asked to check which ones of the proposed first phase services have already been specified in Stage 1 or Stage 2.

Tdoc N1H99006 Annex C BC and TS negotiation changes and checking of service subscription when negotiating BC

What is the real difference and the benefit over GSM?

End-to-end negotiation is not really available in GSM. Also the checking of the subscription during the negotiation seems an improvement.

Tdoc N1H99006 Annex D BC and TS modification during connection.

The interaction with the out of band TFO signalling was raised.

The feasibility and the need for the ICM, at least what comes to fax calls was questioned.

Tdoc N1H99009 Requirements and Basic Procedures for Bearer Services and Teleservice Negotiation

Bearer Service and Teleservice negotiation concept.

Tdoc N1H99010 Requirements and Basic Procedures for Bearer Services and Teleservice Modifications

Bearer Service and Teleservice modification concept.

The proposed approach of in-call modification assumes that ICM will only be able to choose a service (BC/TS) out of the set negotiated at call setup time. E.g. a mobile is not allowed to propose any BC it could support if this was not negotiated at setup time. This old 2G GSM limitation has got no background in at least mobile terminal design. The network part needs to be studied to verify if this limitation can be overcome.

Tdoc N1H99011 Proposal of New Parameter for Bearer Service and Teleservice

Bearer Service and Teleservice basic parameters.

4.4 Security enhancements

Tdoc N1H99006 Annex F Variable length of security parameters such as RAND and SRES

The proposal to enhance the authentication scheme by providing higher security and compatibility to other systems via variable length authentication and ciphering parameters.

The meeting supported unanimously the creation of a work item to allow the usage of variable length authentication parameters. This work was seen essential for the first phase of UMTS.

Links to the other related work items were questioned. Interaction between this WI and ciphering and improved security was identified. The linked work items and secondary responsibilities of the WI need to be defined.

The changes need to be made in a backwards compatible way and this should be indicated on the Work Item proposal.

4.5 Other technical topics

Tdoc N1H99005 Present condition of MS Classmark

Discussion on the principles when the MS shall include MS CM IE in CM service invocation. This proposal will need to be revised to adapt it to the principles outlined in Tdoc N1H99024.

Tdoc N1H99024 Backward compatibility to GSM issue of MS Classmark

Proposal for the mechanism to provide backward compatibility and GSM - UMTS interworking to MS Classmark procedures.

The proposal was discussed and the principle was supported. The delegations are requested to study the proposal and give input to the originators to elaborate it further.

Tdoc N1H99003 Paging response as a MM message

Discussion on making the paging procedure visible to the MM layer.

The extent of the required changes was questioned. According to the originator, the only changes that are needed would be changing the Protocol Discriminator of the Paging Response PDU to indicate MM instead of RR.

This brings up again a compatibility issue, which however seems to be possible to solve. It must be ensured that a MS knows whether the serving network expects the Paging Response to RAN or to CN.

The interaction with the MS Classmark split WI was questioned but it was preferred to keep these two items separate. The principle of the proposal was supported by the meeting.

Tdoc N1H99026 Work Items for the interworking with UTRAN and ANSI-41 Core network

Proposal to create a work item for specifying an additional IWU and L3 functionality to connect the existing ANSI-41 standard MSC to UTRAN RNC.

Effectively this means replacing IS-95 radio network with UMTS UTRAN. The originator confirmed that the introduction of the proposed new IWU would not require any changes to UMTS CN. More details on the technical impact of the proposed WI was requested. Email distribution of more information to follow.

The diversification proposed in the Justification was challenged, GSM core network was stated to be the agreed CN backbone.

TSGS System Architecture WG was seen as the right forum for the initial discussions on the proposal.

5. Review of the meeting report

The report was provided for review in electronic copy at the closing time.

6. Closing of the meeting

The Chairman thanked Fujitsu for hosting the meeting and the delegates for their contribution to the meeting.

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7. ANNEX 1: List of participants

According to Address List indication.

Please note: Full address details can be found on the ETSI server as an MS ACCESS file, under etsi/tc-stc/smg/smg_p/member.mdb or .zip

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Brook Richard	Lucent Technologies		
Yahagi Masahiko	NEC Corporation		
Kauhanen Timo	Nokia Telecommunications		
Axerud Bo	Nokia Mobile Phones		
Koshimizu Takashi	NTT DoCoMo		
Gruber Roland	Siemens		
Baumann Elmar	T-Mobil		
Arzelier Claude	Vodafone		

8. ANNEX 2: List of all documents

As stated above in the report, the scope of the meeting was to elaborate the WI proposals that will need to be approved by the later meetings.

Doc numb	Source	Subject	Result
N1h99001	NTC	Format and IEI to MS classmark for CN	Noted
N1h99002	Fujitsu	TTC/ARIB Requirements for MM protocol	Noted
N1h99003	Fujitsu	Paging Response as a MM message	Noted
N1h99004	Fujitsu	MS Classmark Restructuring for IMT-2000	Noted
N1h99005	Fujitsu	Present Condition of MS Classmark	Noted
N1h99006	NEC, Fujitsu, NTT DoCoMo	Review Request on Solutions of High Priority Wis	Noted
N1h99007	NTT DoCoMo	Assumptions and Basic Control for Multicall Service	Noted
N1h99008	NTT DoCoMo	Proposal of New Parameter (BID) for Multicall Control	Noted
N1h99009	NTT DoCoMo	Requiremnets and Basic Procedures for Bearer Service and	Noted
N1h99010	NTT DoCoMo	Requiremnets and Basic Procedures for Bearer Service and	Noted
N1h99011	NTT DoCoMo	Proposal of New Parameters for Bearer Service and	Noted
N1h99012	Convenor	Split of responsibilities between SMG and 3GPP	Noted
N1h99013	Convenor	TSGN WG1 Work Item Ad-hoc meeting report	Noted
N1h99014	Nokia	Multicall WI description - proposal	Noted
N1h99015	Nokia	Bearer Capabilities WI description - proposal	Withdrawn
N1h99016	Convenor	Terms of Reference for TSGN WG1	Withdrawn
N1h99017	Convenor	Agenda to 18-19 February ad hoc meeting	Noted
N1h99018	Convenor	Proposed TSGN responsibility of existing 1999 work items.	Noted
N1h99019	Convenor	Proposed TSGN responsibility of existing 1999 work items	Noted
N1h99020	Convenor	TSG-N WG1 Ad-hoc Meeting - Participant List	Noted
N1H99021	Lucent	Work Items for UMTS (the same as TSGS1#1(99)09, no	Noted
N1H99022	NEC	22.00 CRA004	Noted
N1H99023	DoCoMo	Related Q and As for BC parameter and Multicall	Noted
N1H99024	Fujitsu	Backward Compatibility to GSM issue of MS Classmark	Noted
N1H99025	Fujitsu	Separating RR and MM specific parts of the MS CM WI	Noted
N1H99026	TTA/ETRI	Work items for the interworking with UTRAN and ANSI-41 Core	Noted
N1H99027	Fujitsu, NTT DoCoMo, BT, NEC, Nokia	Multicall WI description - proposal	Noted