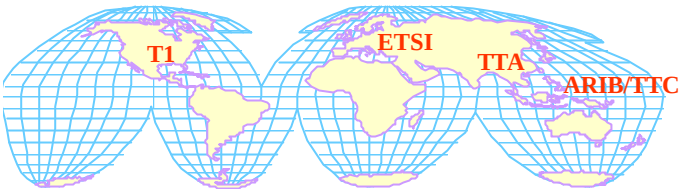

3rd Generation Partnership Project

REPORT Version 6

TSG_SA_WG1#11 Plenary Meeting

Cape Town, SA
6th to 9th February 2001

TSG_SA WG1 Chairman: **Alan Cox**
Secretary: **Michael Clayton**

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DRAFT MEETING REPORT

1 Opening of the Meeting

The TSG_SA_WG1#11 Plenary Meeting was held in Cape Town, SA from the 6th to 9th February 2001. It was chaired by Mr Alan Cox (Vodafone) and the secretary was Mr Michael Clayton from the MCC. The host was Vodacom.

Barry Vlok, from Vodacom, welcomed the delegates to Cape Town, South Africa. He wished the delegates a pleasant stay and a fruitful meeting.

2 Adoption of Agenda

S1-010002	Draft Agenda for SA1 meeting #11	MCC

The agenda was approved without comment.

2.1 Call for IPR

The secretary asked the meeting if there was any IPR that needed to be declared. There was none.

3 Report and Email Approval from last meeting

3.1 Approval of report of last meeting

S1-010001	Report of TSG_SA_WG1#10 Meeting	MCC

The report was approved without comment.

3.2 Email Approval

No email approval occurred between SA1#10 and SA1#11.

4 Reports from other groups

4.1 SA #10

S1-010003	Summary and Report from SA #10	MCC
S1-010063	3GPP TSG SA Workshop on UE in idle mode	Nokia

The report from SA #10 in S1-010003 was noted as was the invitation to the 3GPP TSG SA Workshop on UE in idle mode in document S1-010063.

5 Liaisons from other groups

S1-010062	Application on external devices	Chair GSM CF & EICTA CCIG
S1-010008	Convergence of QoS approaches in 3GPP and TIPHON	SA #10
S1-010059	Convergence of QoS approaches in 3GPP and TIPHON	TIPHON
S1-010060	End to end QoS in IP networks	TIPHON
S1-010159	Reply to TIPHON on QoS	France Telecom

Document S1-010062 contained a liaison statement from the Chair GSM CF & EICTA CCIG on the testing of 3G terminals. Whilst this is a serious issue this is not something that SA1 needs to be actively involved in at this time unless the requirements are in doubt. The document was noted.

Document S1-010008 contained a liaison statement from TIPHON via SA #10 on QoS relating to Voice over IP. This was presented at the last meeting where it was noted that TIPHON and SA1 has diverged which will make it difficult to harmonize the QoS between 3GPP and TIPHON. The details were provided also in documents S1-010059 and S1-010060

The group endorsed the principle of convergence and harmonization between the different approaches, and a reply was provided in S1-010159. It was approved.

5.1 SA

5.1.1 SA3

S1-010042	Modification of pre-configuration information (Copy SA1)	S3
S1-010043	Proposal not to use the IMSI as the identity of an IM subscriber (Copy SA1)	S3
S1-010230	Proposal not to use the IMSI as the identity of an IM subscriber (Copy SA1)	SA2

Document S1-010042 contained a liaison statement on modification of pre-configuration information which was copied to SA1. It was noted.

Document S1-010043 contained a liaison statement on a proposal not to use the IMSI as the identity of an IM subscriber. Whilst it is indicated in the liaison statement that the IMSI is not the best item to use for identification, it does beg the question of what should be used to identify the subscriber. It was noted that the requirements are for secure authentication to the network, but how this is done is not our concern.

It was noted.

Document S1-010230 contained the reply from SA2 to SA3 copied to SA1. It too was noted.

5.1.2 SA5

S1-010065	Questions concerning impact on charging of Release 4 architecture	SA5

Document S1-010065 contained a liaison statement concerning impact on charging of Release 4 architecture. It was noted as it is a discussion between SA5 and SA2 based on the output from our meeting in Orlando.

5.1.3 SA2

S1-010038	eMLPP for PS Domain	SA2
S1-010101	Removal of GPRS Network Operation Mode III	SA2
S1-010027	LS on removal of GPRS Network operation mode III	N1
S1-010160	Reply to SA2 on eMLPP for PS Domain	Siemens

Document S1-010038 contained a liaison statement on the provision of eMLPP for PS domain. SA2 is asking for eLMPP for the packet switched domain and not for the IM subsystem. However, it is not required for the IM domain since eMLPP is designed for the CS domain and the PS domain has other mechanisms such as QoS.

It was decided to send a liaison statement back indicating that eMLPP is not applicable to the PS.

The response was provided in document S1-010160. It was approved.

Document S1-010101 contained a liaison statement on Removal of GPRS Network Operation Mode III. It was not sure what Network Operation Mode III is, but it was noted that this is a copy to SA1 and there is no reference to it in 22.060. It was decided to note it. It was also decided to note also a reply from CN1 in document S1-010027.

5.1.4 SA4

S1-010009	Packet Switched Conversational Multimedia Applications; Default Codecs	SA 4

S1-010009 contained a liaison statement on Packet Switched Conversational Multimedia Applications and Default Codecs. It was noted pending any further information.

5.2 CN

5.2.1 CN1

S1-010024	Emergency Call Indication in the network (Copy SA1)	N1
S1-010025	LS on DL indication of the network interface (Copy SA1)	N1
S1-010026	Response “Re-establish Capability for Emergency call“ from SA1	N1
S1-010028	Response to LS on missing definition of high quality signal for UMTS and on comparing UMTS and GSM signal quality (copy to SA1)	N1
S1-010031	LS on Problem with GPRS and Roaming	N1
S1-010163	Reply on “Re-establish Capability for Emergency call“ from SA1	Ericsson

Document S1-010024 contained a liaison statement on Emergency Call Indication in the network. It was copied to SA1 and was noted.

Document S1-010025 contained a liaison statement on on DL indication of the network interface. It was copied to SA1 and was noted.

Document S1-010026 contained a liaison statement on Re-establish Capability for Emergency call. This resulted from a CR from NTT DoCoMo, which was passed to CN1 for discussion. It was indicated that the feature is no longer required.

It was decided to send a reply to CN1, which was provided in S1-010163. It was approved.

Document S1-010028 contained a liaison statement responding to a LS on missing definition of high quality signal for UMTS and on comparing UMTS and GSM signal quality. It was copied to SA1 and was noted.

Document S1-010031 contained a liaison statement on a Problem with GPRS and Roaming.

If an Operator A has a Roaming agreement with operator B, but only for Circuit Switched services not for GPRS (both networks supporting GPRS).

The customer moves from operator A's coverage to operator B's coverage. Operator B should accept that customer's attach/registration attempts on network B for circuit switched services, but should reject the GPRS attach.

Instead of such behaviour, two different implementations have been identified:
- According to 3GPP specifications, the customer is denied from the whole operator B’s network (CS and PS domains) (error cause #11 “PLMN not allowed” of TS 04.08 R’97)
- A manufacturer’s specific implementation tries to avoid such problem sending another error cause value (#7 “GPRS service not allowed” of TS 04.08 R’97), but according to the TS 04.08 the MS is not allowed to try anymore to attach to a PS domain of any GSM network unless it is switched off and on.

This clearly needs to be corrected. The CRs to do this are presented in document S1-010129, S1-010130 and S1-010131, which will be dealt with in section 6.2.

S1-010231	Periodic PLMN selection attempt	France Telecom

Document S1-010231 contained a proposed liaison statement to CN1 on Periodic Network selection attempts. S1 approved some months ago a mechanism for periodic network selection attempt for R4. With this mechanism, if a user is in international roaming and has selected and registered on a VPLMN which is not in one of the preference list, user or operator, the UE, if in automatic mode, shall make periodic attempts to return to a PLMN of the lists.

The liaison statement is intended to remind CN1 of the requirements of SA1.

It was approved.

5.2.2 CN4

There was no input from CN4.

5.2.3 CN3

S1-010064	LS requesting clarification on Circuit Switched Bearer Services in UMTS	N3
S1-010142	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	SIEMENS
S1-010252	CR to 22.002 clarification on Circuit Switched Bearer Services in	SIEMENS
S1-010253	CR to 22.002 clarification on Circuit Switched Bearer Services in	SIEMENS
S1-010254	Restructuring of 22.002	SIEMENS

Document S1-010064 contained a LS requesting clarification on Circuit Switched Bearer Services in UMTS. CN3 proposed to restructure the document and to correct and adapt it to UMTS capabilities to avoid inconsistencies with 27.001, 23.910 and 29.007, which arose in the past.

The CR to implement this is provided in S1-010142. It was noted that there are two changes in this specification. Changes, which contain some functional corrections and editorial changes.

It was decided to separate the CRs. Document S1-010252 contained the CR to R99 for the functional change with the equivalent to Rel-4 in S1-010253. The restructuring of 22.002 was provided in S1-010254.

They were put on email approval with a view to sending them to SA #11 for approval.

5.2.4 CN2

S1-010032	LS “Support of earlier CAMEL phases”	N2

Document S1-010032 contained a liaison statement from N2 on “Support of earlier CAMEL phases”. This was dealt with in the CAMEL ad hoc and is reported on in section 6.1.

5.3 T

5.3.1 T2

S1-010007	Discussion document on UE functionality split over physical devices	TSG-T2
S1-010017	Discussion document on UE functionality split over physical devices (Copy SA1)	T2
S1-010102	Response to LS (T2-000793) on discussion document on UE functionality split over physical devices	SA2
S1-010165	Report on UE functionality split over physical devices	BT

S1-010166	LS on UE functionality split over physical devices	BT

Document S1-010007 (which is the same as S1-010017) contained a liaison statement from T2 on UE functionality split over physical devices. TSG-T2 has continued its discussions on the issues raised in **SP-000353** on the distribution of call control applications in external devices and in **SP-000313** (TP-000115) on Requirements and Scenarios for Call Handling; i.e. the control of calls by external devices and the probable security issues associated with it.

An example is given in **Annex 1**, which in itself illustrates quite a few problem areas. This is not a unique use case but it is typical of the type of use cases that outside standard development organisations show. However, it did highlight the problems that can occur with an obscure case and begs the question of how many problems would occur with more realistic examples.

In **Annex 2** some principal models on the UE functionality split over physical devices are given to provide a starting point for explicit requirements on the relevant interfaces.

In TSG SA, the first question was "what are the requirements", which is why it comes to SA1. This is, in essence, the theme of S1-010102, which contained the liaison statement from SA2.

There is a work item from T2, which SA1 can use for this work.

It was decided to have an ad hoc during this meeting to scope the work. An input to the ad hoc providing some background was provided in S1-010165 and a liaison statement back to the other groups was provided in S1-010166.

This LS contains an initial analysis from the S1 perspective as developed in a subgroup of 19 people. It was suggested that S1 furthers the requirements in this area under the IMS adhoc group and this was agreed. The LS was approved.

S1-010010	Terminal Capabilities	TSG T2
S1-010023	Terminal Capability Negotiation	N1

Document S1-010010 contained a discussion document on Terminal Capabilities. It is seen to be necessary to have an information store in the 3GPP core network, which "knows" about the capabilities of a given terminal at any one time. This information store needs to be updated when the UE capabilities change, for example when a user changes ME, or when a user connected a TE to an MT. In this way, service delivery can be optimised to suit the user's current environment.

This document gives some examples of what can be done with this information and what considerations should be taken into account.

Certainly there is a need to identify what information is required and where it should be stored in relation to the applications and features that may need to use (or wish to use) this information. It was questioned why SA1 should specify where the data should be stored. There was support for this approach, but SA1 should still specify who should store the information and who should have access to it.

Interestingly, SA1 has discussed the issue of identifying a UE by the IMEI and this was rejected. Moreover, document S1-010023 contained a liaison statement from CN1 indicating that we should not use the classmark either. What, therefore, is left?

It was decided to pass this to the VHE ad hoc for discussion. We should expect a report at the next meeting and on the VHE mailing list.

S1-010021	Reply to conformance test requirements for application layer test	T2

Document S1-010021 contained a reply from T2 to T1 on conformance test requirements for application layer test. When viewing the list of features that was identified by T1 as possible areas requiring conformance

specification, it was identified by T2 that Multimedia Messaging Service was missing. This is a standardised service that will need conformance testing to ensure interoperability between terminals and network elements.

One of the current implementations of the communication between the User Agent and the network element (MMS Relay), supported by the specifications, is based on WAP. For this implementation the conformance testing scheme produced by WAP can be used. On the other hand, for the testing of the network elements, some additional signalling expertise from T1 might be helpful.

The document was noted by SA1.

5.3.2 T3

S1-010046	TR 31.900 - SIM/USIM Internal and External Interworking Aspects	T3
S1-010047	SIM/USIM Internal and External Interworking Aspects	T3
S1-010167	LS on TR 31.900 - SIM/USIM Internal and External Interworking Aspects	One2one
S1-010168	LS on USAT interpreter stage 1	Motorola
S1-010186	Background information for a new feature on STK (A new event Key Identification)	Celltick
S1-010196	Indication of Key Identification	Celltick
S1-010200	Indication of Key Identification	Celltick

T3 have drafted a technical report TR 31.900 on SIM/USIM internal and external interworking aspects. It describes the different cases of interaction between a GSM-SIM or a 3G-UICC and a GSM or 3G ME with a special focus on the diverse scenarios that can apply in a mixed 2G/3G network environment.

Depending on the technical properties of other involved network elements, particularly during authentication and key agreement, the ICC and the ME may or must support some specific features to allow for compatibility. This is a complex matter and has generated some amount of confusion. This TR gives a guideline by summarising the important details and applying them to the possible cases of security interworking along the transmission chain. The TR further explains the options of interworking that exist internally when a SIM and one or more USIM(s) are implemented together on a single UICC.

Before the TR will be sent to 3GPP TSG T for information and further deliberation,T3 are asking S1, S3, T2 and N1 for comments.

In addition, T3 intend to hold an AdHoc meeting on that issue on 28 February 2001 - as part of the next meeting in Sophia-Antipolis - to include the received comments and finalise the document. Interested delegates from S1, S3, T2 and N1are kindly invited to take part in the discussion.

The document itself was provided in S1-010047.

A liaison statement back was provided in S1-010167. S1 has checked version 0.2.0 of the report and did not identify any conflict with the set of service requirements defined by S1 for Release-99. S1 looks forward to receiving the final version of the TR and will be happy to provide the group expertise should it be required by T3. The liaison statement was approved.

S1-010144	Elaboration of KEY IDENTIFICATION EVENT	TSG-T3 chairman
S1-010186	Background information for a new feature on STK (A new event Key Identification)	Celltick
S1-010196	Indication of Key Identification	Celltick
S1-010240	Indication of Key Identification	Celltick

Document S1-010144 contained a liaison statement from the chairman of T3 on the Elaboration of KEY IDENTIFICATION EVENT.

This feature introduces a new "event" that indicates that a key on the MMI has been pressed and includes the key identification, in accordance with the “Get Inkey” command.

This proposal puts the onus of detecting a key being pressed on the mobile, whilst "freeing up" the USAT to perform other activities. Currently, for example, if the USAT wishes to detect a key being pressed, it has to issue the Get Inkey command to the ME and wait for the key to be pressed, and thus cannot carry on with other activities, such as updating or scrolling the display.

There was a serious concern for the security of this feature. However, it was noted that the purpose of SA1 is to identify if there is a requirement and, if so, it is up to someone else to identify how it can be implemented to maintain security.

A description of the original request was provided in S1-010186 and the CR to implement this was provided in document S1-010196.

SA1 did think that this would be a useful feature, although it was clear that it would only make release 4 if a complete set of CRs is available. Therefore, the CR in S1-010196 was approved in principle, and the document S1-010186 was noted, but a liaison statement was required to explain that this should only be approved for Rel-4 if a complete set is provide.

The liaison statement was provided in S1-010200.

A shadow CR was provided in document S1-010240. The CR in S1-010196 and liaison statement in S1-010200 were endorsed by SA1, but do rely on the T3 completing the package. If it is not complete, then the feature will be for Rel-5 only.

S1-010145	USAT interpreter stage 1	T3

It was commented that this stage 1 has been presented to SA1 for the purposes of giving SA1 the chance to comment or take control. Mr Cataldo agreed to receive comments that will be put into a response to T3 in document S1-010168.

In it, S1 indiates that it has briefly reviewed the Stage 1 and the proposed changes to the Stage 1 are acceptable. It was noted that the term "MS" is used, and it is recommend that the term "UE" is used consistently with other specifications.

The liaison statement in S1-010168 was approved.

5.4 RAN

S1-010006	LS on Requirements for PLMN selection and reselection	SA #10
S1-010029	LS on PLMN Selection and Re-selection Issues	N1
S1-010057	LS on Requirements for PLMN selection and reselection	R2
S1-010170	LS on PLMN Selection and Re-selection Issues	France Telecom

Document S1-010006 contained a liaison statement from R2 (also contained in S1-010057) asking for some issues on PLMN selection and reselection to be clarified. A response to this liaison statement was provided from CN1.

It was noted that there is a workshop ongoing, which is dealing with UE in idle mode, although this could be dealt with there.

It was decided to reply to the senders and the workshop. A proposal for this liaison statement was provided in document S1-010170. It was approved and will be sent out.

S1-010058	Response to LS (N1-001039) on Missing definition of high quality signal for UMTS and on comparing UMTS and GSM signal quality (Copy SA1)	R2

Document S1-010058, which contained response to LS (N1-001039) on Missing definition of high quality signal for UMTS and on comparing UMTS and GSM signal quality (and copied to SA1) was noted.

S1-010034	LS for clarification of MPTY issues	N4
S1-010050	Request for clarification on disconnecting Multiparty calls when a single call is active	G4
S1-010051	Request for clarification on MPTY auxiliary state when only one remote party remains	G4
S1-010171	Clarification on disconnecting Multiparty calls when a single call is active	Siemens

Documents S1-010034, S1-010050 and S1-010051 contained liaison statements from CN4 and GERAN 4 asking for clarification of multiparty.

The response from SA1 was provided in document S1-010171 in which answers are given to the questions raised. The liaison statement was approved.

5.5 GERAN

S1-010052	LS on Creation of a new specification to handle implementation issues caused by changes to the Release '97 GPRS specifications (Copy SA1)	GERAN
S1-010053	Interworking between modified Public Land Mobile Network (PLMN) supporting GPRS and Legacy GPRS mobiles	GERAN
S1-010054	LS on DL indication of the network interface (Copy SA1)	GERAN
S1-010172	GPRS clarifications	Lucent

Document S1-010052 contained a liaison statement on creation of a new specification to handle implementation issues caused by changes to the Release '97 GPRS specifications, and the specification was provided in S1-010053. Any subsequent changes resulting from this will be put in the specification as required.

Document S1-010054 was copied to SA1 and was noted.

The document number S1-010172, which was allocated for a response was not needed and so the document was withdrawn.

5.6 GSM Association

S1-010061	LS on Operator Determined Barring – Zonal Barring to 3GPP TSG SA WG1	GSMA SERG
S1-010173	CR on Operator Determined Barring – Zonal Barring to 3GPP TSG SA WG1	NTT DoCoMo
S1-010174	CR on Operator Determined Barring – Zonal Barring to 3GPP TSG SA WG1	NTT DoCoMo
S1-010156	Definition of Zone	NTT DoCoMo

Document S1-010061 contained a liaison statement on Operator Determined Barring – Zonal Barring to 3GPP from GSM Association SERG. There exists a discrepancy in the way zones can be defined. This may cause problems with respect to zonal barring. Zones are defined in one of two ways (depending on the document referred to) as follows:

1. Countries are grouped into zones based on the first digit of their international dialling code. So for instance, the USA with code +1 is in zone 1; the UK with code +44 is in zone 4 and Australia with code +61 is in zone 6. There is one exception to this in that Europe is considered to be one zone even though the codes for the countries within it span the +3 and +4 ranges.
2. The X.121 system is used in which the numbers for countries appear to be based on IMSIs. The zone a country is dependent on the first digit of this 'IMSI' number. So, taking the above examples, the USA with

codes 310-316 is in zone 3; the UK with codes 234-237 is in zone 2 and Australia with code 505 is in zone 5.

GSM A SERG recommend that zones should be defined based on the international dialling plan (option 1 above).

The reasons for this are as follows:

- Customers understand the International Dialling Plan; they use it frequently. If explained correctly, the concept of zonal barring based upon it, should be straightforward.
- It would appear to be the easier option to implement and maintain (as the network already needs to maintain details of the International Dialling Plan). There will be no need to convert the 'IMSI' range of numbers into country codes, which can then be incorporated into the barring definition. (The number the customer dialled is the information that is checked to ensure bars are not being violated.)

A proposed CR to implement this was provided in document S1-010156. Generally this was agreed-to, but that for a Release 99 CR the category should be "F". Moreover, a shadow CR is required for Release 4.

A revision of S1-010156 and a CR for Rel-4 were provided in documents S1-010173 and S1-010174. It was agreed to send the CRs to SA #11 for approval.

6 Release 1999 and earlier

S1-010088	Deletion of reference to GSM 10.71	MCC Sec

Document S1-010088 contained a CR to 02.71 to delete a reference to GSM 10.71. GSM 10.71 is not a published document, and therefore cannot be referenced in an ETSI publication. The CR was approved and will be sent to SA #11 for approval.

6.1 CAMEL

S1-010103	Meeting Report of SA1 CAMEL Ad Hoc 30th Jan – 1st Feb 2001	CAMEL ad hoc
S1-010194	Updated meeting Report of SA1 CAMEL Ad Hoc 30th Jan – 1st Feb 2001	CAMEL ad hoc

The report of the last ad hoc was provided in document S1-010103. The CAMEL phase 4 ad hoc meeting was held 30th January to 1st February 2001, in Austin, Texas (USA) hosted by SBC. It was chaired by Michel Grech from Lucent Technologies. The meeting notes and this report were prepared by Michel Grech.

In summary it was decided by the CAMEL adhoc that:

- A network entity supporting CAMEL Phase 4 is only required to support CAMEL Phase 2 in as far as it possible. In CAMEL Phase 2, network entities are required to support Phase 1, where as a network supporting CAMEL Phase 3 is required to support Phase 2 and Phase 1. The principle used for CAMEL Phase 4 was that a network need not support all previous CAMEL phases, but needs to support a base line version. CAMEL Phase 2 was chose as this offers far greater functionality than Phase 1 and is expected to be more widely deployed that CAMEL Phase 3. A liaison statement was written by the ad hoc on this subject and requires TSG SA1 approval for sending to TSG CN2.

- In addition to refinements of existing requirements, additional requirements have been introduced to CAMEL Phase 4. Some concerns were raised as to the current scope of Phase 4 and ability by TSG CN2 to be able to complete all the work requested by Release 5. The following new features have been added to CAMEL Phase 4:
  - Enhancements of dialled services.
  - Notification of GPRS mobility management to CSE.
  - Provision of location information of called subscriber.
  - Notification of charging information to CSE extended to cover the MT case (previously this was agreed for MO and MF calls).

- All CRs agreed by the ad hoc were agreed by general consensus.

?? No dates for an additional SA1 CAMEL Ad Hoc were planned as none is currently forseen.

A revision of the report, based on comments from the ad hoc, was provided in S1-010194, which was noted.

S1-010104	Remedy for incorrect implementation of CR 22.078-062r5	CAMEL ad hoc
S1-010105	Alignment with stage 2 & 3, and some editorial corrections	CAMEL ad hoc
S1-010106	Alignment with stage 2 & 3, and some editorial corrections	CAMEL ad hoc

There is no technical substance to S1-010104; it is purely editorial. However, it was still decided to send this CR to SA #11 for approval.

Documents S1-010105 and S1-010106 were originally intended to be shadow CRs to the original CR 22.078-062r5 for release 4 and 5. It was noted that the CRs contain a mix of editorial and functional changes. However, this CR is a shadow CR to a CR that was approved in SA #10. Hence, it will need to be put forward. It was agreed to be send S1-010104, S1-010105 and S1-010106 to SA #11 for approval.

In the future, this type of CR will not be accepted by SA1. A much clearer cover sheet will be required.

S1-010107	Support of previous phases of CAMEL	CAMEL ad hoc
S1-010108	Support of previous phases of CAMEL	CAMEL ad hoc
S1-010109	Support of previous phases of CAMEL	CAMEL ad hoc
S1-010126	Proposed LS "Reply to LS on Support of earlier CAMEL phases"	CAMEL ad hoc
S1-010223	Proposed LS "Reply to LS on Support of earlier CAMEL phases"	SA1
S1-010224	Support of previous phases of CAMEL	CAMEL ad hoc
S1-010241	Support of previous phases of CAMEL	CAMEL ad hoc
S1-010242	Proposed LS "Reply to LS on Support of earlier CAMEL phases"	CAMEL ad hoc

At the last meeting, it was decided that support of CAMEL phase 3 automatically implies support of phases 2 and 1. However, at the ad hoc, there was a request that CAMEL phase 4 need not support the features of CAMEL phase 3, although the functions of CAMEL phase 3 are included in phase 4 although they are provided differently.

It was stated that most operators are likely to implement CAMEL phase 4 rather than CAMEL phase 3; i.e. to jump from CAMEL phase 2 to CAMEL phase 4. This view was not shared by all of SA1. Much of this will depend on the timeframes within which vendors will make the various phases available.

It was stated that there are two solutions; to have full compatibility between CAMEL phase 4, 3 and 2 and have all the complexities to implement it or to cut out CAMEL phase 3 whilst still providing the functionality of CAMEL phase 3 in phase 4.

It was the consensus of the group, that:

“TSG SA WG1 have discussed for CAMEL phase 4 the issue of support of earlier CAMEL phases. The conclusion is indicated by the following text which SA1 has agreed for inclusion in the CAMEL Phase 4 (Release 5) Stage 1 specification:

“If an IPLMN or VPLMN supports CAMEL Phase 4, it shall also provide the functionality of all previous CAMEL phases. Phase 4 network signalling shall support interworking with CAMEL Phases 3 and 2.”

It was decided that documents S1-010107 and S1-010108 are not contentious and should be sent to SA #11 for approval. This was agreed. However, it is S1-010109 that is a problem. This was subsequently revised to S1-010224.

The intention of S1-010224 was to make the support generic; i.e. CAMEL phase N shall support N-1. The question raised was if CAMEL N also support N-2? This means that CAMEL phase 4 will support CAMEL phase

3, 2 and 1. There was some confusion as to what support means. Does it mean the functionality or the signalling? Clarification was subsequently provided in S1-010241.

A revision of S1-010224 was provided in S1-010242. It was agreed to send this document to SA #11 for approval.

Document S1-010126 contained a proposed liaison statement from SA1 to CN2. This was revised to S1-010223. However, due to the revision of S1-010224, a revision was provided in S1-010241. The liaison statement in S1-010241 was approved.

S1-010110	Corrections of congestion control procedure	CAMEL ad hoc
S1-010111	Corrections of congestion control procedure	CAMEL ad hoc
S1-010112	Corrections of congestion control procedure	CAMEL ad hoc
S1-010188	Corrections of congestion control procedure	CAMEL ad hoc
S1-010189	Corrections of congestion control procedure	CAMEL ad hoc
S1-010190	Corrections of congestion control procedure	CAMEL ad hoc

Documents S1-010110, S1-010111 and S1-010112 contain corrections to CAMEL phase 3 and the consequential change requests. There were some problems with these CRs, and so some discussion was held off line. The result was S1-010188, S1-010189 and S1-010190.

The documents were agreed to be sent to SA #11 for approval if no comments were received by the end of the meeting.

No comments were received to the CRs in S1-010189 and S1-010190 and so it was decided to send the CRs to SA #11 for approval.

S1-010113	Correction of interaction between CAMEL and BOIC	CAMEL ad hoc
S1-010114	Correction of interaction between CAMEL and BOIC	CAMEL ad hoc
S1-010115	Correction of interaction between CAMEL and BOIC	CAMEL ad hoc

Documents S1-010113, S1-010114 and S1-010115 contain corrections to CAMEL phase 3 and the consequential change requests. It was agreed that they should be sent to SA #11 for approval unless comments are received by the end of the meeting. Since no comments were received, these CRs will be forwarded to SA #11 for approval.

S1-010116	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	CAMEL ad hoc
S1-010117	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	CAMEL ad hoc
S1-010118	Interaction between CAMEL control of MO-/MT-SMS and Call Barring & ODB	CAMEL ad hoc

Documents S1-010116, S1-010117 and S1-010118 contain corrections to CAMEL phase 3 and the consequential change requests. It was agreed that they should be sent to SA #11 for approval unless comments are received by the end of the meeting. Since no comments were received, these CRs will be forwarded to SA #11 for approval.

6.2 Network Selection and GPRS

S1-010129	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	SIEMENS
S1-010130	CR to 02.11 on Roaming restrictions for GPRS (Release '98)	SIEMENS
S1-010131	CR to 22.011 on Roaming restrictions for GPRS (Release '99)	SIEMENS
S1-010132	CR to 22.011 on Roaming restrictions for GPRS (Release 4)	SIEMENS
S1-010198	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	Siemens
S1-010199	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	Siemens
S1-010245	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	Siemens

Document S1-010129 contained a CR to 02.11 on roaming restrictions for GPRS, together with shadow CRs for 02.11 R98 and 22.011 R99 and Rel-4. This related to document S1-010031 in section 5.2.1.

This document was agreed-to in principle. A revision is required to S1-010129 and to S1-010132. These were provided in documents S1-010198 and S1-010199. These documents were withdrawn and replaced with documents S1-010225 and S1-010226.

It was agreed to send S1-010225 to SA #11 for approval.

Document S1-010226, however, was found to be in error and was revised to S1-010245. It was agreed to send to SA #11 for approval.

Documents S1-010130 and S1-010131 were provided subsequently. Both documents S1-010130 and S1-010131 will be forwarded to SA #11 for approval.

7 Work Items (SA1 Responsibility)

7.1 Provisioning of IP-based multimedia services

S1-010011	Liaison statement on IP Multimedia sessions	SA #10

Document S1-010011 contained a liaison statement from SA #10 on IP multimedia sessions. Whilst TSG-SA did not conclude on a specific answer to the technical questions raised in the liaison statement (S2-002223) from SA WG2, a number of principles have been agreed by TSG-SA as guidance to SA WG1 and SA WG2 for their work in defining the service requirements and architecture for the control of IP multimedia services. SA WG1 and SA WG2 are encouraged to propose their own solution in line with the recommendations above.

It was decided that this should be discussed in the IMS ad hoc.

S1-010033	LS requesting clarification on interworking between IM domain and CS networks	N3
S1-010151	IMS to PSTN/ISDN interworking for basic voice calls only	Ericsson
S1-010162	Definition of "Basic voice call"	Alcatel, Fujitsu, Nokia, Siemens
S1-010154	Comments to the LS SP-000696	AT&T Wireless
S1-010182	IMS to PSTN/ISDN interworking for basic voice calls only	ad hoc
S1-010183	LS giving clarification on interworking between IM domain and CS networks	ad hoc
S1-010221	IMS to PSTN/ISDN interworking for basic voice calls only	Alcatel

A liaison statement on the interworking between IM domains and CS networks was provided from N3 in document S1-010033. In a joint meeting, CN1 and CN3 have addressed the required work for the IMS, the interworking between IMS and CS external networks for multimedia services.

In SA TSG-SA#10 it was concluded that the interworking between IMS and CS external networks is needed for voice calls. TSG-SA expressed in its report of meeting #10 and in a liaison statement to SA1 and SA2 (cc to CN1, CN3 and CN4) a requirement to support voice calls between IMS and CS domain users. An excerpt from the report:

> "Conclusion: … It was agreed that the IMS shall support voice capabilities and it shall be possible to have basic voice calls between IMS users and users in the CS domain/PSTN-style networks."

However, it is not clear to CN1 and CN3 whether the IMS and CS domain interworking is meant to be limited only to voice calls or if the interworking should cover also multimedia calls. Also, CN3 has a work item on this subject. If the IMS and CS domain interworking need not cover multimedia calls, the related CN3 work item can be suppressed.

Document S1-010151 contained a proposed CR to 22.228 to introduce the interworking between IMS and CS domain is applicable to basic voice only. There were some problems with this. Before this was approved, it was decided to look at what the definition of basic voice call is.

To this end, document S1-010162 contained a proposal.

> *A BVC is used for calls between the IMS and CS/PSTN and can convey only a speech component. The definition of the BVC pertains only to the boundary between the IMS and the CS/PSTN. If more than one IMS party is involved in an communication with a PSTN party/parties, the communication between the IMS parties shall not be adversely impacted by the presence of a PSTN party. Supplementary service elements identified for support on the boundary interface are CLIR and Call Forwarding.*

Another document, S1-010154, also addresses what is a basic voice call, but looks at it from a regulatory requirement. In particular, it seeks to add Lawful surveillance, Call tracing, Priority access, Emergency calls, Number portability and Global text telephony. Also, the document looks at roaming.

It was decided that a group shall get together to discuss this and combine documents S1-010151, S1-010161 and S1-010154. The CR was presented in document S1-010182 and the LS was provided in S1-010183. The liaison statement was approved but it was reported that more work was required on the CR.

The CR in document S1-010182 was revised before it was presented at the meeting in S1-010221. It was subsequently revised and was provided in S1-010243. This was revised once again to S1-010246. It was agreed to send S1-010246 to SA #11 for approval.

S1-010044	LS to TSGs T2, SA1, SA2 and SA4 regarding conformance test requirements for application layer test	T1
S1-010184	LS to TSGs T1 regarding conformance test requirements for application layer test	Nokia

Document S1-010044 contained a liaison statement regarding the conformance test requirements for application layer tests. In particular T1 indicate that SA1 needs to look at:

SA1	Provisioning of IP-based multimedia services
SA1	Facsimile
SA1,2,3	VHE enhancements
SA1,2,3	OSA enhancements (rel 5 only?)

It was considered a little early to start writing tests for IMS, VHE and OSA and that fax does not belong to SA1. A liaison statement to this effect was provided in document S1-010184. The liaison statement was approved.

S1-010045	SAT/USAT Control of IP Multimedia Services	T3
S1-010056	LS “Control of IP multimedia services”	CN Ad hoc
S1-010100	LS “Control of IP multimedia services”	SA2
S1-010187	Response to LS on SAT/USAT Control of IP Multimedia Services	SBC
S1-010191	Response to LS “Control of IP multimedia services”	SBC

Document S1-010045 contained a liaison statement from T3 on SAT/USAT Control of IP Multimedia Services. T3 are asking for some joint work suggests that an ad hoc meeting between interested parties in both S1 and T3 be held to discuss the various ways that the USIM can contribute to the success of IP multimedia services. The next plenary of TSG-T3 will be held on the 1st and 2nd of March hosted by ETSI, and will be preceded by 3 days of T3 ad hoc meetings, (26th to 28th of February). T3 would be pleased to organise a joint session during this period.

It was suggested that since the work is still in its early stages, the meeting should be a little later. Perhaps this could be held prior to the SA1 Helsinki meeting in May. Either way, it is important to have the service requirements included into this.

A liaison statement back to T3 to explain this was provided S1-010187. The chairman elect indicated that he would prefer to specify a date other than the first day of the next meeting. Rather, it was preferred to communicate the intention of SA1 to T3 to have a joint meeting. This will be done by the chairman elect.

This was agreed and the liaison statement in S1-010187 was withdrawn.

Another document on control of IP Multimedia services was provided in document S1-010056. The liaison statement from CN explains some concern on the lack of clarity over whether all the three possibilities of using CAP, SIP and/or OSA will be included in the approved version of the IP multimedia specifications and could lead to abortive work on developing the details of a possibility, which will then be discarded. For this reason, the TSG CN WG1/2/3/4 joint meeting ask TSG-SA WG1 and TSG-SA WG2 to reach a speedy conclusion on which of the options listed above should be developed in TSG-CN. If clear guidance is not available for CN to continue detailed technical discussions at their next meeting, it will be very difficult for CN to complete the work in time for the closure of UMTS Release 5 at the end of 2001.

Given that TSG-CN WG5 work on OSA, the choice of options is important to them; it would therefore be useful for the guidance from SA WG1 and SA WG2 to be copied to TSG-CN WG5. Hence, they would like a joint meeting.

The point is that just one mechanism should be selected and to exclude the other two. This was not accepted by at least one delegate. At an earlier meeting of SA1, it was suggested that the service requirements would best define which mechanism is most appropriate, but until the service requirements are defined, the option needs to be kept open.

Nonetheless, It was commented that a solution needs to be made as quickly as possible to avoid work on protocols that will never be applied.

It was decided to get together some people and put down the views and opinions and then write a liaison statement back to CN.

The liaison statement was provided in document S1-010191 (labelled as 193).

There was some concern that all three options were being promoted rather than indicating that the door should not be closed on the functionality provided by the mechanisms. Some agreed text does occur in the liaison statement from SA #10 in S1-010011 and perhaps this could be used.

It was decided to revise the liaison statement to S1-010248. This LS was approved.

S1-010090	Introduction of charging for IPMultimedia and Event Based Charging	TIM S.p.A.
S1-010192	Introduction of charging for IPMultimedia and Event Based Charging	TIM S.p.A.

Document S1-010090 contained a CR to 22.115 add features for alignment with new functionality defined in TS 22.228 and to provide event based charging. New information is provided by the serving network and by the user to apply IP Multimedia Charging and Event Based Charging and new special cases are described to apply IP Multimedia and Event Based Charging.

This was passed to an ad hoc.

The response was provided in document S1-010192. It was agreed to send the CR to SA #11 for approval. However, it was noted that in the last clause there may be limits as to what actually may be achieved and this may require further study.

S1-010098	LS on IM Emergency Call without USIM	SA2
S1-010193	Reponse to LS on IM Emergency Call without USIM	AT&T
S1-010216	CR to 22.101 on Clarifications on IMS emergency call support	Nokia

Document S1-010098 contained a liaison statement from SA2 on on IM Emergency Call without USIM. It was noted that within SA2 a proposal was made that all emergency calls with or without a USIM from IM subscribers are made on the CS network. This is being done to make the implementation easier. SA2 requested clarification of the requirements from SA1. Questions raised included the following:

> Is it required that an IM UE without a USIM be able to make an emergency call via the PS domain and the IM subsystem in Rel 5?
>
> Is it required that an IM UE with a USIM but which is not attached to the SGSN be able to make an emergency call via the PS domain and the IM subsystem in Rel 5?
>
> Is it acceptable for R5 for all emergency calls from IM capable UEs to be delivered over the CS domain?

Subsequent discussion within SA1 indicated that delivery of IMS emergency calls over the circuit switched network:

1. implictly mandates dual mode terminals,
2. assumes CS will always be there (that the user does not need to detach from IM and re-attach to the CS domain),
3. there may be problems/failure in attaching to CS domain,
4. user must have visibility of what resources (possibly charge) he is using in the network.

There has been some work by SA2 on emergency calls in the IM domain and it would be unfortunate to lose this for Rel-5. It would appear that SA2 are having problems with the more unusual cases; i.e. roaming is not allowed, requirements for USIMs etc..

It was questioned if will be a stand-alone IM subsystem? If not, then it is possible to go the way of SA2 (notwithstanding the four points above).

It was suggested to stick with the simple case of allowing emergency calls when there is a context and a USIM and leave the rest of the scenarios for later. It was also suggested that the SDOs check with the regulators to ensure that this is acceptable.

A proposed liaison statement was provided in document S1-010193.

It was commented that some regulatory regimes do have some requirements for emergency calls without a USIM and this text is not consistent with this. Moreover, it was agreed to collect comments from SDOs.

It was agreed to have a revision of document S1-010193 in line with the comments made.

A revision is required and was presented in document S1-010249. The liaison statement indicates that SA1 does not wish to delay the availability of R5, and has considered the different requirements options, and concluded that a phased approach is be required. Given the potential complexity of the SIM/USIM and SIM/USIM-less scenarios, S1 has concluded that:-

- the IMS shall support emergency "voice calls" from an IM UE with SIM/USIM within the IMS for R5
- the IMS is not required to support emergency "voice calls" from an IM UE without a SIM/USIM within the IMS for R5

and that the support of emergency "voice calls" from IM UE without a SIM/USIM within the IMS is to be considered for a subsequent release.

Moreover, this liaison indicated "It shall be possible for Release 5 to enable compliance with regional regulatory requirements for emergency services. This may include the need to support SIM/USIM-less emergency call."

The liaison statement in S1-010249 was approved.

A CR to implement the understanding as per S1-010193 was provided in document S1-010216. Given the concerns over the liaison statement in S1-010193 it was decided to revise the CR.

The revision was provided in S1-010250. It was agreed, to send this to SA #11 for approval.

S1-010143	IMS Service Examples and Overall Requirements (Discussion document)	SIEMENS
S1-010149	Proposal for new Stage 1 specification : Multimedia Service Capability Requirements	Vodafone
S1-010150	Multimedia service examples	Ericsson

At the TSG SA Meeting #10 it was agreed that it is necessary to produce basic and advanced examples for IMS services, which can be used to verify that the capabilities provided by the network are present to support these services.

Document S1-010143 is a first step to identify different service categories and to derive requirements on the underlying network. Numerous articles, reports (e.g. UMTS report No. 9 or the "Book of Visions 2000" (the report of the IST WSI Project)) and other documents are available that discuss and describe possible 3rd Generation mobile services and applications.

It is being asked that:

- Based on this first draft of service examples, the detailed requirements for the offering these kinds of services should be analysed. Some specific services should be elaborated and described in more detail (1-2 pages per service).
- These short service descriptions and the overall requirements should be the basis for the work within SA 2 to elaborate short functional flows for these services and to analyse if all required functions are available within the network.
- In a second step applications in the IMS, that can become building blocks for service provisioning, should be identified.

This document was noted as a good start to this work. It will require some updating and will be dealt with in the next IMS ad hoc.

Document S1-010149 a proposal for new Stage 1 specification : Multimedia Service Capability Requirements. This document also contains some examples of what is possible as per the last document S1-010143.

Document S1-010151 contained a presentation of Multimedia service examples. As an interesting presentation, it was noted in light of S1-010149 and S1-010143.

S1-010152	Service control for different components of an IP multimedia session	Ericsson

Document S1-010152 contained a proposed CR to fulfil part of the requirement in S1-010011; i.e. it is no longer specified which tools shall be used to support IP multimedia applications.

It is clear that there is a potential problem in S1-010011, there was concern that there is a deletion of all the service control mechanisms. This view was supported by a number of delegates and since the text is descriptive rather than normative. SA1 is not trying to influence the choice of tools, but rather than delete the text, it was decided to reject this CR.

S1-010153	Service requirements for local services	Ericsson

Document S1-010153 is proposing to clarify that users and/or terminals shall be able to indicate whether they wish a chosen address to be treated as a local address in a visited network or according to services offered from their home environment. (It should be noted that the network operator is always able to determine how the service request shall be treated, irrespective of the wish of the user and/or terminal.)

This service requirement should not be stated in the VHE specification, since readers may look there only to find requirement on VHE, and not in the IMS specification, since these requirements might not be solved in the IM subsystem.

The idea is to allow the user to indicate whether a service request concerns a local service, offered via a local address in a visited network, or a service offered from the home environment. The user and/or terminal shall be able to choose what should be the default option.

The mechanism needs to be flexible. Whilst it is not terribly useful for a network code used in the home network to give the home weather if you are in Capetown, but then again, it is not useful if all you can get is the local weather and not find out how to dress before going home.

The document was noted for now, and delegates were invited to raise this in either the IMS ad hoc or the VHE ad hoc.

S1-010185	Requirement for End-to-end encryption of IP multimedia Subsystem controlled VOIP	AT&T

Document S1-010185 contained a proposal to add end-to-end encryption of IP multi-media Subsystem controlled VOIP. This would appear to be more applicable to SA3, but the source indicated that the comments of SA1 were sought before putting this to SA3.

There was general support for this, although it was commented that this could be one solution amongst many and that SA3 should not be lead to a particular solution.

It was questioned how much work this will be for the other groups. Perhaps a feasibility study is required before a decision is made to put this into release 5. A delay to release 5 is not acceptable.

It was requested that the requirement is required to be captured in a stage 1 and the most appropriate TS is 22.228.

Nonetheless, it was decided to send a liaison statement to SA3 regarding this work item. The liaison statement was provided in S1-010247.

This was further revised on line:

> "S1 believes these matters should be dealt with by S3~~, and asks S3 to confirm that this functionality could be included within R5~~."

and was provided in S1-010261. It was approved.

S1-010217	Plan for services scenarios activity within SA1	IP multimedia services ad hoc chair

Document S1-010217 was provided to try and plan for further work on services scenarios, specifically for IP multimedia services. There have been also several individual contributions to propose additional service examples. Also there has been concern that SA1 should look not only IMS services but services over whole of release 5. A concern within SA1 was also how the “service examples” are documented as 3GPP only specifies the services capabilities not the services themselves.

It seems necessary to hold a physical meeting to solve the above issues, even though the scope exceeds IP multimedia services the IM ad hoc can been a suitable place for this activity. Thus a 2-3 day ad hoc meeting with specific agenda covering “services examples” is proposed.

There were some problems regarding the dates. It was decided to have the meeting from 5-8 March 2001 in Tempe, Arizona hosted by Motorola.

S1-010232	Standardisation of IMS Common Services and Advanced Service Examples	BT

Document S1-010232 was provided in response to the liaison statement SA #10 in S1-010011. Delegates were requested to read this document and to provide comments to the source (Peter Chaloner) by email.

7.2 Bearer Modification without pre-notification

S1-010055	Proposed working method for Service Modification	N3

Document S1-010055 contained what appears to be a liaison statement from CN3 to SA1 that was sent to the SA1 secretary. However, it was noted by the source that this is an old document and should not really be passed as a liaison statement. Since also it was agreed that the work is to be considered as part of Rel-5, it was requested to withdraw the document. The document was withdrawn.

7.3 VHE enhancements

S1-010039	Clarification of VHE capable set of services	S2
S1-010041	VHE User Profiles - Security issues	S3
S1-010081	VHE ADHOC #4 Meeting report	Editor
S1-010082	LS to S2 on VHE to R4	Adhoc group
S1-010083	VHE ADHOC #5 meeting report	Chair/Editor
S1-010084	The Virtual Home Environment (Release 5) Clean copy of 096 submitted to S1 plenary	Editor
S1-010085	Changes to TS 22.121 Release 4 - Update of 097 submitted to S1 Plenary	Editor
S1-010086	Proposed Reply LS to S2 (S2-002093) on clarification of VHE requirements (Update of 100 (LS to S2) submitted to S1 plenary)	Editor
S1-010169	The Virtual Home Environment (Release 5) Addition of User profile requirement and changes for clarification	VHE Ad hoc
S1-010201	Proposed Reply LS to S2 (S2-002093) on clarification of VHE requirements (Update of 100 (LS to S2) submitted to S1 plenary)	Editor
S1-010206	VHE ADHOC #4 Meeting report	Editor

Document S1-010041 contained a liaison statement from S3 on security issues. This is to indicate that S3 has received the responses from SA1 and is working on the subject. It was noted.

Document S1-010039 contained a liaison statement from SA2 requesting clarification of VHE capable set of services. The proposed response to this was provided in document S1-010086. Each of the requests for clarifications is dealt with in S1-010086 and the invitation for a joint meeting with SA2 on VHE issues, proposed for the 27/28th of Feb in Sweden for further discussion is accepted.

There was a concern that the answer to point 2 is not clear. This resulted in a revision which was provided in document S1-010201. It was approved.

Document S1-010081contained the VHE ADHOC #4 Meeting report and S1-010083 contained the VHE ADHOC #5 meeting report. Both documents were noted, although document S1-010081 was subsequently updated to S1-010206 to include an updated delegates list. S1-010206 was noted.

Document S1-010085 contained a CR to TS 22.121 Release 4. This was agreed, to be sent to SA #11 for approval if no comments were received by end of meeting. Since no comments were received, these CRs will be forwarded to SA #11 for approval.

Document S1-010084 was withdrawn in favour of a CR to 22.121 in S1-010169. This was agreed, to be sent to SA #11 for approval if no comments were received by end of meeting. Since no comments were received, these CRs will be forwarded to SA #11 for approval.

Document S1-010082 contained a proposed liaison statement from SA1 to SA2 on VHE to R4. For Release 4 there are no additional requirements on VHE as compared to VHE Release '99. It was approved.

S1-010087	Handling of Service Provisioning requirements	Chair/Editor

Document S1-010087 contained an input document on the handling of Service Provision. This was prompted by a question from SA2 asking for a clarification. as to where Service Provision will be handled. SA2 (VHE-OSA drafting group) is addressing these issues in TR 23.955 and look to S1 (VHE-adhoc group) for guidance on requirements.

The issue of Service Provisioning includes discovery, selection and delivery of service. Requirements are needed from the User's perspective and network perspective. This area of work is related to VHE but not restricted to VHE as it covers other areas such as local service discovery, selection and activation.

This level of requirement has not been documented in any SA1 document and SA2 will need to have this requirement to progress its work especially for VHE provisioning. Since this area is strongly related to VHE. The VHE adhoc group seek advice on whether this work should be handled in TS 22.121 Rel-5, in a new TS on Service Provisioning or in TS 22.228 as this aspect also touches on IM services.

It was decided that this work shall be vested in the VHE ad hoc for the time being.

S1-010175	Rel-5 VHE service discovery	Motorola

Document S1-010175 contained a discussion document on the subject of service discovery for VHE. By discovery, it is intended that the user be able to know what services are available for use. A definition of the term would be useful.

It was questioned if it is required; why not just advertise this in the newspaper?

It was decided to send this to the VHE group for consideration.

7.4 OSA enhancements

S1-010097	Answer to LS on request for OSA Interface Information	SA2
S1-010133	Meeting Report OSA adhoc #3	S1 OSA ad-hoc
S1-010134	Meeting Report OSA adhoc #4	SIEMENS
S1-010135	Discussion document on OSA Terminal Capabilities	SIEMENS
S1-010136	22.127 version 1.2.0 (Release 4)	S1 OSA ad-hoc
S1-010137	22.127 V 4.0.0	rapporteur
S1-010138	22.127 version 1.3.0 (Release 5)	rapporteur
S1-010139	Proposed LS to T2 MMS: Additional feedback to Request for OSA Interface Information, (T2-000556)	S1 OSA ad-hoc
S1-010140	CR to 22.127 V 4.0.0 on CS Call Control (Release 4)	SIEMENS
S1-010141	CR to 22.127 V 4.0.0 on User interaction(Release 4)	SIEMENS
S1-010176	Rel-5 OSA service discovery	Motorola

Document S1-010097 contained a liaison statement from SA2 to T2 indicating that T2 would be well advised to collaborate with SA1 on the applicability of the OSA API to the MMS. It was noted.

The meeting report of OSA adhoc #3 was provided in document S1-010133. This should really have been seen at the last meeting, but it made no difference to the output from that meeting. It was noted.

The meeting report of OSA adhoc #4 was provided in document S1-010134. The meeting finalised the work on 22.127 for "Open Service Access" Release 4 and all requirements for later releases were removed. For Release 4 the meeting agreed to introduce an Event Notification Function, clarified requirements on call control and enhanced charging functions. The result is given in 22.127 version 1.2.0 (S1O00060). It was submitted to SA#10 and approved there.

Document S1-010136, which contained 22.127 version 1.2.0 (Release 4), has been superceded by S1-010137 that was approved at SA #10. It was noted.

Document S1-010138 contained a proposal for a Rel-5 version of 22.127. It contains some changes that are mainly editorial. It was noted, although it was made clear that it is not version 1.3.0, but rather a working draft. It was noted for the time being. It will be turned into a CR to 22.127 version 4.x.y when it is ready to be created using a CR to the release 4 version as a base.

Document S1-010139 contained a proposed LS to T2 MMS: Additional feedback to Request for OSA Interface Information, (T2-000556). It was approved.

Document S1-010140 contained a CR to 22.127. In the current OSA stage 1 (22.127 Version 4.0.0) there exists a requirement for the OSA interface to be able to create CS or PS calls. For release 4 there exists no mechanism to accomplish this. It was agreed, to be sent to SA #11 for approval.

Document S1-010141 contained another CR to 22.127 on user interaction. In the current OSA stage 1 (22.127 Version 4.0.0) is unclear what kind of user interaction for CS CC needs to be considered. It was agreed, to be sent to SA #11 for approval.

It was asked if this work could be made know to CN5. Jörg Swetina agreed to communicate this to CN5.

Document S1-010135 contained a discussion document on OSA Terminal Capabilities. The present OSA function to access terminal capabilities is based on some notes in the WAP specifications. There it is stated that in the course of establishing a WAP session a terminal may transmit terminal capabilities via the WAP gateway to the WAP server. It was decided to address this at the joint VHE OSA meeting on 6th - 8th March.

Document S1-010176 contained a discussion document on service discovery for OSA Rel-5. It is not a change request, but does suggest some changes. It was noted and will be sent to the OSA ad hoc for consideration.

The next meeting of the OSA ad hoc will be from the 6th to 8th March.

S1-010202	MeXE service discovery	Motorola

Document S1-010202 contained a CR to 22.057 on service discovery for MeXE; it was taken under this part of the agenda for consistency and since there was no MeXE item. Although MExE generically supports service discovery by "surfing" to websites and downloading applications from operators' and other parties servers, it is helpful to explicitly clarify this as a requirement.

It was agreed to be sent to SA #11 for approval if no comments by end of meeting. Since no comments were received, these CRs will be forwarded to SA #11 for approval.

7.5 CAMEL phase 4

S1-010103	Meeting Report of SA1 CAMEL Ad Hoc 30th Jan – 1st Feb 2001	CAMEL ad hoc
S1-010119	Enhancements to mobility management reporting	CAMEL ad hoc
S1-010120	Changing of naming for SMS-CSI	CAMEL ad hoc
S1-010121	Corrections of Call Barring interaction for CSE created call / new party	CAMEL ad hoc
S1-010122	Enhanced CSE capability for Subscribed Dialled Services	CAMEL ad hoc
S1-010123	Clarification on Call Party Handling requirements	CAMEL ad hoc
S1-010124	Provide Location Information in case a terminating call is alerted	CAMEL ad hoc
S1-010125	Transport of Charging Information from serving PLMN to the CSE	CAMEL ad hoc

Document S1-010103 contained the report of the last meeting of the CAMEL ad hoc. It was noted as in section 6.1.

Document S1-010119 contained a CR to 22.078 on "enhancements to mobility management reporting". It was agreed, to be sent to SA #11 for approval.

Document S1-010120 contained a CR to 22.078 on changing of naming for SMS-CSI. The Stage 2 documents (23.008 and 23.078) are naming the CAMEL marks for SMS MO-SMS-CSI and MT-SMS-CSI. This CR is proposing to align with stage2. It was agreed, to be sent to SA #11 for approval.

Document S1-010121 contained a CR to 22. 078 on corrections of Call Barring interaction for CSE created call/new party. The description of interworking of CSE created new party with Call Barring supplementary service and ODB is misleading and not in line with chapter 18.8. It was agreed to be sent to SA #11 for approval.

Document S1-010122 contained a CR to 22. 078 on enhanced CSE capability for Subscribed Dialled Services. There are IN services like Freephone, Premium Rate, Universal Access Number, that a mobile user would like to access from his home PLMN and also when he is roaming. These are the services that are already popular in his PSTN. The requirement is that a mobile user should be able to invoke the same set of IN services, preferably using the same dialling pattern as already prevalent in his PSTN. It was agreed, to be sent to SA #11 for approval.

Document S1-010123 contained a CR to 22. 078 on clarification on Call Party Handling requirements to provide further clarification of the CPH operations. It was agreed, to be sent to SA #11 for approval.

Document S1-010124 contained a CR to 22. 078 to provide Location Information in case a terminating call is alerted. When a terminating call is subject to CAMEL based services, the location of the called subscriber is given at the initial contact from the network to the CSE. For some service this location information might be not sufficient and precise enough. It is proposed to add the location information to the procedure where the called subscriber is alerted. At this time the subscriber is paged and the location information is very accurate. It was agreed, to be sent to SA #11 for approval.

Document S1-010125 contained a CR to 22. 078 on transport of Charging Information from serving PLMN to the CSE. This document proposes to enable the CSE to request charging notifications from the serving MSC in case of Mobile Terminated calls. The phrase 'request charging notifications' has been changed to 'send charging notifications' for Mobile Originated and Mobile Forwarded calls. It was agreed, to be sent to SA #11 for approval.

7.6 Facsimile

Non input was received on Facsimile enhancements.

7.7 Technical Enhancements and Improvements (TEI)

S1-010069	Predictive Text Input	France Telecom
S1-010070	Predictive Text Input	France Telecom
S1-010158	Work Item Description for the Predictive Text Input feature	France Telecom

Quite a bit of discussion has occurred on the subject of predictive Text input over the email exploder. This was partially caused by two inputs in documents S1-010069 and S1-010070 which contain proposed CRs to 22.101 for release 4 and release 5.

The "predictive text input" feature is now available on most of the UEs but this feature works only for the SMS application. It would be useful and would allow a consistency to have it for other applications like SIM Toolkit, WAP, etc.. Moreover, it would be useful to turn this feature on and off according to the situation it is being used in.

A proposed work item description was provided in S1-010158.

It was commented that this feature is related to MMI and should be left to operator implementation. This was stated by many manufacturers with tedious repetition. Traditionally, the services group does not specify the MMI over and above what is specified in 22.030.

The documents were withdrawn.

S1-010071	Handling of interactions between applications requiring the access to UE resources	France Telecom
S1-010072	Handling of interactions between applications requiring the	France Telecom

	access to UE resources	

Two CRs were presented in documents S1-010071 and S1-010072 on handling of interactions between applications requiring the access to UE resources. Currently WAP sessions and SIM toolkit services are not programmed to run simultaneously in a UE. In other words, no rules have been defined to resolve contentions for the access to the handset resources such as display and keypad. The objective of this proposal is to define a user controlled mechanism to grant access to the UE resources to the applications running simultaneously.

These CRs relate to a release 99 CR that was approved at SA #10.

For Rel-5, further work is expected to enrich the proposed procedure. This will be done in accordance with T2 work on Terminal Local Model, but for the purposes of consistency, it was decided to approve CRs to both Rel-4 and Rel-5.

It was agreed to send both documents to SA #11 for approval.

S1-010148	User controlled PLMN list	Vodafone

Document S1-010148 contained a CR to 22.011 on a user controlled PLMN list. The change is being proposed to remove the stated prohibition of being able to update the User PLMN List over the air.

The change is proposed because :

1) This restriction on OTA update is not necessary. Operators own the SIM cards and set the fields on the SIM cards. Optional fields like User PLMN List and Network PLMN List do not have to be present on the SIM card and so an operator can issue SIM cards with just the Network PLMN list or no list at all.
2) Ease of use - at present, to enjoy subcriber requested services from their home operator, they must remember to leave the 'user network selection' field empty.
3) Operators want to be able to offer preferential tariff on the basis of PLMN selection which means the consumer has to remember to keep the User PLMN List empty to benefit from such tariffs.
4) Operators will be able to offer services to users to remotely update this file.
5) Operators will be able to offer customer care for those customers who do not understand the User PLMN List.

There was a comment that there have been serious discussions in SA regarding the selection lists. It was requested, therefore, that the decision to do this be taken very carefully. This is not to be confused with the switching between the user-controlled and network controlled PLMN section lists.

It was commented that this could be a regulatory issue and should be maintained. It was suggested though, that it is not for the technology to police a regulatory issue.

Since there was no clear resolution in SA1 and so the default situation is to leave the text alone. With this in mind, the CR was rejected.

S1-010195	Barring of MT SMS Service Requirements	One 2 One

Document S1-010195 contained a discussion document that observes that recently some networks started to charge roaming customers for mobile terminating SMS. This is unfair to the user who does not have the possibility of blocking the reception of SMS.

It is felt beneficial to introduce a service requirement for a new supplementary service aimed to completely block, or filter the incoming SMS while roaming.

It should be noted that it is common practice to notify the user of a voice message waiting by sending an SMS, as well as sending advice of charge, thus it is desirable to have a mechanism that allows a certain level of flexibility in the barring.

It was noted and delegates were requested to contact the author.

S1-010251	Editorial CR to 22.129 for Rel4	Orange

Document S1-010251 contained a CR to 22.129, which were mainly editorial in nature. It was agreed to send it to SA #11 for approval.

7.8 Service Provider Name

S1-010030	Response to LS "Enhancement of CPHS Network Operator Name Feature for 3G R4"	N1
S1-010146	Operator PLMN List Overview	SBC

Document S1-010030 contained a response to the liaison statement from T3 on Enhancement of CPHS Network Operator Name Feature for 3G. TSG CN1 has discussed the LS and gave some answers. It was noted, pending discussion on Service Provider Name and PLMN name.

Document S1-010146 contained a reference document on the PLMN list display. A liaison statement along with change requests has been received by TSG SA1 from TSG T3 regarding proposed changes to the Operator PLMN list. This contribution provides an overview of the proposed changes to promote understanding within SA1.

S1-010076	Display of service provider name in the UE	One 2 One
S1-010077	Display of service provider name in the UE	One 2 One
S1-010209	Display of service provider name in the UE	One 2 One
S1-010210	Display of service provider name in the UE	One 2 One
S1-010209	Display of service provider name in the UE	One 2 One
S1-010210	Display of service provider name in the UE	One 2 One

Document S1-010076 contained a CR to 22.101 (Rel-4) to clarify the service requirement on the service provider name display in the terminal. A new procedure is described in order to display the desired information on the terminal about the provider of the communication service. When in the home network the name of the service provider is shown on the terminal, when roaming, the name of the visited network is shown.

Document S1-010077 contained an equivalent CR for Rel-5.

It was commented that whilst this feature would appear to be appropriate for the user, it would require extra storage space in the Mobile and extra software. There are also some concerns over whether this can be abused. However it was also felt that these issues could be satisfactorily resolved, and proposals were made for refining the CRs.

Revisions of the CRs were provided in S1-010209 and S1-010210 taking into account the comments of the meeting. It was agreed to send the CRs to SA #11 for approval with the word "optionally" after the "and/or".

S1-010147	LS on Introduction of Operator PLMN Name List for 3G Release 4	SBC
S1-010211	LS on Introduction of Operator PLMN Name List for 3G Release 4	SBC

Document S1-010147 contained a proposed response to T3 from SA1. It was decided to revise this to add some more explanatory text in the document. The revision was provided in S1-010211, which was approved.

Service Requirements for the flexible display of the Operator Name were discussed, and it was agreed that requirements exist to:

1. Display a single Operator Name as a function of multiple network codes,
2. Display different Operator Names as a function of different Mobile Network Codes,
3. Enable application of both the above while the subscriber is in either the home PLMN or roaming.

It was requested to have an email list. This will be done.

7.9 GPRS (22.060) New WI

There was no input on GPRS at this meeting under this agenda item.

7.10 ODB for Packet Services (New WI)

S1-010018	Work Item Description for Release 4: ODB (Operator Determined Barring) for Packet Oriented Services	NEC
S1-010019	Corrections of the ODB categories for Packet Oriented Services	NEC
S1-010036	Remove ODB for Packet Oriented Services from Release 99	NEC
S1-010037	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	NEC
S1-010203	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	NEC
S1-010204	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	NEC
S1-010205	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	NEC

Document S1-010018 contained a proposed WI for ODB (Operator Determined Barring) for Packet Oriented Services. It is being passed to SA1 for information as it is being proposed to have SA2 as the lead group. Essentially, the WI intends to apply ODB to packet services. The document was noted.

A proposed CR to 22.041 in order to implement the changes related for SA1 was provided in S1-010019. The current ODB barring categories for Packet Oriented Services has conflicts with the description in GPRS stage 2. It was agreed, to send this to SA #11 for approval

Document S1-010036 also contained a CR 22.041 (R99) to remove ODB for Packet Oriented Services from Release 99. It was agreed, to send this to SA #11 for approval.

Finally, document S1-010037 contained a CR to 22.078 (Rel-4) to introduce a new subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services.

The problem with this is that the version 4 of 22.078 and the version 3 are intended to be the same and relate to CAMEL phase3. CAMEL phase 4 only exists in release 5. By having this change to version 4 means that we create a CAMEL phase 3½.

It was decided to have the same text in release 99 and release 4 with a note to explain the problem, and a release 5 as a shadow specification.

It was agreed to send the CRs in S1-010203, S1-010204 and S1-010205 to SA #11 for approval.

The CRs were also provided in documents S1-010213, S1-010214 and S1-010215. These numbers were originally allocated for the CRs, but they were erroneously provided in S1-010203, S1-010204 and S1-010205 and rather than change the documents used, it was decided to use S1-010203, S1-010204 and S1-010205. The CRs were provided in documents S1-010213, S1-010214 and S1-010215 were withdrawn.

7.11 CPHS (New WI)

S1-010049	Introduction of Operator PLMN Name List for 3G Rel-4	T3

Document S1-010049 contained an introduction of Operator PLMN Name List for 3G Rel-4. Currently the PLMN name is read from the ME's own internal list (based upon GSMA PRD SE.13) and is displayed when the subscriber is registered on a PLMN. The attached CR, T3-010102, as part of the introduction of the CPHS features, introduces the ability for a network operator to define a USIM file that contains a name to be displayed when on the HPLMN. The benefit of having this information on the USIM is that it is provided by the network operator and its contents can therefore be modified as and when required. This was noted, pending the discussions regarding the CPHS features for Rel-4 (see S1-010177 below).

S1-010020	Introduction of features from the CPHS for 3G Rel-4	T2
S1-010048	Introduction of features from the CPHS for 3G Rel-4	T3

Document S1-010020 contained a liaison statement from T2 to T3 on CPHS. T2 has reviewed the liaison statement and has no immediate concerns with the discussion, however concerning the Voice Mail section T2 are seeking some clarification. Therefore, T2 is asking S1 for confirmation that T2's interpretation is acceptable to SA1.

Document S1-01048 answers the questions of T2 in S1-010048. Since, SA1 has no concerns over this, the changes are endorsed.

S1-010073	Notification of active CFU	One 2 One

Document S1-010073 contained a CR to 22.082 to add a feature for alignment with new functionality defined in T3. When the UE is in idle mode, an indication on the status of CFU is provided to the user. The feature is already implemented in Rel-4 in the context of the CPHS work item and this CR introduces the corresponding service requirement.

It was commented that, back in the annals of time, there was a signal defined as part of call set-up to indicate that CFU is set and it was asked how this relates to this functionality. It was answered that this change allows for the status of Call Forwarding to be stored in the USIM. It does not involve the network.

S1-010177	LS to T3 on Introduction of CPHS features	Orange
S1-010178	CR to 22.101 on Introduction of CPHS features	Orange
S1-010179	CR to 22.101 on Introduction of CPHS features	Orange

In the last meeting, SA1 received a liaison statement from T3 (S1-000820, T3-000627) regarding three features that were part of the CPHS specification. Document S1-010177 provides a response to this liaison statement. In it, S1 is supporting the inclusion of the CPHS features in 3GPP R4 and has reviewed the service requirements for the proposed features.

The CRs to implement the features in SA1 specifications were provided in S1-010178 (Rel-4) and S1-010179 (Rel-5).

The liaison statement was approved subject to the no comments being received on the CRs by the end of the meeting. Since no comments were received, these CRs will be forwarded to SA #11 for approval.

S1-010074	PLMN name indication	One 2 One
S1-010075	PLMN name indication	One 2 One
S1-010207	PLMN name indication	One 2 One
S1-010208	PLMN name indication	One 2 One

Document S1-010074 contained a CR to 22.101 to specify the alternative sources for the PLMN name resulting from the liaison statement in S1-010177. The Public Land Mobile Network name is currently derived either by the UE list or, if the terminal and the network implement the feature, using the broadcast channel according to 22.042. In this CR it is proposed to allow the PLMN name to be read from the USIM.

There was a comment regarding the second bullet. The first point was that it should be more related to the NITZ specification 22.042 and that the order of priority may not be appropriate. With the USIM taking precedence over the broadcast name or ME stored name.

An equivalent CR was provided for Rel-5 in S1-010075. Based on the comments, both S1-010074 and S1-010075 were revised to S1-010207 and S1-010208. It was agreed to send the CRs to SA #11 for approval.

S1-010078	Message Waiting Indication persistency	One 2 One
S1-010079	Message Waiting Indication persistency	One 2 One

Documents S1-010078 and S1-010079 were withdrawn.

8 Work Items (Other Groups)

8.1 Location Services enhancements

S1-010040	Provision of Open Interfaces within the GERAN & UMTS for LCS Support	S2
S1-010068	Report from SA LCS Workshop, London, 11-12 January 2001	Qualcomm Europe SARL
S1-010099	Withdrawing the SA Work Item on open LCS interfaces	SA2

Document S1-010040 contained a liaison statement on the Provision of Open Interfaces within the GERAN & UMTS for LCS Support. It resulted in a workshop, which was held on 11-12 January 2001 reported in S1-010068.

Document S1-010068 contained a report from the SA LCS Workshop, London. The result of the LCS Workshop was:

- A proposal will be made to TSG-SA to withdraw the work item agreed in TSG-SA#10 in SP-000685 on open interfaces.
- A proposal will be made to TSG RAN to endorse the new work item as described in Tdoc 23. This new WI covers R4.
- The workshop recommends to GERAN that Iu mode should follow the same principle as UTRAN, but take into consideration that the final decision will be made in GERAN.

The document was noted.

Support for this conclusion was provided in S1-010099 containing a liaison statement from SA2. It was noted.

S1-010012	Editorial Cleanup	SBC
S1-010164	LCS future developments	Nokia
S1-010218	Editorial Cleanup	SBC/Nokia
S1-010235	Quality level negation	Nokia
S1-010236	Identification of a Target MS for LCS	Nokia
S1-010237	OSA support for LCS	Nokia
S1-010238	Clarification on Defined geographical areas	Nokia
S1-010239	Location determination in call or PDP context activation and release	Nokia

Document S1-010012 contained a clean-up CR to 22.071. It would appear that the description of the velocity parameter has been deleted. This is not the case, however, as it occurs elsewhere in the document.

Document S1-010164 contained numerous proposals for changes, including additional editorial improvements to those provided in S1-010012.

It was suggested that the two authors get together to discuss the CR. The purely editorial aspects should be put into one CR, and the other elements need to be put into one or more CRs to 22.071.

The revision of S1-010012 was provided in S1-010218. The CR in S1-010218 was agreed to be sent to SA #11 for approval.

Documents S1-010235, S1-010236, S1-010237, S1-010238, S1-010239 contained CRs related to the proposal to split up the work identified in S1-010164 into separate CRs.

On S1-010236, it was questioned whether it is necessary to have a reference to IP addressing in the Rel-4 specification. The CR was rejected.

There was a proposal to delete clause 9.2.2, Location identification in UTRAN and/or UE. This chapter actually describes a new events triggering location service request when a call is established or closed and the similar functionality for the GPRS sessions. This is however not very clearly described in current text and thus a

clarification is proposed or deletion altogether. This was not agreed, but rather a counter proposal was to accept the text in S1-010164. It was provided in S1-010239.

It was stated that the comments to 9.2.4 and 9.2.5 in S1-010164 are in conflict with the views of the ad hoc meeting of LCS. It was answered that this is known, but that some discussion is required in SA1 plenary on this issue. On S1-010238, it was questioned whether it is necessary to put change the text and imply that DEGA is still a requirement whereas it has been deleted from the workplan. The CR was rejected, but could be replaced with CR to delete the whole section. In the event, it was decided to keep the text as it is.

On 9.2.8, it was commented that the last sentence is not correct and should be deleted. It is sufficient to state that LCS shall support VHE. It was provided in S1-010237.

Documents S1-010235 contained a CR to delete the text about further QoS requirements.

It was agreed to send S1-010235, S1-010237 and S1-010239 to SA #11 for approval.

S1-010035	LS on Maximum size of LCS clients	N4
S1-010219	LS on Maximum size of LCS clients	Vodafone

Document S1-010035 contained a liaison statement from CN4 on the maximum size of LCS clients. CN4 has discussed the matter of maximum numbers of LCS clients and indicates that there are protocol limitations (mainly segmentation of the messages) that have to be considered when the maximum number of LCS clients is defined. CN4 has been notified of the proposal made by NTT DoCoMo on SA1 mailing list (maximum number shall be 40) and CN4 agreed to use this maximum number as working assumption pending on the SA 1 approval of this service requirement.

The TS 29.002 mandates the use of White Book SCCP from 1st of July 2002 and 40 clients can be transferred with MAP protocol only if the White Book SCCP is used. If the Blue Book SCCP is used, only 5 clients can be transferred without specifying protocol level segmentation, which is not recommended by CN4. Hence, the recommendation of CN4 is that the maximum number of LCS clients is 40 and the segmentation problems are solved by using White Book SCCP.

There was a comment that perhaps 40 are not sufficient. In this case, to state a limit in the standard would be a little premature. The upper bound set in this instance is a matter of the signalling limitation, which is not really a way forward. Historically, the services would state a minimum rather than a maximum. The question is if there is a service requirement for more than 40?

The consensus of the group was documented in a liaison statement provided in S1-010219 that indicated:

1. SA1 would not like to translate a technology limitation into a service requirement.
2. SA1 accept that it is useful to specify a **minimum** value to the number of LCS clients and derive the lower bound as follows :
   - There are 16 service sub-categories in Annex B of TS 22.071.
   - If we assume that a user may which to access at least one application in each service sub-category this gives a **minimum** bound of 16 LCS clients.
   - Some categories would clearly require more than one LCS client e.g. Location Dependent Content Broadcast and so we suggest a minimum value of 20 LCS clients.
3. SA1 do not wish to set any maximum value on the number of LCS clients.
4. SA1 believe that if the commercial imperatives exist the technical limitations can be overcome.

The document was presented in S1-010219. It was approved.

S1-010095	LS Response to LCS Privacy Exception List changes	SA2

Document S1-010095 contained a liaison statement from SA1 on LCS Privacy Exception List changes in response to the SA1 LS in S1-000800. SA2 has discussed on the enhancement of LCS Privacy Exception List within Release 4, and it has been incorporated to LCS Stage2 document based on the S1's changes. Therefore, the CR to TS22.071 included in LS from S1 is feasible within Release 4. It was noted.

S1-010096	Enhancement of LCS functionality in Rel-4	SA2
S1-010155	Response to LS on Enhancement of LCS functionality in Rel-4	NTT DoCoMo

Document S1-010096 contained a liaison statement on enhancement of LCS functionality in Rel-4. SA2 indicate that the work can be done, but that a variety of solutions are possible, some of which are very complex. SA2 is leaning towards a more optimal solution with higher complexity but greater signalling efficiency. However, SA2 might endorse a simpler solution with lower signalling efficiency since the greater signalling would only be invoked rarely.

SA2 is studying but has not yet approved the proposal and the relevant text has been included in the informative ANNEX of 23.271. Since the feature is targeted to release 4, SA2 is asking CN4 to proceed with their work based on the description in the Annex of 23.271. Any CRs to the CN stage 3 associated with these solutions will be presented for information to CN4 and not for approval until a solution has been approved in SA2.

A proposed response was provided in document S1-010155. S1 believes it is a very important function that a LCS server detects a target MS's position as soon as it becomes reachable. For some LCS server which always want to know a target MS's position in real-time (e.g. tracking service for vehicles), it needs to retry making the positioning attempts quite frequently after the positioning attempt has failed. Furthermore, it is also very important to alert to LCS Clients as soon as it becomes reachable, since an LCS server positioned quite frequently could be very likely to fail when once one failure has occurred. This function helps to reduce a lot of useless attempts.

S1 also believes this situation will happen quiet frequently. For instance, the target MS is in an underground, inside of some buildings, out of the coverage and so on. In order to cope with this problem, this function should be necessary for the earliest release. Therefore, S1 strongly requests to support this requirement for Rel-04 and to proceed with the work based on the description in the Annex of TS23.271 as the solution of this requirement.

This liaison statement was approved and will be sent out.

8.2 Multimedia Messaging

S1-010013	MMS stage 1	T2
S1-010014	MM Forwarding	T2
S1-010015	New features in MMS R'4	T2
S1-010016	Support for Streaming in MMS	T2

Document S1-010013 contained a liaison statement to accompany three CRs to 22.140 on three subjects:

✍ S1-010015 (T2-000774) (New features in MMS R'4):
The recent working assumption in T2 for MMS stage 2, 23.140 and in the WAP Forum (which defines an implementation/stage 3 of MMS) support features of MMS that are not yet covered in the MMS stage 1, 22.140. This CR identifies these features and proposes to align MMS stage 1.

It was agreed to send the CR in S1-010015 to SA #11 for approval

✍ S1-010014 (T2-000775) (MM forwarding):
A clear need was identified by T2 for that MMS shall be able to support a request to forward multimedia messages or multimedia message elements without having to first download the MM to the terminal and that this feature needs standardisation. This change allows the feature to be standardised.

It was agreed to send the CR in S1-010014 to SA #11 for approval

✍ S1-010016 (T2-000776) (Support for Streaming in MMS):

The present SA4 work on streaming for R'4 is limited to downlink streaming (with a terminal as a streaming client). Uplink streaming (terminal originating the stream) has not been considered so far. This CR is to reflect the restriction to downlink streaming only in the requirements for MMS which aligns MMS stage 1 with SA4's current working assumption.

It was agreed to send the CR in S1-010016 to SA #11 for approval

S1-010022	Support for prepaid in MMS	T2
S1-010220	Reponse to LS on Support for prepaid in MMS	SA1
S1-010244	Reponse to LS on Support for prepaid in MMS	SA1

Document S1-010022 contained a liaison statement on prepaid MMS. At the last TSG-T2 meeting it was identified that Multimedia Messaging should support prepaid billing. With prepay there is a need to prevent a subscriber using MMS when their credit has gone below a certain limit. This requires a mechanism for real-time credit checking.

Ideally, specific mechanisms need to be devised that will allow the specific features of MMS to be charged to prepay customers. For example, this would mean that an approval procedure is needed which allows the MMS to decide on a per message basis whether to provide the service to a prepaid customer or not.

It was suggested that the mechanism to work with MMS should be generic and allow for other services and features.

The liaison statement was noted, and passed to Michele Palermo, the rapporteur, for consideration. There is some capability for pre-paid already provided in 22.1125. Also, the rapporteur for 22.127 indicated that there will be some support for this in OSA, but in Rel-5.

A proposed response was provided in document S1-010220. This was revised to S1-010244.

It was noted that the work required for release 4 is ambitious. This was acceptable, since the feature is important, and the liaison statement in S1-010244 was approved.

S1-010197	Packet-switched Streaming Services (PSS); General Description	Vodafone

Document S1-010197 contained a stage 2 for Packet-switched Streaming Services (PSS). This was presented to SA1 to stimulate some discussion on the fact that we have a stage 2 without a stage 1, and a question as to whether SA1 is in favour of this. In the absence of any requirements, SA4 will assume this will be a bit-pipe only.

If any delegates wish to comment, they should contact Mr Stephan Wolak.

8.3 Global Text telephony

There was no input on GTT.

8.4 Emergency call enhancements

There was no input on Emergency call enhancements.

8.5 CS multimedia services

There was no input on CS multimedia services.

8.6 UMTS/GSM ANSI-41 inter-standard roaming

S1-010067	UMTS/GSM ANSI-41 inter-standard roaming	Qualcomm Europe SARL, Lucent Technologies

S1-010161	UMTS/GSM ANSI-41 inter-standard roaming	Qualcomm Europe SARL, Lucent Technologies
S1-010222	UMTS/GSM ANSI-41 inter-standard roaming	Qualcomm

Document S1-010067 was replaced by document S1-010161, which dealt with the issue of inter-standard roaming between UMTS and ANSI-41 core networks. This was discussed in the third meeting of SA1 in March 1999 [1], [2]. The work item was agreed although it is not included in the current 3GPP work plan.

In the summer of 1999 in response to an OHG requirement for inter-standard roaming, workshops were held by 3GPP and 3GPP2 [3], [4] to identify hooks and extensions in the radio access network signalling protocols. 3GPP TSG-T WG3 and ETSI SCP have done work to support multi-mode SIM cards for operation in GSM, TDMA, and CDMA networks.

3GPP TSG-SA WG3 and TSG-CN have been working on positive authentication reporting for subscribers who roam from 3GPP2 networks to 3GPP networks. At the TSG-SA plenary in Bangkok, a liaison statement from TSG-CN requesting broader work item for the feature "Inter-system roaming between 3GPP and 3GPP2" was presented [5]. The authors of this contribution support TSG-CN in that request.

SA1 is asked to take the following action:

- ?? To agree the work-item on inter-standard roaming between UMTS/GSM and ANSI-41 core networks (annex B of this contribution) and ask TSG-SA to include it as a feature in the 3GPP workplan.
- ?? To adopt the terminology used by GAIT as seen in Annex A of this contribution.
- ?? To ask TSG-SA to establish a workshop, open to delegates of 3GPP, 3GPP2, TR45, CDG, GAIT, and GGRF to define service requirements and identify further work for 3GPP for the accomplishment of inter-standard roaming between UMTS and ANSI-41.

A number of companies indicated that they would support this WI. There was some concern regarding the terminology as given in annex A, and if that conflicts with the terminology already used in 3G. It was decided to forward the WI to SA for approval. The extracted WI was provided in document S1-010222.

Document S1-010222 was approved and will be sent to SA #11 for approval.

8.7 Support of Push Services

S1-010092	Liaison Statement about Push Services Work Item	SA2
S1-010093	Proposed change to WI: A feasibility study of an architecture for Push Service	SA2
S1-010094	TS 23.874 Version 1.3.0 (Feasibility study of architecture for push	SA2
S1-010091	Work Status of "Support of push service"	WI rapporteur (NTT Comware)

Document S1-010092 contained a liaison statement from SA2 on the status of the Push Service feasibility study (TR 23.874). The feasibility study is about to be finalised, however, TSG-SA2 has noticed the absence of the sufficient service requirements to finish the feasibility study. Thus, TSG-SA2 is asking TSG-SA1 to provide a basic set of requirements for the push service. This would allow timely completion of the work identified.

A proposed change to WI "A feasibility study of an architecture for Push Service" was provided in document S1-01093. This document has been approved at SA #10, although there are some areas that need work, in particular the services area. It was noted.

Document S1-010094 was noted as background information.

Document S1-010091 contained a presentation on the status of push services. This presentation implies that we have a great deal of work to do on this subject. Delegates were asked to consider the content of the presentation. It was noted.

S1-010157	proposed response on Liaison Statement about Push Services Work Item	NTT DoCoMo
S1-010089	High Level Push Service Requirements	Motorola, Et Al
S1-010229	High Level Push Service Requirements	SA1
S1-010255	Statement on guidance for GPRS based PUSH services implementation	NTT DoCoMo

A response to the liaison statement from SA2 was provided in document S1-010157. There was a concern on this response, which may be highlighted by document S1-010089 contained a discussion document on High Level Push Service Requirements.

TSG-SA1 has been requested by TSG-SA2 to provide a basic set of requirements for the Push service. Since that request, the TSG-SA2 Push Service Drafting Session has worked on the Push service and architecture requirements and proposed a list of high-level requirements.

The sources of the document are asking TSG-SA1 to consider and evaluate the list of high-level requirements, and define a list of the Push service requirements, so that TSG-SA2 can finalise its Push services work in a timely manner for the TSG-SA2 Push Service Ad Hoc Group.

There were a number of comments, which indicated that the work on this has only just started. The items in S1-010089 are very high level and the document is not in a shape to allow an architecture group to start work.

The two documents S1-010157 and S1-010089 are not the same, but may be complementary. This won't be known until they are reviewed. It would appear that the NTT DoCoMo was going a little further by including GPRS PUSH services. Hence, document S1-010229 was produced to show how the documents could be merged.

Subsequently, document S1-010256 was produced to show only the general requirements and S1-010255 was produced to show only specific requirements.

There was some thought as to what to do with these documents. It is clear that we should not be pushed by SA2 but rather "pull" them.

For S1-010255 was controversial regarding the requirements related to GPRS. The meeting did not achieve unanimous support. The document reflected the support of the majority of the group, but there were some concerns raised regarding the implementations.

The revised version was provided in S1-010259. The liaison statement was not supported unanimously, but was approved while noting the reservation of Ericsson and Nokia.

In the meantime, S1-010256 contained information that could be agreed. It was revised and provided in S1-010260. This liaison statement was approved.

S1-010127	Proposed Work Item description	Ericsson L.M.
S1-010128	Service aspects; Stage 1 Push Service (3G TS 22.xxx Release 5)	Ericsson L.M.

Another WI proposal was provided in document S1-010127. This prompted the concern that timing is imperative. This was addressed by the chairman, who indicated that it is all very well that SA2 to work on something without a service requirement, but they cannot expect SA1 to a write a service requirement urgently and in a rush. There is clearly no consensus on this item at this time, which indicates that a service is required and it should be done properly.

A proposal for a stage 1 was provided in S1-010128. This may not be appropriate; it may be better to put the requirements for this into an existing specification, although which one is not clear.

It was decided to merge the requirements in documents S1-010157 and S1-010089 as a basis for a liaison statement back to SA2 indicating that this is work in progress, but it is a start.

9 Any Other Business

9.1 Wideband AMR

S1-010227	Discussion on Wideband AMR	Siemens

Document S1-010227 contained a discussion document on wideband AMR. While it seems, that most of the work to get W-AMR up and running in Release 5 needs to be done in other groups, the additional requirements for the usage of W-AMR (as compared to AMR) should be analysed and included in the relevant stage 1 specifications.

S1 is invited to endorse this proposal. It should also be considered, whether a new workitem is needed. The work has been essentially completed, although some of the interworking needs to be clarified.

It was indicated that the work is underway in the other groups.

In the meantime, the document was endorsed, and interested parties should contact Joerg Swetina. (May be mentioned in status report to SA #11.)

9.2 Presence detection

S1-010228	Support of presence capabilty	Motorola, et al

Document S1-010228 contained a proposal for a work item related to the concept of presence, whereby users make themselves "visible" or not "visible" to other parties of their choice, allowing services such as group and private "chats" to take place. Presence is an attribute related to mobility information, and provides a different capability to be exploited by other services. The concept of presence, once supported, will enable other multimedia services to exploit this key enabler to support other advanced multimedia services and communications.

Examples of multimedia services that could potentially exploit the presence capability include "chat", e-mail, multimedia messaging, instant messaging etc..

It was endorsed by SA1 and will be presented to SA #11 for approval with the additional support of Ericsson.

9.1 3G Vocabulary (21.905)

S1-010005	LS on TR 21.905: Vocabulary for 3GPP Specifications	TSG T1
S1-010080	Editorial changes and new definitions	One 2 One
S1-010180	Inclusion of commonly used definition contained in 23.122	One2one
S1-010181	Inclusion of commonly used definition contained in 23.122	One2one
S1-010233	Editorial changes and new definitions	One 2 One
S1-010234	Inclusion of commonly used definition contained in 23.122	One2one

Document S1-010005 contained a liaison statement from T1 which has been included in document S1-010080. It was agreed sent to SA #11 for approval if no comments by end of meeting. Since no comments were received it was sent.

Document S1-010180 contained a CR to 21.905 to include commonly used definition contained in 23.122. It was agreed sent to SA #11 for approval if no comments by end of meeting. It was revised to S1-010233 to make the CR a little briefer.

Document S1-010181 was not required and was withdrawn.

Document S1-010233 and S1-010234 will sent to SA #11 for approval.

10 Administration

S1-010066	Release 4 specification set from Release 99	MCC
S1-010004	List of rapporteurs	MCC

Document S1-010066 contained a document to define what Release 99 specifications will be upgraded to Release 4.

Nokia believe that HSCSD (22.034) is applicable for both GSM and 3G. Siemens believe that Follow-Me is a 3G service. Also 2 reports 22.971, "Automatic establishment of roaming relationships" and 22.975 "Advanced addressing" were deleted for Rel-4.

Document S1-010066 was revised on line and provided in S1-010258. It was further revised and provided in document S1-010262.

Document S1-010004 contained a list of rapporteurs that was provided for information and update. The secretary asked that comments be provided to him for updating. It will be provided in document S1-010263 after the meeting.

10.1 Election of SA1 Chairman

An election for the chairmanship of TSG SA WG1 was held during the meeting. The two candidates were Randolph Wohlert and Kevin Holley. The outgoing chairman of SA1 congratulated Mr Kevin Holley of BT as the chairman elect.

11 Approval of Outputs and Liaisons

Change Requests

Release	Spec No.	Doc. No.	Title	To
R98	02.11	130	CR to 02.11 on Roaming restrictions for GPRS (Release '98)	SP-11
R97	02.11	225	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	SP-11
Rel-4	02.11	245	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	SP-11
R98	02.71	88	Deletion of reference to GSM 10.71	SP-11
Rel-4	21.905	233	Editorial changes and new definitions	SP-11
Rel-4	21.905	234	Inclusion of commonly used definition contained in 23.122	SP-11
Rel-4	22.002	253	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	Email
R99	22.002	252	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	Email
Rel-4	22.002	254	Restructuring of 22.002	Email
R99	22.011	131	CR to 22.011 on Roaming restrictions for GPRS (Release '99)	SP-11
Rel-4	22.038	196	Indication of Key Identification	T3
Rel-5	22.038	240	Indication of Key Identification	T3

R99	22.041	173	CR on Operator Determined Barring – Zonal Barring to 3GPP TSG SA WG1	SP-11
R99	22.041	36	Remove ODB for Packet Oriented Services from Release 99	SP-11
Rel-4	22.041	174	CR on Operator Determined Barring – Zonal Barring to 3GPP TSG SA WG1	SP-11
Rel-4	22.041	19	Corrections of the ODB categories for Packet Oriented Services	SP-11
Rel-5	22.057	202	MeXE service discovery	SP-11
Rel-4	22.071	237	OSA support for LCS	SP-11
Rel-4	22.071	218	Editorial Cleanup	SP-11
Rel-4	22.071	239	Location determination in call or PDP context activation and release	SP-11
Rel-4	22.071	235	Quality level negation	SP-11
Rel-5	22.078	125	Transport of Charging Information from serving PLMN to the CSE	SP-11
R99	22.078	104	Remedy for incorrect implementation of CR 22.078-062r5	SP-11
Rel-4	22.078	114	Correction of interaction between CAMEL and BOIC	SP-11
Rel-5	22.078	124	Provide Location Information in case a terminating call is alerted	SP-11
Rel-5	22.078	123	Clarification on Call Party Handling requirements	SP-11
Rel-5	22.078	122	Enhanced CSE capability for Subscribed Dialled Services	SP-11
Rel-5	22.078	121	Corrections of Call Barring interaction for CSE created call / new party	SP-11
Rel-5	22.078	120	Changing of naming for SMS-CSI	SP-11
Rel-5	22.078	118	Interaction between CAMEL control of MO-/MT-SMS and Call Barring & ODB	SP-11
Rel-4	22.078	117	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	SP-11
R99	22.078	116	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	SP-11
Rel-5	22.078	119	Enhancements to mobility management reporting	SP-11
Rel-4	22.078	204	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	SP-11
Rel-5	22.078	106	Alignment with stage 2 & 3, and some editorial corrections	SP-11
Rel-5	22.078	242	Support of previous phases of CAMEL	SP-11
Rel-5	22.078	190	Corrections of congestion control procedure	SP-11
Rel-5	22.078	205	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	SP-11
Rel-4	22.078	105	Alignment with stage 2 & 3, and some editorial corrections	SP-11
R99	22.078	203	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	SP-11
R99	22.078	188	Corrections of congestion control procedure	SP-11
Rel-4	22.078	108	Support of previous phases of CAMEL	SP-11
Rel-5	22.078	115	Correction of interaction between CAMEL and BOIC	SP-11
Rel-4	22.078	189	Corrections of congestion control procedure	SP-11
R99	22.078	113	Correction of interaction between CAMEL and BOIC	SP-11
R99	22.078	107	Support of previous phases of CAMEL	SP-11
Rel-4	22.082	73	Notification of active CFU	SP-11
Rel-5	22.101	72	Handling of interactions between applications requiring the access to UE resources	SP-11
Rel-4	22.101	71	Handling of interactions between applications requiring	SP-11

			the access to UE resources	
Rel-5	22.101	179	CR to 22.101 on Introduction of CPHS features	SP-11
Rel-4	22.101	207	PLMN name indication	SP-11
Rel-5	22.101	208	PLMN name indication	SP-11
Rel-4	22.101	209	Display of service provider name in the UE	SP-11
Rel-5	22.101	210	Display of service provider name in the UE	SP-11
Rel-5	22.101	250	CR to 22.101 on Clarifications on IMS emergency call support	SP-11
Rel-4	22.101	178	CR to 22.101 on Introduction of CPHS features	SP-11
Rel-5	22.115	192	Introduction of charging for IPMultimedia and Event Based Charging	SP-11
Rel-4	22.121	85	Changes to TS 22.121 Release 4 - Update of 097 submitted to S1 Plenary	SP-11
Rel-5	22.121	169	The Virtual Home Environment (Release 5) Addition of User profile requirement and changes for clarification	SP-11
Rel-4	22.127	140	CR to 22.127 V 4.0.0 on CS Call Control (Release 4)	SP-11
Rel-4	22.127	141	CR to 22.127 V 4.0.0 on User interaction(Release 4)	SP-11
Rel-4	22.129	251	Editorial CR to correct references to releases	SP-11
Rel-4	22.140	14	MM Forwarding	SP-11
Rel-4	22.140	16	Support for Streaming in MMS	SP-11
Rel-4	22.140	15	New features in MMS R'4	SP-11
Rel-5	22.228	246	IMS to PSTN/ISDN interworking for basic voice calls only	SP-11

WIs

Doc No	Title	To
222	UMTS/GSM ANSI-41 inter-standard roaming	SP-11
228	Support of presence capabilty	SP-11

Specs

Release	Doc No	Title	To

Email of issues dealt with in meeting

Release	Doc No	Title	To
R99	252	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	Email
Rel-4	253	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	Email
Rel-4	254	Restructuring of 22.002	Email

Email of issues NOT dealt with in meeting

Release	Doc No	Title	To

Ad Hocs

Rel	Doc	Title	To

ease	No		
	10	Terminal Capabilities	VHE ad hoc
Rel-5	11	Liaison statement on IP Multimedia sessions	R5 ad hoc
	23	Terminal Capability Negotiation	VHE ad hoc
	135	Discussion document on OSA Terminal Capabilities	VHE/OSA ad hoc
	143	IMS Service Examples and Overall Requirements (Discussion document)	R5 ad hoc
Rel-5	175	Rel-5 VHE service discovery	VHE ad hoc
Rel-5	176	Rel-5 OSA service discovery	VHE ad hoc

Approved Liaison statements

Docu	Title	To	Copy
10	Terminal Capabilities	VHE ad hoc	
11	Liaison statement on IP Multimedia sessions	R5 ad hoc	
23	Terminal Capability Negotiation	VHE ad hoc	
82	LS to S2 on VHE to R4	SA2	
139	Proposed LS to T2 MMS: Additional feedback to Request for OSA Interface Information, (T2-000556)	T2 MMS	S2 VHE, TSG CN5
155	Response to LS on Enhancement of LCS functionality in Rel-4	SA2	CN4
159	Reply to TIPHON on QoS	TIPHON, SA1, SA2, SA	
160	Reply to SA2 on eMLPP for PS Domain	SA2	
163	Reply on “Re-establish Capability for Emergency call“ from SA1	N1	
166	LS on UE functionality split over physical devices	SA2, SA3, T2, TSG-T, T3, CN1, SA	
167	LS on TR 31.900 - SIM/USIM Internal and External Interworking Aspects	T3	
168	LS on USAT interpreter stage 1	T3	
170	LS on PLMN Selection and Re-selection Issues	R2, UE idle Wksp	CN1, R4, SA, GERAN, GERAN WG1
171	Clarification on disconnecting Multiparty calls when a single call is active	CN WG4, GERAN-WG4	
177	LS to T3 on Introduction of CPHS features	SP-11	
183	LS giving clarification on interworking between IM domain and CS networks	CN3	SA, SA2, CN1
200	Indication of Key Identification	TSG-T WG3, TSG-SA WG3	
201	Proposed Reply LS to S2 (S2-002093) on clarification of VHE requirements (Update of 100 (LS to S2) submitted to S1 plenary)	SA WG2 (VHE-OSA Drafting group)	
219	LS on Maximum size of LCS clients	CN4	SA2
231	Periodic PLMN selection attempt	CN1	RAN2
241	Proposed LS "Reply to LS on Support of earlier CAMEL phases"	CN2	
244	Reponse to LS on Support for prepaid in MMS	T2, CN2, SA5	
248	Response to LS “Control of IP multimedia services”	CN1, CN2, CN3, CN4, S2	CN5
249	Reponse to LS on IM Emergency Call without USIM		
259	Statement on guidance for GPRS based PUSH services implementation	SA2	

260	Proposed response on LS about PUSH service work item	SA2	
261	Requirement for End-to-end encryption of IP mulitmedia Subsystem controlled VOIP	SA3	

12 Future meetings

The meeting schedule, was reviewed in the meeting. Proposals for hosts would be gratefully received.

S1#12	7-11 May 2001	Helsinki, Finland, hosted by Sonera
S1#13	9-13 July 2001	North America, hosted by
S1#14	5-9 November 2001	Japan, hosted by NTT DoCoMo
R5 ad hoc	5-8 March 2001	Tempe, Arizona hosted by Motorola
VHE/OSA	5-8 March 2001	Tempe, Arizona hosted by Motorola

13 Closure of Meeting

The chairman thanked the delegates for their contributions to the meeting and for their hard work. He thanked the host, Vodacom, for all the facilities at the meeting.

ANNEX A – Table of documents

Doc. No.	Title	Source	Doc Pack
1	Report of TSG_SA_WG1#10 Meeting	MCC	
2	Draft Agenda for SA1 meeting #11	MCC	
3	Summary and Report from SA #10	MCC	
4	List of rapporteurs	MCC	
5	LS on TR 21.905: Vocabulary for 3GPP Specifications	TSG T1	
6	LS on Requirements for PLMN selection and reselection	SA #10	
7	Discussion document on UE functionality split over physical devices	TSG-T2	
8	Convergence of QoS approaches in 3GPP and TIPHON	SA #10	
9	Packet Switched Conversational Multimedia Applications; Default Codecs	SA 4	
10	Terminal Capabilities	TSG T2	
11	Liaison statement on IP Multimedia sessions	SA #10	
12	Editorial Cleanup	SBC	
13	MMS stage 1	T2	
14	MM Forwarding	T2	
15	New features in MMS R'4	T2	
16	Support for Streaming in MMS	T2	
17	Discussion document on UE functionality split over physical devices (Copy SA1)	T2	
18	Work Item Description for Release 4: ODB (Operator Determined Barring) for Packet Oriented Services	NEC	
19	Corrections of the ODB categories for Packet Oriented Services	NEC	
20	Introduction of features from the CPHS for 3G Rel-4	T2	
21	Reply to conformance test requirements for application layer test	T2	
22	Support for prepaid in MMS	T2	
23	Terminal Capability Negotiation	N1	
24	Emergency Call Indication in the network (Copy SA1)	N1	
25	LS on DL indication of the network interface (Copy SA1)	N1	
26	Response "Re-establish Capability for Emergency call" from SA1	N1	
27	LS on removal of GPRS Network operation mode III	N1	
28	Response to LS on missing definition of high quality signal for UMTS and on comparing UMTS and GSM signal quality (copy to SA1)	N1	
29	LS on PLMN Selection and Re-selection Issues	N1	
30	Response to LS "Enhancement of CPHS Network Operator Name Feature for 3G R4"	N1	
31	LS on Problem with GPRS and Roaming	N1	
32	LS "Support of earlier CAMEL phases"	N2	
33	LS requesting clarification on interworking between IM domain and CS networks	N3	
34	LS for clarification of MPTY is	N4	
35	LS on Maximum size of LCS clients	N4	
36	Remove ODB for Packet Oriented Services from Release 99	NEC	
37	New subclause is added regarding to the CAMEL interactions with ODB for the Packet Oriented Services	NEC	
38	eMLPP for PS Domain	S2	
39	Clarification of VHE capable set of services	S2	
40	Provision of Open Interfaces within the GERAN & UMTS for LCS Support	S2	
41	VHE User Profiles - Security issues	S3	
42	Modification of pre-configuration information (Copy SA1)	S3	
43	Proposal not to use the IMSI as the identity of an IM subscriber (Copy SA1)	S3	
44	LS to TSGs T2, SA1, SA2 and SA4 regarding conformance test requirements for	T1	

	application layer test		
45	SAT/USAT Control of IP Multimedia Services	T3	
46	TR 31.900 - SIM/USIM Internal and External Interworking Aspects	T3	
47	SIM/USIM Internal and External Interworking Aspects	T3	
48	Introduction of features from the CPHS for 3G Rel-4	T3	
49	Introduction of Operator PLMN Name List for 3G Rel-4	T3	
50	Request for clarification on disconnecting Multiparty calls when a single call is active	G4	
51	Request for clarification on MPTY auxiliary state when only one remote party remains	G4	
52	LS on Creation of a new specification to handle implementation issues caused by changes to the Release '97 GPRS specifications (Copy SA1)	GERAN	
53	Interworking between modified Public Land Mobile Network (PLMN) supporting GPRS and Legacy GPRS mobiles	GERAN	
54	LS on DL indication of the network interface (Copy SA1)	GERAN	
55	Proposed working method for Service Modification	N3	
56	LS "Control of IP multimedia services"	CN Ad hoc	
57	LS on Requirements for PLMN selection and reselection	R2	
58	Response to LS (N1-001039) on Missing definition of high quality signal for UMTS and on comparing UMTS and GSM signal quality (Copy SA1)	R2	
59	Convergence of QoS approaches in 3GPP and TIPHON	TIPHON	
60	End to end QoS in IP networks	TIPHON	
61	LS on Operator Determined Barring – Zonal Barring to 3GPP TSG SA WG1	GSMA SERG	
62	Application on external devices	Chair GSM CF & EICTA CCIG	
63	3GPP TSG SA Workshop on UE in idle mode	Nokia	
64	LS requesting clarification on Circuit Switched Bearer Services in UMTS	N3	
65	Questions concerning impact on charging of Release 4 architecture	SA5	
66	Release 4 specification set from Release 99	MCC	
67	UMTS/GSM ANSI-41 inter-standard roaming	Qualcomm Europe SARL, Lucent Technologies	
68	Report from SA LCS Workshop, London, 11-12 January 2001	Qualcomm Europe SARL	
69	Predictive Text Input	France Telecom	
70	Predictive Text Input	France Telecom	
71	Handling of interactions between applications requiring the access to UE resources	France Telecom	
72	Handling of interactions between applications requiring the access to UE resources	France Telecom	
73	Notification of active CFU	One 2 One	
74	PLMN name indication	One 2 One	
75	PLMN name indication	One 2 One	
76	Display of service provider name in the UE	One 2 One	
77	Display of service provider name in the UE	One 2 One	
78	Message Waiting Indication persistency	One 2 One	
79	Message Waiting Indication persistency	One 2 One	
80	Editorial changes and new definitions	One 2 One	
81	VHE ADHOC #4 Meeting report	Editor	
82	LS to S2 on VHE to R4	Adhoc group	

83	VHE ADHOC #5 meeting report	Chair/Editor	
84	The Virtual Home Environment (Release 5) Clean copy of 096 submitted to S1 plenary	Editor	
85	Changes to TS 22.121 Release 4 - Update of 097 submitted to S1 Plenary	Editor	
86	Proposed Reply LS to S2 (S2-002093) on clarification of VHE requirements (Update of 100 (LS to S2) submitted to S1 plenary)	Editor	
87	Handling of Service Provisioning requirements	Chair/Editor	
88	Deletion of reference to GSM 10.71	MCC Sec	
89	High Level Push Service Requirements	Motorola, Comverse, Openwave, Japan Telecom, Ericsson, AT&T Wireless Systems	
90	Introduction of charging for IPMultimedia and Event Based Charging	TIM S.p.A.	
91	Work Status of "Support of push service"	WI rapporteur (NTT Comware)	
92	Liaison Statement about Push Services Work Item	SA2	
93	Proposed change to WI: A feasibility study of an architecture for Push Service	SA2	
94	TS 23.874 Version 1.3.0 (Feasibility study of architecture for push	SA2	
95	LS Response to LCS Privacy Exception List changes	SA2	
96	Enhancement of LCS functionality in Rel-4	SA2	
97	Answer to LS on request for OSA Interface Information	SA2	
98	LS on IM Emergency Call without USIM	SA2	
99	Withdrawing the SA Work Item on open LCS interfaces	SA2	
100	LS “Control of IP multimedia services”	SA2	
101	Removal of GPRS Network Operation Mode III	SA2	
102	Response to LS (T2-000793) on discussion document on UE functionality split over physical devices	SA2	
103	Meeting Report of SA1 CAMEL Ad Hoc 30th Jan – 1st Feb 2001	CAMEL ad hoc	
104	Remedy for incorrect implementation of CR 22.078-062r5	CAMEL ad hoc	
105	Alignment with stage 2 & 3, and some editorial corrections	CAMEL ad hoc	
106	Alignment with stage 2 & 3, and some editorial corrections	CAMEL ad hoc	
107	Support of previous phases of CAMEL	CAMEL ad hoc	
108	Support of previous phases of CAMEL	CAMEL ad hoc	
109	Support of previous phases of CAMEL	CAMEL ad hoc	
110	Corrections of congestion control procedure	CAMEL ad hoc	
111	Corrections of congestion control procedure	CAMEL ad hoc	
112	Corrections of congestion control procedure	CAMEL ad hoc	
113	Correction of interaction between CAMEL and BOIC	CAMEL ad hoc	
114	Correction of interaction between CAMEL and BOIC	CAMEL ad hoc	
115	Correction of interaction between CAMEL and BOIC	CAMEL ad hoc	
116	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	CAMEL ad hoc	
117	Interaction between CAMEL control of MO-SMS and Call Barring & ODB	CAMEL ad hoc	
118	Interaction between CAMEL control of MO-/MT-SMS and Call Barring & ODB	CAMEL ad hoc	
119	Enhancements to mobility management reporting	CAMEL ad hoc	
120	Changing of naming for SMS-CSI	CAMEL ad hoc	
121	Corrections of Call Barring interaction for CSE created call / new party	CAMEL ad hoc	
122	Enhanced CSE capability for Subscribed Dialled Services	CAMEL ad hoc	
123	Clarification on Call Party Handling requirements	CAMEL ad hoc	
124	Provide Location Information in case a terminating call is alerted	CAMEL ad hoc	

125	Transport of Charging Information from serving PLMN to the CSE	CAMEL ad hoc	
126	Proposed LS "Reply to LS on Support of earlier CAMEL phases"	CAMEL ad hoc	
127	Proposed Work Item description	Ericsson L.M.	
128	Service aspects; Stage 1 Push Service (3G TS 22.xxx Release 5)	Ericsson L.M.	
129	CR to 02.11 on Roaming restrictions for GPRS (Release '97)	SIEMENS	
130	CR to 02.11 on Roaming restrictions for GPRS (Release '98)	SIEMENS	
131	CR to 22.011 on Roaming restrictions for GPRS (Release '99)	SIEMENS	
132	CR to 22.011 on Roaming restrictions for GPRS (Release 4)	SIEMENS	
133	Meeting Report OSA adhoc #3	S1 OSA ad-hoc	
134	Meeting Report OSA adhoc #4	SIEMENS	
135	Discussion document on OSA Terminal Capabilities	SIEMENS	
136	22.127 version 1.2.0 (Release 4)	S1 OSA ad-hoc	
137	22.127 V 4.0.0	rapporteur	
138	22.127 version 1.3.0 (Release 5)	rapporteur	
139	Proposed LS to T2 MMS: Additional feedback to Request for OSA Interface Information, (T2-000556)	S1 OSA ad-hoc	
140	CR to 22.127 V 4.0.0 on CS Call Control (Release 4)	SIEMENS	
141	CR to 22.127 V 4.0.0 on User interaction(Release 4)	SIEMENS	
142	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	SIEMENS	
143	IMS Service Examples and Overall Requirements (Discussion document)	SIEMENS	
144	Elaboration of KEY IDENTIFICATION EVENT	TSG-T3 chairman	
145	USAT interpreter stage 1	T3	
146	Operator PLMN List Overview	SBC	
147	LS on Introduction of Operator PLMN Name List for 3G Release 4	SBC	
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153	Service requirements for local services	Ericsson	
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159	Reply to TIPHON on QoS	France Telecom	
160	Reply to SA2 on eMLPP for PS Domain	Siemens	
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162	Definition of "Basic voice call"	Alcatel, Fujitsu, Nokia, Siemens	
163	Reply on “Re-establish Capability for Emergency call“ from SA1	Ericsson	
164	LCS future developments	Nokia	
165	Report on UE functionality split over physical devices	BT	
166	LS on UE functionality split over physical devices	BT	

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168	LS on USAT interpreter stage 1	Motorola	
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172	GPRS clarifications	Lucent	
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201	Proposed Reply LS to S2 (S2-002093) on clarification of VHE requirements (Update of 100 (LS to S2) submitted to S1 plenary)	Editor	
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236	Identification of a Target MS for LCS	Nokia	
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254	Restructuring of 22.002	SIEMENS	
255	Statement on guidance for GPRS based PUSH services implementation	NTT DoCoMo	
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258	Release 4 specification set from Release 99	MCC	
259	Statement on guidance for GPRS based PUSH services implementation	NTT DoCoMo	
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263	List of rapporteurs	MCC	

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