



## **3<sup>rd</sup> Generation Partner's Group**

# **UMTS**

## **REPORT Version 1**

### **TSG\_SA\_WG1#6 99-5 Plenary Meeting**

30 November - 3 December 1999  
San Diego, USA,

## TABLE OF CONTENTS

<b>1</b>	<b>OPENING OF THE MEETING.....</b>	<b>4</b>
<b>2</b>	<b>ADOPTION OF AGENDA.....</b>	<b>4</b>
<b>3</b>	<b>APPROVAL OF REPORT FROM LAST MEETING .....</b>	<b>4</b>
<b>4</b>	<b>REPORTS FROM OTHER GROUPS.....</b>	<b>4</b>
4.1	ETSI SMG.....	5
4.1.1	SMG2.....	5
4.1.2	SMG7.....	5
4.1.3	SMG9.....	5
4.2	ETSI HF.....	6
4.3	3GPP.....	6
4.3.1	TSG CN SS.....	6
4.3.2	TSG N3.....	6
4.3.3	TSG N1.....	7
4.3.4	TSG N2.....	8
4.4	T1P1.....	8
<b>5</b>	<b>PRE RELEASE '99.....</b>	<b>8</b>
5.1	SECURITY OF IMEI.....	8
5.2	FOLLOW ME.....	8
5.3	GSM 400 .....	9
5.4	FIXED DIALLING NUMBER (FDN).....	9
5.5	ASCI.....	9
5.6	CELL SELECTION .....	10
<b>6</b>	<b>RELEASE '99 .....</b>	<b>10</b>
6.1	MSP.....	11
6.2	GPRS.....	11
6.3	SIM APPLICATION TOOLKIT.....	13
6.4	MULTI-MEDIA MESSAGING.....	13
6.5	LOCATION SERVICES .....	14
6.6	CAMEL.....	14
6.7	VHE .....	16
6.8	MULTICALL 22.135.....	18
6.9	22.129 HANDOVER .....	19
6.10	CLI 22.081.....	20
6.11	CLI 22.085.....	20
6.12	SOlsa.....	20
6.13	HSCSD.....	20
6.14	SIM APPLICATION TOOLKIT (SAT).....	20
6.15	NITZ.....	21
6.17	PIAFS.....	21
6.18	EDGE RAN.....	21
<b>7</b>	<b>RELEASE 2000 ONWARDS.....</b>	<b>22</b>
7.1	ALL IP NETWORK.....	22
<b>8</b>	<b>ANY OTHER BUSINESS.....</b>	<b>23</b>
8.1	IMODE PRESENTATION.....	24
8.2	GAIT PRESENTATION.....	24
8.3	3GPP VOCABULARY TR 21.905.....	25
<b>9</b>	<b>ADMINISTRATION.....</b>	<b>25</b>
<b>10</b>	<b>APPROVAL OF UMTS OUTPUTS AND LIAISONS.....</b>	<b>25</b>

<b>11</b>	<b>FUTURE MEETINGS.....</b>	<b>27</b>
<b>12</b>	<b>CLOSURE OF MEETING.....</b>	<b>28</b>
	<b>ANNEX A – TABLE OF DOCUMENTS.....</b>	<b>29</b>
	<b>ANNEX B – PARTICIPANTS LIST .....</b>	<b>34</b>
	<b>ANNEX C – DOCUMENT INDEX .....</b>	<b>36</b>

## TSG-SA WG 1 (Services) meeting #6

**TSG S1#6(99) /99**  
**Agenda Item: 2**

### DRAFT MEETING REPORT

Version: 1.0, 6 December 1999

#### 1 Opening of the Meeting

The TSG-SA WG1 meeting #6 was held in San Diego, USA from the 30th November to the 3rd December 1999. It was chaired by Mr Alan Cox (Vodafone) and the secretary was Mr Michael Clayton from the MCC.

The meeting was opened by Mr Randolph Wohler from Pacific Bell.

#### 2 Adoption of Agenda

Document 861/99 contained the draft agenda for SA1 meeting #6. It was approved without comment.

#### 3 Approval of Report from last meeting

Document 858/99 contained the Draft Report of TSG S1 at the end of the meeting. Document 882/99 was supposed to contain the final report of meeting SA1 #5, but ended up containing the same as document 858/99. Since the report was circulated late, it was decided to look for comments during the meeting.

There were no comments during the meeting and so the meeting report was approved.

Document 929/99 contained a summary of S1 Email agreements reached before the meeting. Of note was the CR to 22.129 in document 868/99 (see also section 6.9), which was agreed by email and will be passed to SA #6 for approval. Document 929/99 was noted.

Document 983/99 contained a liaison statement on bearer modification without pre-notification from CN3. This is in response to a liaison statement sent by SA1 provided in document 846/99. An answer to this was provided in document 936/99 from Nokia. Another response was provided in document 962/99.

Both documents provided different answers but there were no specific conflicts. It was decided to combine the documents; this was provided in document 998/99. A revision of it was provided in document 1034/99 to N1, N3, S2.

It was noted that this does not apply to the packet domain. This is not entirely clear in the title at least. Nonetheless, document 1034/99 was approved and will be sent.

#### 4 Reports from other groups

Document 884/99 contained a liaison statement on Emergency Call Handling from the EPT. EPT has identified the requirement that, where TETRA technology supports a public telecommunications operator, it will need to handle emergency calls. To this end EPT would like advice on the methodology and functionality associated with Emergency call handling that is currently being specified for SMG and including; Location, Formats, Call Set up, Onward transmission to emergency services. They are asking SA1/SMG1 if there are any other information that SMG1/SA1 thinks would be relevant?

It was decided that the secretary should send them some of our specifications.

M	AP	Action	Interested Parties	Owner	Status
06	01	Secretary to send relevant specifications on emergency call handling to EPT		Michael Clayton	

Document 862/99 contained the report of SA and SMG. It was noted.

Document 995/99 contained an Overview of TSG#5 results from the MCC.

It was clarified that the functionality has been frozen, not the specifications. SA1 has completed most of its documentation, but there needs to be work done in the other groups to complete a consistent set. Clearly SA1 should be adding new functionality at this meeting as this will cause the work to be delayed. However, the other groups will need to complete their work and it is incumbent on them identify what they can complete for R'99 and what they cannot. To this end, a process of Features, Building Blocks and Work Tasks has been designed although it remains to be seen how well this will work.

Other points were:

- ?? A single common vocabulary document will be maintained for the 3GPP Project. This will be based upon the RAN Vocabulary document (TR 25.990).
- ?? Regular input is expected from all groups to the Vocabulary editor.
- ?? To minimize the time spent on CRs at TSG meetings:
  - ?? CRs shall contain cover sheets;
  - ?? CRs shall be to the correct, latest versions;
  - ?? Anyone objecting to a CR should contact the MCC Support Team/Secretary to ensure it is separated from "non-contentious" CRs;
  - ?? Impact on other Releases needs to be identified and "shadow" CRs created;
  - ?? CRs ready in good time before the meeting.
- ?? An e-mail exploder list will be set-up for dissemination of informal reports from meetings. TSG, WG and SWG Chairmen, Vice Chairmen and Secretaries will be on the list, and are asked to contribute with executive summaries of each of their meetings and informal Liaisons between groups.
- ?? To minimize the number of liaisons in TSG meetings, and to maximize working efficiency of the groups, it is requested that matters be discussed between groups, utilizing the "Leaders exploder list" and MCC Support Team before raising formal liaisons.
- ?? Due to the high work load of the 3GPP meetings, many meetings have been causing exhaustion for delegates and the Support Team, who usually need to work late into the evening after the close of a day's session.
- ?? A **10-hour** maximum meeting day is provided as a guideline for meetings.

The presentation was noted.

#### **4.1 ETSI SMG**

##### **4.1.1 SMG2**

The input from SMG2 was dealt with at the appropriate part of the meeting.

##### **4.1.2 SMG7**

Document 987/99 contained a liaison statement on applicability of GPRS and EDGE requirements and tests from SMG7. Essentially, SMG7 would like some help to identify what is mandatory for EDGE.

It was decided to have a liaison statement back to SMG7 to explain the situation. It was provided in document 1070/99. After some discussion, the liaison statement was agreed.

##### **4.1.3 SMG9**

Document 1058/99 contained a liaison statement on Introduction of Mailbox Presence & Count Indication Service. A request was received in SMG9 (from North America) to define a file on the SIM to support mailbox information. Currently this information has to be stored in the Mobile for GSM900 systems.

SMG9 have considered the support of a Mailbox file for various Mailbox types. e.g. Voice, Fax, Email. They have agreed that this would be a useful feature. Although SMG9 can specify a file on the SIM card to store the mailbox data as for phonebook entries, it was realised that this feature could be expanded to include data indicating the number of unread messages for each type of mailbox along with information of how this indication

is presented to the user. However for this feature to be considered a service requirement must be specified and the appropriate procedures to handle such a service defined.

A proposed response was provided in document 1067/99.

It was commented that it has been agreed to have MMS for release '99 and that 'mailbox type' should be combined with this. Therefore, it was proposed that SMG9 liaise with T2 on MMS. There are two aspects, one to indicate the mailbox number on the SIM, and the second to expanding the feature; it may be useful to have the first of these in R'99.

It was decided to forward 1058/99 to the MMS group of S1 and T2 for study. The LS in 1067/99 was *not* approved.

Nonetheless, it was decided that SMG9 needs to be informed of the solution. The liaison statement for this was provided in 1073/99 which was approved.

## 4.2 ETSI HF

Document 887/99 contained a liaison statement on the work being done in Human Factors (HF- a Group of ETSI). Also included is a report DEG/HF- 00003: Issues concerning user identification in future telecommunications systems. This describes work being planned on what used to be known as 'numbering and addressing', to make this more user-friendly in the Internet and telephony environments.

Delegates were requested to read the specification and contact HF directly.

An associated document 912/99 contained a presentation from Mike Pluke on User Identification Solutions in Converging Networks. It was noted. It was further agreed to invite Mr Pluke to our next meeting of S1, to report on progress and to seek the opinion of our delegates.

M	AP	Action	Interested Parties	Owner	Status
06	05	Mr Pluke from HF to be invited to the next meeting		Chairman	

## 4.3 3GPP

### 4.3.1 TSG CN SS

The input from CN SS was dealt with at the appropriate part of the meeting.

### 4.3.2 TSG N3

Document 985/99 contained a liaison statement to S1 on 3G Services from TSG CN WG3. It appears that part of it deals with the deletion of X.25 requirement for GPRS. The meeting did not have any problems with this. The other part related to the modem support for release 99.

A proposed answer back was that modem support is not in release 99 and X.25 could be deleted. However, it was commented that errors in the standards could be caused by deleting X.25; e.g. removing all references to X.25.

In the stage one it is stated that a later phase of GPRS could provide modem inter-working; hence, the stage one is in line with CN3. A pragmatic approach to X.25 is to say that it depends on market requirements.

It was decided to indicate to CN3 that not only does SA1 see that modem inter-working is not required for release 99 it is probably not required at all (although for X.25, this is not needed at all, but to delete all the references will be a lot of work).

Another clarification was that X.25 traffic can still be encapsulated in a GPRS packets.

A liaison statement in reply was provided in document 1001/99. It was approved and will be sent to CN3, SA2, T2, CN1.

Document 1069/99 contained a liaison statement as a reply to LS to S1 on 3G Services. We do not have the expertise to comment on this liaison statement and so it was noted.

#### **4.3.3 TSG N1**

##### **Service/Baseline Implementation Capabilities**

Document 898/99 contained a liaison statement on Service/Baseline Implementation Capabilities from TSG CN SS ad hoc. A response to this liaison statement was provided in document 982/99, which was subsequently answered in document 978/99. Since this is correspondence between CN1 and CN3, with SA1 in the middle, the documents were noted.

##### **UE idle mode operation**

Document 979/99 contained an LS on Information about current status on UE idle mode operation from TSG CN WG1. This is not to SA1 but caused a response from CN1 in document 980/99, which is to SA1. After some reading, it transpired that the question related to a network selection list.

In addition document 876/99 contained a response (to TSG-CN WG1, copy TSG-SA WG1, TSG-SA WG2, SMG2 WPA) to LS on Information about current status on UE idle mode operation from RAN 2.

It was commented that there would appear to be a contradiction between 22.101 and 22.011 on network selection. The selection parameters are for FFS and at the same time refers to 02.11 whereas we have a 22.011. It is probably understandable that there is some confusion between the groups.

It was reported that this has been discussed in TSG T2, which has a report on the issue, which SA1 has not received.

In addition a model of what could be used was provided in documents 952/99 and 953/99 in section 5.6. These documents cover the selection between GSM and ANSI 136, but it could equally apply to UMTS and GSM.

Another document contained a proposed liaison statement from SMG2 although it is not clear whether this was approved by SMG2.

It was decided to have a drafting group which to discuss this issue. This was led by Paul Dwyer who is rapporteur of 22.101.

The output of the meeting was provided in document 1002/99. This was subsequently revised to 1030/99 (see section 7.2).

##### **Common Identification for Relocation Co-ordination**

Document 981/99 contained a reply to LS on Common Identification for Relocation Co-ordination from TSG CN WG1 to a liaison statement from RAN2. However, the original liaison statement from RAN2. It would appear, however, that the question being asked is if the IMSI is sufficient for relocating a user; i.e. the instances of emergency calls made when a PS connection is active without a SIM/USIM would be rare.

Essentially, SA1 agrees with them as how could one set up a PS call without a SIM.

One question was what a packet emergency call is, as referred to in the LS. This would appear to be a new requirement or service.

A response was provided in 1003/99. There was some concern over the text "3GPP SA WG1 would like to clarify that currently no requirement exists for PS emergency calls or for emergency situations where calls are simultaneously active in the CS and PS domain". It was decided to delete the paragraph. A revision was provided in document 1071/99. It was approved.

##### **Terminal Baseline Implementation Capabilities**

Document 1059/99 contained a liaison statement on additional Terminal Baseline Implementation Capabilities for secure interoperation with GSM. SA1 is being asked for clarification of whether "essential conditional" is the correct term to use in the circumstance, or whether GSM SIM and/or GSM SIM application on the UICC are required to be supported by all 3G UEs even those designed for use in local market where there is no GSM network.

It was decided to indicate that it may be all right not to have a mandatory requirement for local markets, but this should not be in the standard. A draft reply to this effect was provided in a liaison statement on additional Terminal Baseline Implementation Capabilities for secure interoperation with GSM to T2, in document 1072/99. A slight editorial change is required and it was decided to put this on email approval.

#### 4.3.4 TSG N2

Document 989/99 contained a liaison statement on 3G-H.324M from TSG CN WG2. This is in response to a number of liaison statements between N1, N3 and N2. N2 has noted that 3G-H.324M is defined as Bearer Service in 3GPP. This means that N2 will need to define a code point for this bearer service in 23.016 and 29.002; N2 indicate that they will prepare the necessary CRs.

This is a bit of a surprise as SA1 has not specified H.324M as a bearer service. H.324M is used for real time multi-media and to specifying this as a bearer service may not be appropriate. However, SA1 is being asked if there is a need to consider the applicability of supplementary services to the new bearer service.

A proposed CR to 22.002 from NTT DoCoMo was proposed and agreed to be sent for approval in document 1008/99 on addition of new general bearer service user data characteristics for 33.6kbit/s modem, FTM and multimedia calls. The CR was agreed to be sent to SA#6 for approval. In addition, a liaison statement on the subject to CN3 and SA2 was provided in 1046/99 (See section 6). However, whilst this includes the entry for a bearer service, it makes no mention of the requirement for registration and activation.

It was decided that Nokia and DoCoMo should discuss this and come back with a proposal.

M	AP	Action	Interested Parties	Owner	Status
06	02	Nokia and DoCoMo to discuss the requirement for applicability of SSs to H.324M.	NTT DoCoMo	Tommi Kokkola	

Another liaison statement from N2 on support of White Book SCCP (07/96). This was not directly to SA1 and so it was noted.

#### 4.4 T1P1

Document 910/99 contained a liaison statement on requirements for Telephony Support for the Hearing Impaired from T1P1. This stems from the regulatory requirements of the USA.

The result of this is an Industry TTY Forum Liaison Report, which was provided in document 911/99 also from T1P1.

The group supported the concept, and would support the work to implement the requirements.

## 5 Pre Release '99

### 5.1 Security of IMEI

At the last meeting of SMG (#30), it was agreed, after significant discussion, to have a number of CRs to 02.16 and 22.016 to improve IMEI security. The CRs will be provided for information over email; these have been approved by SMG #30 and are not open for discussion.

### 5.2 Follow Me

Document 899/99 contained a liaison statement on Service code for Follow Me from the TSG CN SS ad hoc. A service code is required. A suggestion of a value has been sent to Christien Julien, but no reply has yet been received. Until this code is allocated, the work on Follow-me cannot be completed.

A phone call to MCC will be made.

M	AP	Action	Interested	Owner	Status
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			Parties		
06	03	A call to be made to Christian Julien regarding the allocation of service code (SC) of 10 for Follow Me		Secretary	

Document 945/99 contained a question on whether "Follow Me" should remain in GSM or be transferred to 3GPP. A point to consider is the security of Follow-me; if it is for public access networks then the changes may make it cumbersome for the railway applications, which need to be simple and fast to avoid disasters.

Therefore, it was proposed that rather than indicating that this is suitable for GSM and not UMTS, it should be stated as being suitable only for private networks.

A liaison statement to CN on this was provided in 1016/99. It was approved and will be sent. Subsequently it was agreed to combine the answer to the question in 945/99 with the status of the 3G specs in 922/99 and send it as a liaison statement to SA.

Document 946/99 contained a CR to 22.094 on Introduction of the rôle of a "Follow Me service supervisor:" from Siemens. When an initiating subscriber has - by mistake - not erased his previous FM registration with respect to a remote party, no other initiating subscriber is able to register FM with this remote party. The FM service supervisor can erase any previous registration to a remote party with an appropriate control procedure (forced erasure).

It would appear that the SS ad hoc is ready to include this requirement and is only awaiting SA1 to require it. The CR for is not required for 22.094 as it has not been approved. There is, however, an 02.94 (V8.0.0) and a CR is required for this.

A new document was provided in document 1015/99 together with an updated 22.094. The CR in 1015/99 and the new specification 1036/99 were agreed and will be sent to SA #6.

### 5.3 GSM 400

Documents 866/99 containing a CR to 02.07 on GSM 400 (rev of 647), and 867/99 containing a CR to 02.40 on GSM 400 (rev of 648) were withdrawn.

### 5.4 Fixed Dialling Number (FDN)

Document 942/99 contained a proposed CR to 02.07 on Fixed Number Dialling from France Telecom. There was some concern that the requirement is still not clear to manufacturers, who appear to have inconsistent implementations. Moreover the reference to the service codes and the destination numbers for SMS may need some work (e.g. does FDN apply to the service centre or the end destination?).

It was decided to have an ad hoc on the subject. The result was a CR to 22.101 in document 1038/99 which was agreed after some debate.

To support this a liaison statement was provided in 1039/99. It was approved.

Document 943/99 was an equivalent CR to 22.101 to introduce FDN to UMTS. Based on the discussion of document 942/99, 943/99 was withdrawn. The meeting did agree, however, that FDN is applicable to UMTS although it should be optional.

Finally, 944/99 contained a discussion document on the importance of FDN to support the CRs. Whilst this was not necessary now, it was noted that T3 are working on the subject and will need some input. Therefore, it was decided to have a liaison statement in document 1039/99 to explain the importance of FDN and to explain the changes. It was approved and will be sent.

### 5.5 ASCI

Document 949/99 contained a CR to 22.004 on Applicability of CCBS to TS91/TS92. Whilst it was agreed that 02.68 and 02.67 should remain in GSM and not be transferred, the references to the applicability is still valid for R'99.

The CRs to GSM 02.68 and 02.69 themselves, in documents 947/99 and 948/99, are to version 7.0.1, but will result in a version 8.0.0. It was noted that the PNE rules need to be applied and the "should" shall be "shall".

The revisions were provided in 1040/99 and 1041/99. Document 949/99 was revised to 1042/99.

Document 1040/99, 1041/99 and 1042/99 were agreed and will be sent to SA #6 for approval.

## 5.6 Cell Selection

A CR to 02.11 on COMPACT Cell Selection parts 1 and 2 (documents 952/99 and 953/99 respectively) were dealt with in section 4.3.3 and section 7.2 (see 1030/99 and 1032/99).

## 6 Release '99

Document 922/99 contained a rationalisation of Documents for GSM Release 99 and UMTS Release 99 from an editorial ad hoc group. There are at present several service requirements documents for both GSM release 99 and UMTS release 99 which appeared to overlap. It should be noted that although these two systems use differing radio access technologies they both use the same core network specifications. It is possible to rationalise these requirements documents such that they can each cover both UMTS and GSM requirements.

It was noted that the 22.101 now includes 02.07 as informative annex A (optional ME features), and it was decided that this annex should be normative. It was argued that the annex supports services such as FDN, which, whilst optional, should be implemented in a specific way. This was agreed.

The first CR to 02.01 - Mainly an editorial update for GSM/3GPP use was provided in document 923/99. The document contained a reproduction of the GSM 02.40 on the tones to be used. It was commented that these tones are from the USA and Europe, but it was emphasized that these are just examples. It decided that the changes in relation to the tones were approved as an example, and those delegates in Asia and other parts of the world could provide CRs later to put in some examples of their own.

Another problem was noted about the principle of the change itself. There was a difference of opinion regarding what is to be achieved in release 2000 and how it relates to release 99.

It was decided to have a revision of document: circuit services should be used instead of circuit domain with a definition of Circuit Services. This was provided in 1023/99.

The following documents were agreed in principle, but with the same changes as per 1023/99 regarding Circuit Services.

Doc No	Contents	Revision	Revision	Result
923/99	CR to 22.001 made only applicable to CS Domain	1023/99	1076/99	Agreed
924/99	CR to 22.002 made only applicable to CS Domain	1024/99	1075/99	Agreed
925/99	CR to 02.03 on Editorial update for GSM/3GPP use	1025/99		Agreed
926/99	CR to 22.101 Mainly editorial update for GSM/3GPP use	1026/99		Agreed
927/99	CR to 22.105 Mainly editorial update for GSM/3GPP use	1027/99		Agreed
935/99	CR to 22.043 Mainly editorial update for GSM/3GPP use	1028/99	LS instead	
939/99	CR to 22.030 Mainly editorial update for GSM/3GPP use	1029/99		Agreed

It was noted that SIM-lock has not been transferred to 22.101. It was noted that this has been classified as a security issue and GSM 02.22 was sent to SA3.

There is a CR later in the meeting (942/99). This will be including based on the agreement of the document.

In document 928/99 there was a proposed liaison statement on 02.06 specification transfer to 3GPP. It was approved.

Document 935/99 contained a proposed CR to 22.043 Mainly editorial update for GSM/3GPP use. One point was the reference that the localised service area is both an optional network feature and an optional UE feature. However the next sentence indicated that "All UE shall support exclusive access feature". This wording is tricky

but generally there is a need to allow a restriction which would imply that even if the feature is optional, the ability to restrict is not. This wording needs to be revised.

Another question asked was regarding the handover requirement. Should the handover in conjunction with LSA allow handover to cells outside the LSA as long as contact is maintained with the cell within the LSA? It was suggested that this needs to be an option for operators. It was revised to 1028/99.

However, it would appear that a liaison statement was added to the CR and it was then intended to be sent to RAN2, RAN3, SA2 to see if the work can be done. This was not agreed in the meeting and caused some dire concern (it would appear). It was decided to discuss this outside the meeting and perhaps bring it back.

It was eventually revised to 1077/99. Finally, it was approved.

Another editorial change, this time to 22.030, was provided in 939/99 from Nokia. There was a comment, well spotted by Orange, that an incorrect reference has been included. This resulted in a change provided in document 1029/99.

Document 984/99 contained a liaison statement on Release'99 clean-up from TSG CN WG3. This document was the same as document 901/99. The meeting agreed to delete the basic PAD/Packet access. A change to 22.002 is required. An update of an earlier CR was requested (1024/99) and this will be included in this CR. A liaison statement to CN3 was provided in 1045/99. It was revised to 1050/99 and was approved and sent during this meeting by the vice chairman.

Document 1008/99 contained a CR to 22.002 on addition of new general bearer service user data characteristics for 33.6kbit/s modem, FTM and multimedia calls. This was agreed and will be sent to SA#6 for approval. A liaison statement on the subject to CN3 and SA2 was provided in 1046/99. (See also section 4.3.4.)

### **Mobile IP support in R'99**

Document 1010/99 contained a CR to 22.060 on Mobile IP support in Release 99. It was agreed and will be sent to SA#6 for approval.

The same requirement was put into 22.100 in document 1011/99. This needed a little re-working. It was decided to provide a CR, but to the most appropriate specification. This was provided in 1047/99. It was agreed and will be sent to SA #6 for approval.

### **Emergency Call**

Document 1022/99 contained a CR to 22.110 on Emergency Call Clarifications. This was considered dangerous and it could cause the requirement put in for the Japanese situation to be put in jeopardy. The CR was rejected.

### **6.1 MSP**

Document 940/99 contained a liaison statement on CLIR provisioning per profile for an MSP Subscriber from TSG CN WG2. This was dealt with in an ad hoc, a report of which was provided in document 1007. It was noted (see section 6.6).

Document 941/99, which contained a CR to 02.69 on Clarification of interaction with CCBS service, was also dealt with in the ad hoc. A revision was provided in document 1048/99, which was approved (see section 6.6).

Document 897/99 contained a liaison statement on the Functionality of MSP Phase 2 and CR to 02.97 from the TSG CN SS ad hoc. The liaison was noted and the CR appears to be almost identical to one already approved at the last SA meeting. After the meeting, it was noticed that the only *further* changes are two minor aspects, which can be dealt with at our next meeting.

### **6.2 GPRS**

Document 879/99 contained a Response to Liaison statement on PLMN selection for GPRS MS. This was copied to SA1 and was consequently noted.

### **Anonymous access for release 99**

Document 960/99 contained a draft LS on anonymous access for release 99 from 3GPP SA WG2. It would appear that the interest to enhance GPRS anonymous Access to UMTS was very low in SA2 and no company

contributed or expressed interest for this feature. Therefore, there is a risk that Anonymous access is, de facto, dropped from release 99. It was noted that the need for anonymous access enhancement to UMTS should be further studied, as for example for road telematics.

SA1 is being asked:

?? Should anonymous access be part of UMTS release 99 or any later releases?

?? Should anonymous access be part of GPRS release 99 or any later releases?

It was asked if this could be used to mask your IP address. One answer given was yes, in which case there could be a requirement, although this was not the original intention.

It was proposed that this is not required for release 99 although it could be required for later phases. In GSM 02.60 R'99 (section 5.4.3.) there is a requirement (the same text exists in 22.060).

It was decided to have a liaison statement back to SA2 (1043/99) and a CR to 02.60 (1044/99). The liaison statement in 1043/99 was approved and the CR in document 1044/99 was agreed.

### **Cell Broadcast Service (CBS) & GPRS**

Document 971/99 contained a discussion document on Cell Broadcast Service (CBS) & GPRS from MMO. In particular GPRS class B and C terminals seem not be prepared to receive cell broadcast messages when attached to GPRS<sup>1</sup>. This limitation may hinder the introduction of GPRS because service continuity for existing services can not be guaranteed. From our perspective there seems to be no technical restriction for a MS to listen to the CBCH (Cell Broadcast Channel) when camping on the PCCCH (Packet Common Control Channel).

A CR to 22.060 on GPRS & SMS-CB Interworking to start the process was provided in 972/99. Whilst there was some support, there was some concern that the other groups can do the work in time for R'99. It was proposed that the change is agreed in SA1, but is sent to SMG2 and/or SA (the chairman of SA is also the chairman of SMG2) to ensure consistency.

Also, it was noted that the change could conflict with the North American situation. The wording needs to reflect that this applies to GSM and not EDGE 136 systems. There was some further concern that dual mode mobiles could become confused.

It was reworded a little to indicate that SMS CB should be received in both transmit and receive mode. A revision was provided in 1049/99. This was agreed in SA1 but relies on SMG2 if it can be implemented. It is conditionally approved.

### **Capability of UE to receive CBS messages**

Document 875/99 contained a liaison statement on Capability of UE to receive CBS messages in connected mode from RAN 2. This is the same as document 973/99.

RAN2 has been asked if there are any restrictions in receiving the SMS-CB during the call. The answer is that for release '99, support of CBS in CELL\_DCH would be entirely restricted to terminals with specific additional capabilities, namely the ability to receive dedicated and common physical channels simultaneously. This means that CBS would not be supported in CELL\_DCH state (e.g. during a speech call) by terminals with basic service capabilities, e.g. "speech" terminals.

RAN 2 also indicated that frequent transitions between the above mentioned states CELL\_FACH, CELL\_PCH, URA\_PCH and CELL\_DCH can take place during a packet transmission and therefore this would mean that the support for CBS would be interrupted/resumed depending on the allocation of radio resources and the algorithms in UTRAN. RAN 2 is looking for guidance on whether this is acceptable from a service point of view.

A proposed response was provided in document 974/99. The liaison statement was indicated that reception for a basic UE is not possible if it is connected in the CS domain. It should be possible for a basic UE to receive messages if it is connected in the PS domain and no data is currently transmitted. This was revised to take

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<sup>1</sup> GSM 03.64-800, section 6.1.4 on CBS: "An MS attached to GPRS shall not be required to monitor the CBCH channel if a PCCCH exists. [EDITOR'S NOTE: Service is not specified]"

away a reference to a "basic UE" since this term was not defined. A revision was provided in 1005/99, which was subsequently approved.

It was sent to RAN2 from this meeting and needs to be sent still to T2.

### **Connectionless services during the call**

Document 904/99 contained a response to LS on Connectionless services during the call from TSG RAN. There was some confusion on what is required. It was noted that the document 904/99 also contains a question on SMS CB which is covered by document 1005/99. The answer to this is the same flavour as 1005, but it was decided to have a liaison statement back to emphasise the point. This was provided in 1063/99; it was approved.

### **Registration of interworking profile**

Document 1006/99 contained a discussion document on registration of interworking profile and CR to 22.060. This was revised to 1033/99 prior to presentation.

This is a very complex subject and should be discussed with technical experts. Moreover, this is a new requirement and should be put into R2000 and so the rush is not required. It was decided to put this as a work item to the next meeting.

Document 1061/99 contained a liaison statement on push services for GPRS. What was asked for was I-mode like services for GPRS and originally there was meant to be a number of change requests. However, the existing standard might actually support the requirement and hence the liaison statement to verify this. It was approved.

Document 1068/99 contained a complementary liaison statement to 1061/99. It was agreed with correction of a slight typo; in fact we ask S2 not S1!

### **6.3 SIM Application Toolkit**

Document 883/99 contained a discussion document on "User Control" requirements for SIM toolkit stage 1. This was noted for now; delegates were asked to deal with this over email and we will expect some input at the next meeting.

### **6.4 Multi-Media Messaging**

Documents 859/99 and 860 were withdrawn.

The report on MMS ad hoc was contained document 950/99. This was noted after a brief presentation.

Document 870/99 contained a liaison statement on Multimedia Messaging (MMS). The reason for this liaison statement was to respond back to SA1. The first bullet item is not actually stating that VHE is not supported but refers to the parallel work on VHE and MMS; i.e. one should not hold up the other. This was supported by a proposed liaison statement to SA2 in 997/99.

Another liaison statement on Multimedia Messaging (MMS) stage 1 was provided in document 871/99. This was sent by us to S3; it is not known if there is a reply at this time. The document was noted whilst SA1 awaits the reply.

There are different opinions on what MMS really is. However, the work on the stage 1 has progressed and it is felt by the MSS ad hoc that it is ready for approval as the first new 3GPP teleservice for R'99.

In document 1013/99 there is a liaison statement indicating the fear that there could be more than one standard for MMS; 3GPP and WAP forum. The ad hoc does not see this as a problem as the WAP forum does have significant input to the stage 2.

Based on the comments of the MMS ah hoc, it was decided to send Stage 1 of Multimedia Messaging Service (3G TS 22.140 version 1.2.0) in 951/99 to SA#6 for approval. It will be raised to version 2.0.0 prior to presentation.

Document 896/99 contained a version of Advanced Multimedia Messaging Service from the MMS subgroup. This document was produced to indicate the advances that could be implemented in R'2000. It was noted for now. Delegates were asked to look into this for R'2000.

No new ad hocs are planned for the time being.

Document 959/99 contained a liaison statement to SA1 concerning message screening from SA2. A proposed answer was provided in 930/99 from Nokia. There was some concern over the use of the term "message screening". Rather the term "packet screening" should be used. It was decided to revise the text; a revision was provided in document 1004/99. It was approved and will be sent.

## 6.5 Location Services

Document 909/99 contained an informative liaison statement on the transfer of Location Services to 3GPP. Essentially it is the intention of T1P1 to pass back the specifications to 3GPP for R'99. T1P1 expects to complete the work of R'98 at SMG#31 and then hand this over also.

Document 954/99 contained the CR to 02.71 on U.S. specific Emergency Services requirements included as an informative annex. An equivalent CR to 22.071 was provided in 955/99. This is USA specific; normally Canada follows the regulatory requirements of the USA, but it has not been done yet.

Both CRs were agreed to be sent to SA#6.

An input on the clarification of location services support in Release'99 for packet switched services was provided in document 964/99. It was asked if networks which are GPRS-only also supply location services? It was answered that there is no regulatory requirement for packet networks, but depending on what is being carried it could be yes. It would appear that no work in 23.171 in R'99 has been done for LCS. This would mean that there will be no LCS for GPRS in R'99 and would mean that this CR needs to be put into 22.071.

Some time was spent on whether there should be LCS for GPRS in R'99. In particular what will happen with dual mode mobiles; i.e. that LCS is only available in GSM mode. This is not satisfactory but not much can be done about it at this time.

Document contained 886/99 Accuracy Classes for LCS from Nortel. Another document on Alternative Quality of LCS Classes was provided in document 1053/99. There were significant comments to this document and so it was decided to note this for the time being. It will be discussed between the parties involved.

M	AP	Action	Interested Parties	Owner	Status
06	04	Accuracy classes for LCS (886/99 and 1053/99) to be discussed between Nortel and Nokia. It will be brought back if appropriate.	Tommi Kokkola	Iain Sharp	

Document 1074/99 contained a proposed liaison statement to CN1, CN2, CN3, S2 on Clarification of dealing with LCS. There is a proposal that the LCS was R99 item. But it is not clear when the LCS will be provided and CN1, CN2, CN3, and S2 are being asked to confirm whether LCS is supported at release 99 or Release 2000.

If the liaison statement is sent, the answer will probably be too late so this will be brought up at SA #6 rather than sending the liaison statement.

M	AP	Action	Interested Parties	Owner	Status
06	06	Document 1074 on Clarification of dealing with LCS to be brought up at SA #6.		Chairman, Michael Clayton	

## 6.6 CAMEL

An ad hoc on CAMEL was held just prior to the meeting. The report of this meeting was provided in document 1007/99.

### **S1 99-888 (LS) - LS on Dialed Services in CAMEL Phase 3**

S1 was informed about N2 enhancements of network dialed services. New capabilities are the possibilities to include charging information and to bar calls. S1 is asked to include this in the stage 1.

Siemens promised to provide a respective CR that will be presented during this week in plenary (see 1035/99 in this section below).

### **S1 99-889 (LS) - CAMEL Control of VoIP Services FTR**

A feasibility technical report from N2 covering CAMEL support for Voice over IP services was received as a CC document. The document was noted. As this is a release 2000 issue stage 1 modifications will be done in 2000 if necessary.

### **S1 99-891 (LS) - Response to Liaison "Interaction between MMS, SAT, MExE, non MExE terminals and Camel Open Service Architecture"**

A liaison concerning the transfer of terminal capabilities to the CSE was received. N2 informed S1 that there was nothing done for release 99. As far as this issue is currently open, clarification is needed between OSA, VHE & MExE. If clarified modifications will be done in CAMEL stage 1 for release 2000.

### **S1 99-895 (LS) - Naming of CAMEL in R99 and R2000**

N2 supported the naming of Camel phase 3 and 4. As this was proposed by S1 the document was noted. An open issue that needs to be discussed in S1 is the scope of Camel phase 4. N2 informed S1 that the existing scope of phase 4 is quite big and there is not much room for new features in Camel phase 4.

It was noted that the present specification for Camel phase 3 still included those items which were being delayed to phase 4 and these still need to be clearly marked or deleted.

### **S1 99-940 (LS)**

N2 sent a liaison regarding the possibilities of the CSE to overwrite the CLIR parameter for mobile originated calls to support MSP services. This was rejected in the last S1 meeting. There seemed to be currently no objections in S1 to allow this modification and the ad hoc group propose the CR in Tdoc S1 99-941 for approval.

### **S1 99-941 (CR) - CR to 02.69 on Clarification of interaction with CCBS service**

Corresponding CR to 02.69 on Clarification of interaction with CCBS service. A revision was provided on-line to indicate that the CSE shall be able to instruct the VPLMN. The revision was provided in 1048/99 and was approved.

### **N2 99K70 (LS)**

This status of this document is currently not known. Nevertheless, the ad hoc group has looked at the document. It proposes the split of Camel phase 3 & 4. Currently S1 is not able to draft a respective CR for release 99. If the status of the document can be clarified during the meeting, S1 delegates might be able to draft the respective CR during this week to be included for next SA plenary. Otherwise the CR could not be completed in time.

S1 secretary is asked to clarify the status of the document. It was subsequently identified that the liaison statement was approved and needs to be dealt with.

Document 1035/99 contained a CR to 22.078 on Enhancement of the capabilities of dialed services. In order to have a more flexible handling TSG CN WG2 have agreed to enhance the capabilities of dialed services by allowing the CSE to bar the call and to perform charging activities, i.e. to add Free Format Data to the Call Data Record. It was reported that CN2 has done the work so the addition of a feature should be approved in SA#6. The CR was agreed and will be sent to SA#6.

Document 865/99, containing a liaison statement on SAT/MexE <-> CAMEL Interworking / Traceability, was noted as it was agreed by email approval

## 6.7 VHE

Just prior to the SA1 meeting, an ad hoc meeting was held on VHE. The agenda for this was provided in 872/99. The draft VHE ad hoc report was provided in document 1014/99.

One resolution on OSA and the role of MExE/SAT servers, two proposed CRs on OSA and the role of MExE/SAT servers were presented in document 991/99. The issue concerns the implicit statement in the VHE Stage 1 that MExE and SAT servers support OSA.

The MExE group has explicitly not defined the functionality of a MExE server as it may be realised in many different ways (e.g. a web server, a WAP gateway, another MExE terminal, a web homepage or even another application etc.). Indeed MExE has sent an LS to S1 stating that MExE servers do not necessarily support OSA service capability features. For this reason there is concern at defining the functionality of a MExE server in the VHE group.

Documents 873/99 and 993/99 were presented by Jörg Swetina. The two CRs attempt to modify a figure and provide new text to either ensure that the MExE/SAT servers:-

?? support OSA, or conversely

?? to clarify that the support of OSA by MExE/SAT servers is optional

Concern was expressed that such functionality may bypass some of the AAEW requirements (i.e. user control, permissions etc.). Alternative means of accessing such information by downloading applications to the devices were suggested.

The discussion was protracted and involved many other delegates, and it was clear that we would not be able to reach agreement on the proposed changes during the ad-hoc.

1. There was no consensus on the proposed changes in tdocs **S1-99873** and **S1-99993**. The chair encouraged the principal speakers and interested parties to try and reach agreement on changes to the VHE Stage 1 outside the meeting.
2. It is clear that in its current form, the VHE stage 1 does not have support from all members of S1.

## MMS and VHE

The Multimedia Messaging Service (MMS) feature was discussed to understand how VHE and OSA is impacting this new service. MMS is the first new teleservice to be standardised under 3G. The MMS rapporteur Gunnar Schmidt has stated that MMS would be completed more quickly if MMS didn't have to support VHE's OSA service capability features.

It was agreed during the MMS S1 ad-hoc that the MMS/VHE OSA relationship will prove to be an example for all future services, and it will therefore be important to adopt a good process on how new services support VHE.

MMS has also adopted the principle of determining which aspects of a service require to be standardised (i.e. impacting the network), and those aspects which don't (i.e. at an application level).

VHE's OSA currently lists some OSA service capability features for messaging. S2/T2 will define the OSA service capability features required to support MMS, and the VHE Stage 1 will then include descriptions of them.

Importantly, MMS has decided that in order to bring MMS to the market as quickly as possible, MMS will not support OSA in its first release due to its complexity and difficulties. It was questioned whether perhaps MMS could at least use some of the OSA service capability features. MMS will support VHE via the individual toolkits used to build the service (e.g. MExE).

VHE is the concept, and OSA is just one of the technologies which could be used to support VHE.



S2 is understood to be performing a co-ordinating role, and it was felt that contact between T2 and S2 should be further encouraged. It was also noted that there has been little contact between S2 and S1 on VHE.

Given that MMS has elected not to use the OSA service capability features for its first release of MMS, it was suggested that S2 should be informed so that they may concentrate their activities on the non-messaging OSA service capability features for Release 99. Manfred Leitgeb (Siemens) agreed to draft an LS to S2 (copied to T2, S2 and CN) in **S1-99997** to identify those OSA service capability features which should be prioritised for Release 99.

### Conclusions

1. It was felt that the discussion of MMS had thrown light on the current state of the VHE specification.
2. MMS is the first new 3G service, but MMS has elected not to use OSA service capability features in its first release.
3. MMS appear to be saying that the VHE specification is unclear, as the T2 MMS group have had difficulties in understanding the VHE concept due to the complexity of the OSA service capability features. The VHE group should take steps to clarify the specification, and the OSA service capability features.
4. It was felt that S2 should be encouraged to perform its co-ordinating role with respect to VHE, and the support of VHE by MMS.
5. An LS to S2 (copied to T2, S2 and CN) in **S1-99997** is to be drafted to identify those OSA service capability features which should be prioritised for Release 99.

### Availability of terminal capabilities / user profile

Jörg Swetina (Siemens) presented tdoc **S1-99992** to raise concerns on the fact that the VHE Stage 1 identifies the user profile (containing interface and services related information). Without the availability of the user profile it will be difficult to provide consistency of services across the different VHE toolkits.

The paper proposed that S1 VHE, in conjunction with other groups, should more clearly define the contents, use availability, and when the user profile is required. The user profile is not just required at the application layer, but also by the network.

It was noted that S1 had recently sent a LS to S2 stating that S2 VHE work should not only concentrate on CAMEL, but also support the other toolkits (i.e. MExE, SAT). The MExE group had also recently sent a request to S2 to progress work on the support of a user profile. S2 VHE would appear to be only concentrating on the OSA aspects of VHE.

Further, it was felt that S2 should be encouraged to exercise its co-ordination of VHE, and this should be stated in the **S1-99997** LS to S2 (this was revised, see 1037/99 below).

### Conclusions

1. The contents of **S1-99992** were generally agreed
2. S1 VHE should work with other groups to more clearly define the use and contents of the user profile
3. **S1-99997** LS to S2 should identify the need for S2 to support the user profile, and request greater VHE co-ordination.

### Identification of Release 2000 VHE work

Insufficient time was available to discuss this topic, but the preceding discussion had raised the following points:-

1. The definition and use of the user profile in the VHE Stage 1 should be further elaborated, and supported by S2
2. The VHE specification should be re-worked to distinguish between the VHE concept, and the support of the concept using OSA service capability features
3. New services should identify how they are supported by VHE by having their own sub-clause in the VHE specification.

During the VHE ad hoc, a liaison statement to SA2 was requested on Service Capability Functions (SCFs) to be supported for R'99, which was contained in document 997/99. It was decided to change the document to indicate that some SCFs are not high priority rather than not required. It was revised to document 1037/99. There was a working assumption that this is approved unless comments are received (Ericsson were going to check prior to sending it).

It would appear that this was sent without approval; it was dependent on comments from Ericsson. The comment from Ericsson was to not support it. Interestingly, it did not make it to the VHE meeting of S2 although it has been sent by fax (probably too late).

One of the reasons is that message transfer is not used by MMS. However, Ericsson wanted the features for other services than for MMS. It was noted that the wording was changed to "lower priority for R'99".

Document 864/99 contained a LS to EP UMTS on Request for information on Virtual Home Environment (VHE) work on fixed network access. This was approved by email and was presented for information.

The following documents were noted in the ad hoc:

890/99	Liaison Statement Collaboration for open interfaces	TSG SA WG2
892/99	Security issues in VHE/OSA	TSG SA WG3
986/99	User service requirements for Global Virtual Home Environment (VHE)	SPAN2
991/99	22.121 of VHE V3.1.0	Rapporteur
993/99	CR to 22.121 on MExE SAT servers	Ericsson

Document 1012/99 contained a liaison statement on VHE/OSA Service Capabilities Features and MMS from TSG T WG2 to TSG SA WG2. It was noted by SA1

## 6.8 Multicall 22.135

Document 878/99 contained a liaison statement on Radio Access Bearers (RAB) pre-emption from RAN WG3. When a user has several calls in progress and the user needs to handover, some priority mechanism is required to identify what bearers should be maintained. It was questioned where the service element should be defined. This was taken with 1062/99. Both documents were noted.

The view of the meeting was that this mechanism would be appropriate to deal with pre-emption of RABs belonging to the same UE (e.g. case of a multicall) in the same way as for RABs from different UEs. Both documents were noted.

Document 988/99 contained a liaison statement on Multicall from TSG CN WG2. TSG-N2 have discussed several contributions on Multicall, which is required as a Release 99 service. It is noted that the stage 1 for Multicall defines Multicall as a **basic** service; however it also defines subscriber control procedures (registration, interrogation, ...) which seem to be more appropriate to a **supplementary** service. The development of the specifications for control of call set-up in a Multicall configuration is in TSG-N2's area of competence; however the functional behaviour and signalling for the subscriber control procedures are in the TSG-N SS ad hoc group's area of competence.

In view of the short time available to develop the stage 2 & 3 specifications for Multicall, TSG-N2 believe that we should restrict the scope of Multicall for Release 99 to omit the procedures for subscriber control and interrogation. This would allow the development of the specifications to be concentrated in TSG-N2, and substantially improve the chances of having a useful service specified for Release 99.

TSG-N2 have taken the working assumption that this restriction of the scope of Multicall for Release 99 is acceptable to TSG-S1. TSG-S1 are asked to confirm the working assumption.

Document 963/99 contained a solution on registration, Interrogation and Restriction of Packet Domain from NTT DoCoMo. It is being proposed that these functions are postponed to R'2000.

A similar problem was provided in 975/99, which contained comments on the Multicall stage1 (22.135) from TSG S2. An answer to this was provided by Nokia in 932/99, which contained CR to 22.135 Clarification of PS domain requirements.

It would appear that there is an overlap, the NTT DoCoMo proposal to postpone the work and the Nokia proposal to delete the functions. After some rather confused debate, it was initially decided to postpone the issue to R'2000.

Hence, 963/99 was approved, 932/99 was withdrawn and 988, and 975, were noted!.

Now, document 931/99, containing a proposed liaison statement to SA2 concerning Multicall, was intended to answer 975 and support 932/99. Since 932/99 was withdrawn, a revision was required, which was provided in document 1064/99. It was approved.

A further document 1017/99 provided some comments on Multicall Stage 1 (3GPP 22.135) from Lucent. The intention was to stimulate some discussion such that those points agreed could be included in a CR to 22.135.

It should be noted that the text in this document on handover should go to 22.129 based on the proposal in document 1020/99. It was agreed.

The CR to 22.135 was provided in document 1065/99 and the CR to 22.129 was provided in document 1066/99. Both were agreed.

## **6.9 22.129 Handover**

Document 868/99 contained a CR to 22.129 on Performance requirements for real-time services and requirements for handover between UMTS and GPRS (rev 843). This was agreed by email (see document 929/99) and will be passed to SA #6 for approval.

Document 869/99, which contained a liaison statement to SA2 and RAN groups on CR at document 843, was also approved and has been sent out.

The editorial CR to 22.129 contained in 877/99 was noted. It may be presented at the next meeting.

Document 900/99 contained a liaison statement on Handover issues for CS Data from 2G to 3G PLMNs from TSG N3. This was copied to S1 as was the answer from CN3 in document 961/99. Both documents were noted.

Also noted was document 958/99, which contained a liaison Statement to S2 on Combined Mobility management.

Document 957/99 contained an LS on Open Issues on 3G to 2G Handover (Packet Switched domain) from TSG CN WG2. When a user with two PDP contexts (connections) (e.g. Telephony and Data) hands over to a network which will only support one connection, then which service should remain active?

Either one PDP context is chosen by the network/user or the whole call is dropped. Olle Ericsson indicated that some wisdom has been applied in his company and he will find out their opinion.

Possibly the context which is most active (more data/traffic being transferred) should be kept, or the operator (serving or home) can decide, or should the application decide (in which case the application designers need to be informed)? Moreover, there may not be the option to keep alive all the PDP contexts as the GSM network may not support it.

Perhaps there needs to be some priority list which should be applied. It was noted that in the Multicall specification 22.135, there is a priority list. However, the difference is that in Multicall it is known what the bearers are being used for, but in this case it may not be known what the bearers are being used for.

A liaison statement to SA2 and CN2 is required (1018/99). Also a CR 22.129 is required (1019/99) and perhaps one to Multicall (22.135) (1020/99).

Document 1018/99 was provided later in the meeting. It was approved and was sent to N2 and S2 during the meeting.

The CR to 22.129 was in 1019/99 was agreed to be sent to SA #6 for approval.

The CR to delete the text from the Multicall specification (22.135) in document 1020/99, was agreed to be sent to SA #6 for approval.

#### **6.10 CLI 22.081**

Document 908/99 contained an editorial CR to 22.081 (Line Identification SS) from Telia. The CR was agreed and will be sent to SA #6 for approval.

#### **6.11 CLI 22.085**

Document 999/99 replaces 907/99 both being editorial CRs to 22.085 (CUG).

#### **6.12 SoLSA**

Document 933/99 contained a CR to 02.34 on SoLSA correction and 934/99 an equivalent CR to 934/99. Both of these documents were replaced by 1051/99 and 1052/99.

It was noted that the change refers to calls, but it also applies to GPRS, which does not have calls. It was decided that the editor needs to check this. For the time being these changes were not agreed.

#### **6.13 HSCSD**

Document 938/99 contained a proposed liaison statement to N1 and N3 (copy to SA2) concerning HSCSD specifications from Nokia. In it, there is a proposal to change 22.034 to make GBS applicable to 3GPP but multi-slot is only relevant for GERAN.

A proposed CR to the Stage 1, 22.034 was provided in 937/99 and, as S1 is not fully aware of all the implications of these changes, CN1 is invited to study the issue.

It was agreed to be send the LS and the draft Stage 1 for comments; it was sent to SA2 during meeting.

#### **6.14 SIM Application Toolkit (SAT)**

Document 873/99 contained a CR to 22.121 on MExE SAT servers from Motorola. This was discussed in the VHE ad hoc (see above) and has been postponed.

On the assumption of agreement of 873/99, document 874/99 contained a proposed LS on MExE SAT servers. This was, therefore, withdrawn.

Document 967/99 contained a liaison statement on SAT Handover notification and termination of call postponed from the last SA1 meeting. Since the presentation, agreement between Nokia and Mannesmann Mobilfunk was achieved. It was agreed to be sent to SA3, CN1, T3, SMG9 SMG1/9 SAT ad hoc.

Document 970/99 contained a discussion document on SAT Incoming Communication Event. Mannesmann Mobilfunk has studied the possibilities of the incoming communication event in SAT and recognised that there is only a notification with the A-Number sent to the SAT. No other actions are possible.

To build e.g. a flexible automatic screening or filtering application, SAT should be able to initiate all reactions to an incoming combination that a user is able to, e.g: rejecting the call, sending a UDUB (user determined user busy) and deflecting the call with the call deflection service.

Mannesmann Mobilfunk is asking S1 for support and to integrate this functionality in the respective standards.

It was asked if Incoming Communication Event is specified in SAT. It was clarified that it is, but only to show the A-number and to pass the A-Number to the SAT. It is proposed that this option is a change to R'2000 and the document is hoping to elicit some support. There was some support to study this for R'2000.

It is expected to come to the next meeting, although it was requested to come early.

## 6.15 NITZ

Document 1021/99 contained a CR to fix an Ambiguity in the NITZ feature. The key is to supply both the time (UTC or local) and the time difference (via the timezone).

It expressed concern that there are terminals that have implemented the **UTC** and time difference whereas the proposal in this document is to supply the **local** time and time difference. However, Nokia claimed that the present text clearly states that **UTC** rather than **local time** should be used.

This needs to be sorted out as soon as possible since it appears that both implementations have been used in product that has already been released and these are incompatible. Another point is that some countries do not respect the timezone and use a different time to that of their own timezone.

***It was decided to bring this to the attention of SA for a solution unless it is resolved earlier.*** Either way, comments from mobile manufacturers are required as soon as possible.

## 6.17 PIAFS

Document 1000/99 contained a discussion document on PIAFS. The additional service requirement would simply be that: 'The UMTS standard shall enable an operator to offer to his end users, access to PIAFS when being in the home environment as well as when roaming, without requiring operators of visited networks to implement any PIAFS specific functionality'. It was not clear whether further changes were needed, so this should be studied. It was not clear where to place the service requirement, if a new one was needed.

It was noted for the time being, but should be studied for R'2000.

## 6.18 EDGE RAN

Document 905/99 contained a presentation on GPRS-136HS EDGE Motivation from the UWCC. The Universal Wireless Communications Carrier Community is a limited liability corporation established to support an association of carriers and vendors developing, deploying products and services based on ANSI-136 TDMA and ANSI-41 WIN standards. This presentation and document 906/99, containing a Concept Proposal for EGPRS-136, were provided as background information for the change requests in 952/99 and 953/99.

The CRs in to 02.11 in 952/99 and 953/99 were presented next, but were put on hold in lieu of a presentation of 1002/99, a 'beer group' production. This latter document contained a proposed liaison statement and also a CR to 22.101 (3.7.0).

There was some confusion on what parts of 22.011 have been subsumed in 22.101 and if the text in the documents has been duplicated. Therefore, it was proposed to delete 22.011 by putting it in 22.101. This prompted a revision of 1002/99, which was provided in document 1030/99.

It was decided that the CR in 952/99 should be put into 22.101 (as per 1002/99), which may result in significant updating. The revised CR will be provided in document 1032/99. [It was commented that there should not be a reference to DCS1800. It was clarified that the names GSM1800 and GSM1900 are used by the GSM Association, whereas the standard still uses the original DCS1800 and PCS1900.]

It was decided that the CR in 953/99 should be put into 22.101 (see above). The revised CR was provided in document 1032/99. It was agreed to be sent to SA #6 for approval.

Document 1030/99 was provided later in the meeting. It has now been decided to keep 22.011 and refer to it in 22.101. In 3.2.2.2 on the subject of attempting registration when the voice service is not supported, if there is no support for voice then the UE will not select that network. It was commented that the text could be interpreted as the UE should not attempt a registration to any network which has cells that do not support speech.

It was proposed that this document should be suitable for GSM and UMTS; the note needs to be deleted. Moreover, there needs to be a check to ensure that other groups can perform the appropriate work for R'99. In particular, there is at least a new field for operator preferences that needs to be put into the SIM and/or UE.

The chairman asked if there are any changes to these specifications that the other groups are not expecting. He did not want the other groups complaining that there are new requirements that will not be completed for R'99.

Some other editorial corrections need to be made. A Corrected version was provided in 1056/99. This was agreed to be sent once a cover sheet is added.

A liaison statement was also provided in 1057/99 to explain the changes to the other groups. It was approved and will be sent out.

A CR to 22.101 was provided in 1031/99 comprising text from 951/99. This specifies the behaviour of a voice capable mobile that has camped on a network/cell which does not support voice service. The CR was agreed and will be sent to SA#6 for approval.

The following documents were not dealt with:-

880	LS concerning the GSM/EDGE RAN	SMG2
881	Draft of GSM/EDGE RAN Radio Requirements	SMG2

Since these documents are destined to go to SA, they will be listed as being noted by SA1.

## 7 Release 2000 onwards

### 7.1 All IP Network

#### Ad-hoc meeting:

A report of the ad hoc prior to the plenary was provided in document 1054/99. The ad hoc group met for the full day of Monday with 60 attendees, a lot of new faces and they are very interested in IP related services discussion. The ad hoc meeting was chaired by Tommi Kokkola. During the day, good progress was made on understanding the nature of IP based service concepts.

It was not clear at the beginning what was the scope and aim of the ad hoc group. The name of the ad hoc group was also criticised, but there were no good proposals. The chair referred to his email on this (document 968/99).

A lot of carriers are concerned that their existing network will be obsolete, if IP network is introduced too early, and they want to support their existing services. It was clarified that S1 will continue also the development and maintenance of CS domain services for R'2000 at plenary and at the other ad hocs. This will allow seamless service continuity from release '99.

It was further noted that some of the delegates were looking after new real time multimedia services (H.323/SIP CC) and some were considering implementation of existing GSM telephony services (DTAP/04.08 CC) on PS Domain. This created misunderstanding during the meeting, so it was agreed that proper definitions are needed and shall be documented in the new proposed TR (see below).

There were comments that S1 should not separate PS and CS domain service requirements. Chair clarified that S1 is allowed to consider the service architecture issue although the responsibility lies with S2. Also a certain level of technical understanding is needed in order to write the detailed services descriptions for other groups.

Document 916/99 contained a draft skeleton for new TR "Study on PS domain services and capabilities". Editor for the TR is Mark Cataldo / Motorola. It was agreed to proceed with the TR based on contributions and discussions at this ad hoc. Editor welcomed email contributions on S1\_IP-mailing list.

It was agreed to create a R'2000 feature list. It is very beneficial to get an understanding already as soon as possible of the priorities of different features from operators in order to verify that the most important features get included in R'2000. The idea of the feature list is that everyone shall propose features for "wish list" by Jan 14<sup>th</sup>. When list of features is complete everyone shall evaluate the priority of each feature by the next S1 Plenary (7. Feb.). Combined information can be used to focus and to phase the work at the next S1.

Document 1055/99 from ad hoc chair includes a template for an evaluation form with an initial set of requirements based on ah hoc inputs.

The following documents were dealt by the ad hoc: 893, 894, 913, 914, 915, 916, 917, 918, 919, 920, 921 and 968.

893/99	All-IP architecture for release 2000	Orange
894/99	Handover scenarios for "all-IP" network in release 2000	Orange
913/99	Email on IP over Cellular	RHC WG
914/99	Voice service requirements for R 2000	Nortel
915/99	Minimum feature set for R2000	Motorola
916/99	R200 IP report	Motorola
917/99	New services and IPv6	Nokia
918/99	PS Domain feature list evaluation for release 2000	Nokia
919/99	Feature list for R2000	AWS
920/99	"Wish List" for S1_IP Features	Samsung
921/99	Proposed R'00 service requirements	Ericsson
968/99	Email on all IP ad hoc planning	Nokia

### **SCHEDULE:**

Following meetings were proposed for the ad hoc.

18.-20. Jan	Drafting session, Host invited.
7. Feb	At ETSI, followed by S1 plenary.
29.2-2.Mar	Host invited (AT&T has offered to host in North America).
10. Apr	Host invited, followed by S1 plenary.
16.-18. May	Host invited.

At this stage the January meeting was agreed, but the others will be decided later. It was noted that goal should be to have drafting done via electronics means (email) as much as possible. However there was also support for face-to-face drafting sessions with a clearly agreed scope before the meeting.

Electronic discussion is to take place on the S1\_IP mailing list, and the report editor strongly encouraged contributions on the various areas of the report (cf. **TDoc 916**) in advance of the first drafting session.

The following documents were not dealt with and were referred to the next ad hoc:

903/99	Proposed LS to SMG on the requirement for ERAN to support the 3rd Generation evolved Circuit interface for Release 2000	TSG SA WG2
965/99	Service concept for R2000	BT, AT&T, NORTEL
969/99	Method for progressing work on R'00	Nortel
976/99	R00 Work Plan	Telia
994/99	Model for Technical project co-ordination and management	TSG Chairmen

There was only a brief discussion on this topic in the plenary meeting due to lack of time. It was agreed that S1 must identify the service and architecture requirements for R'2000 'top down'. It was suggested that in general, there would be similar service requirements as R'99, but that new architectures might provide a more efficient solution to these needs, in particular for IP type services. Cost effectiveness and efficiency would become very important in an increasingly competitive market place.

Due to the interest of S1 in defining new requirements for architectures, it was suggested that a cross-group ad-hoc might also be useful and this proposal was to be raised at the SA plenary.

## **8 Any Other Business**

## 8.1 IMode Presentation

Document 902/99 contained an Outline of IMode Presentation from NTT DoCoMo. The presentation itself was provided in document 996/99. The presentation was given by Mr David Macdonald.

I-Mode was launched on 22<sup>nd</sup> February 1999 and already has 2,625,989 subscribers with an increase of 450,00 per month. Moreover, 259 companies have aligned with DoCoMo for content provision of which 46 are all the major banks in Japan. Outside of this, there are also 7 search engines used in conjunction with I-Mode. Also there are 3,085 voluntary I-mode internet websites. They expect 4 million by the end of March 2000.

I-Mode service is an HTML (not HDML) based service to browse the web. A customised homepage is provided which is driven by a user profile; this is done to make the user access to IP web sites easier. The cost is also attractive; it costs 1 yen (=1 US cent) to send one packet of information. A point of note is that the service providers charge for this, but the gateway function is currently not charged for.

Interestingly, I-mode caters for different terminals; it is a part of the HTTP layer for the type of terminal to be provided to the user agent (service provider) so that the information can be formatted appropriately. Another point is the architecture for I-Mode. The HTML and HTTP layers are the same; it is only the TCP, IP and L1 and L2 which are transposed. This means that the content providers do not need to change anything to use I-Mode in addition to their existing applications for the Internet; only the content needs to be reformatted for the limited display of a mobile. The terminals are catching up with colour displays now coming on to the market.

Mr Macdonald's email is [djmac@gw.nttdocomo.co.jp](mailto:djmac@gw.nttdocomo.co.jp) and he welcomed questions on I-mode.

It was questioned if the services are location based. It was answered that this is not the case for the time being.

Of note was the average cost for a subscriber of 1200-1400 Yen per month including the subscription cost. The phone is usually subsidised but a typical cost is 15,000 Yen (US\$150) although cheaper versions are possible.

It was noted that for some time there was a concept that 3G is required due to the critical need for spectrum. This prompted the question of where the additional spectrum to run I-mode has come from? There was no specific answer to this.

For the time being, there is no English version of the I-mode specification. It will be available in due course although probably not for free.

An interesting point is that the average telephony traffic has increased (20-30%) with I-mode users. One reason could be the Phone 2 feature, where the user can click on a telephone number (e.g. for the local pizza restaurant) or perhaps because the I-mode user is more mobile literate.

Mr Macdonald was warmly thanked by the chairman and delegates.

## 8.2 GAIT Presentation

Document 956/99 contained a Presentation on GAIT from Penny Bright of Lucent.

GAIT stands for GSM/ANSI-136 (TDMA) Interoperability Team and was formed in February - March 1999 to address deliverables from the GSM Alliance/UWCC; GAIT reports to both the UWCC and the GSM Alliance.

The Scope and Charter is to:

- ⚡ Develop mobile station (including Subscriber Identity Module) and network functional requirements and specifications for the interoperability and interworking of GSM and ANSI-136 based cellular/PCS systems
- ⚡ Work with other industry bodies and the appropriate standards bodies to standardize the GSM/ANSI-136 interoperability service

The deliverables are:

- ⚡ Network Spec. primarily addresses the GSM/ANSI-41 Interworking/Interoperability Function (IIF)
- ⚡ as well as others: e.g. SMSC and ANSI-41 HLR
- ⚡ Common Mobile Terminal Specification addresses the GSM/ANSI-136/AMPS Multi-Mode Mobile and SIM
- ⚡ Test Plan Spec. In Progress -- needs stage 3 detail



- /// Detailed specification and standardization required to meet July 2000 targeted general availability
  - /// Specifications will be frozen in November 1999
  - /// Network Spec. Submission to T1P1 in Nov. '99
  - /// Some portions of the detailed handset specifications have been submitted to TR-45.3
  - /// (for GHOST and SIM files and procedures)

The key drivers are:

- /// Support for international roamers
- /// GSM and/or ANSI-136 coverage exists in every developed city in the world
- /// 290 million GSM and ANSI-136 subscribers worldwide
- /// Support for GSM subscribers in regions that are otherwise predominately ANSI-136
- /// Support for ANSI-136 subscribers in regions that are otherwise predominately GSM
- /// Seamless Service (features and user interface)

The presentation was noted and Penny Bright was thanked by the chairman and delegates.

### 8.3 3GPP Vocabulary TR 21.905

The draft version of the 3GPP Vocabulary TR 21.905 was provided from One2one in document 966/99. Contributions will be welcome from delegates and the other technical committees.

It will be submitted for information to SA.

Document 1059/99 contained a liaison statement on additional Terminal Baseline Implementation Capabilities for secure interoperation with GSM. In it, amongst other information is a definition of "mandatory". It was decided that this should go in to our vocabulary document. This was agreed and the rapporteur was asked action this.

In addition 1060/99 contained a liaison statement from T2 regarding terminology in T2 SWG6 (TR21.904). It was decided to pass it to the rapporteur.

## 9 Administration

Document 885/99 contained a list of specifications which are missing Rapporteurs. This was revised on line and the result was provided in document 1078/99. It was decided to provide this document to the MCC for updating. There are still a few gaps which will need to be filled.

## 10 Approval of UMTS Outputs and Liaisons

CRs

Doc No	Title	To
863	Proposed CR to 22.086 on Multicall	SA
868	CR to 22.129 on Performance requirements for real time services and requirements for handover between UMTS and GPRS (rev 843)	SA #6
908	Editorial CR to 22.081(Line Identification SS)	SA #6
954	CR to 02.71 on U.S. specific Emergency Services requirements included as an informative annex.	SA#6
955	CR to 22.071 on U.S. specific Emergency Services requirements included as an informative annex.	SA#6
999	Editorial CRs to 22.085 (CUG)	SA #6
1008	Addition of new general bearer service user data characteristics for 33.6kbit/s modem, FTM and multimedia calls	SA#6
1010	CR to 22.060 on Mobile IP support in Release 99	SA#6
1015	CR to 02.94 on Introduction of the rôle of a " Follow Me service supervisor."	SA #6
1019	CR to 22.129 on handover with multiple PDP contexts	SA #6

1020	CR to 22.135 on handover with multiple calls	SA #6
1021	Ambiguity in the NITZ feature	SA #6
1025	CR to 02.03 on Editorial update for GSM/3GPP use (rev of 926)	SA #6
1026	CR to 22.101 Mainly editorial update for GSM/3GPP use	SA #6
1027	CR to 22.105 Mainly editorial update for GSM/3GPP use	SA #6
1029	CR to 22.030 Mainly editorial update for GSM/3GPP use	SA #6
1031	Revision of 952 CR to 22.101 on COMPACT Cell Selection part 1	SA#6
1032	Revision of 953 CR to 22.101 on COMPACT Cell Selection part 2	SA#6
1035	CR to 22.078 on Enhancement of the capabilities of dialled services	SA#6
1036	Version 2.2.0 of 22.094	SA #6
1038	CR on Fixed Number Dialling to either 02.07 or 22.101	SA#6
1040	CR to 02.68 on Interaction with CCBS service	SA #6
1041	CR to 02.69 on Clarification of interaction with CCBS service	SA #6
1042	CR to 22.004 on Applicability of CCBS to TS91/TS92	SA #6
1044	CR to 22.060 on anonymous access for release 99	SA #6
1047	CR to 22.100 on Mobile IP support in Release 99	SA #6
1048	CR to 22.078 on CSE ability to change CLI PI for an MO call	SA #6
1049	CR to 22.060 on GPRS & SMS-CB Interworking	SA #6
1056	Update of 1002 from PLMN selection ad hoc (beer group)	SA #6
1065	CR to 22.135 based on 1017	SA #6
1066	CR to 22.129 based on 1017	SA #6
1074	Clarification of dealing with LCS	SA #6 Report
1075	CR to 22.002 made only applicable to CS Domain (rev of 1024)	SA #6
1076	CR to 02.01- Mainly an editorial update for GSM/3GPP use.	SA #6

**Specs**

Doc No	Title	To
951	Stage 1 of Multimedia Messaging Service (3G TS 22.140 version 1.2.0)	SA#6
966	3GPP Vocabulary TR 21.905	SA #6

**Email**

Doc No	Title	To
1072	Reply to LS on additional Terminal Baseline Implementation Capabilities for secure interoperation with GSM	Email
846	Bearer Modification without pre-notification and Requirement for R99	S1 Mail
964	The clarification of location services support in Release'99 for packet switched services. (LCS)	SA1 #7

**Ad Hocs**

Doc No	Title	To
873	CR on MExE SAT servers	SA1 VHE ad hoc
921	Proposed R'00 service requirements	ad hoc
903	Proposed LS to SMG on the requirement for ERAN to support the 3rd Generation evolved Circuit interface for Release 2000	ad hoc
965	Service concept for R2000	ad hop
969	Method for progressing work on R'00	ad hoc
976	R00 Work Plan	ad hoc
993	CR to 22.121 on MeXE SAT servers	SA1 VHE ad hoc
994	Model for Technical project co-ordination and management	ad hoc
1060	Terminology in T2 SWG6 (TR21.904)	One2one
1073	LS to N2, T3 and SMG9 on PLMN selection	N2, T3, SMG9

897	LS on the Functionality of MSP Phase 2 and CR to 22.097	Email
1033	Registration of Interworking profile and CR to 22.060	SA1 #7

## Liaison statements

Doc No	Title	To
865	LS on SAT/MexE <-> CAMEL Interworking / Traceability	Sent
869	LS to SA2 and RAN groups on CR at TDoc 843	SA2, RAN2, RAN3
928	Liaison statement on 02.06 specification transfer to 3GPP	SMG2
938	Proposed liaison statement to SA2 concerning HSCSD specifications	SA2, sent, CN1, CN3
937	CR to 22.034 Draft CR on HSCSD changes for 3GPP	SA2, sent
1001	LS to CN3 on Modem interworking and X.25 for GPRS	CN3, SA2, T2, CN1
1005	Liaison: Cell Broadcast Service (CBS) Reception in Connected Mode	RAN2, T2
1004	Proposed liaison statement to SA2 concerning message screening	SA2
1034	LS to on Bearer modification without prior notification (Revision of 998)	N1, N3, S2
1037	LS to S2 on SCFs to be supported for R'99 (revision of 997)	SENT SA2, CN2, T2
1039	LS to T3 on FDN	T3, SMG9
1043	LS to SA2 on anonymous access for release 99	SA2
1046	LS to CN3 and S2 on new general bearer service user data characteristics for 33.6kbit/s modem	CN3, S2, CN1
1050	LS to CN3 on PAD/Package (see also 1024/99) revised 1045	CN3 (Sent), SMG3
1057	LS to N2, T3 and SMG9 on PLMN selection	RAN2, SA2, SMG2 WPA, CN1, SMG9, T3
1061	Draft LS on push services for GPRS	SA2, CN3
1063	Response to LS on Connectionless services during the call	RAN, RAN2, SA2, T
1064	Proposed liaison statement to SA2 concerning multicall (revised 931)	SA2
1068	Liaison statement for clarification of necessity of registration Interworking profile for activation on PS domain	3GPP S2, CN3
1070	LS to SMG7 on Applicability of GPRS and EDGE requirements and tests	SMG7, SMG2, SMG3, SMG4
1071	LS to CN1 and RAN2 on use of IMSI for Common Identification for Relocation Co-ordination	CN1, RAN3
1073	LS to N2, T3 and SMG9 on PLMN selection	T2, T3, SMG9
1077	LS on Support of SoLSA with UTRAN	RAN2, RAN3, SA2
1016	LS to CN SS ad hoc on Follow Me	SMG/3GPP SA
1018	LS to SA2 and CN2 on handover with multiple PDP contexts	N2, S2
864	LS to EP UMTS on Request for information on Virtual Home Environment (VHE) work on fixed network access	Sent
1078	Revision of document 885/99 on missing rapporteurs	MCC
967	SAT Handover notification and termination of call	SA3, CN1, T3, SMG9 SMG1/9 SAT ad hoc

## 11 Future meetings

The meeting schedule was reviewed in the meeting. It was decided to change the dates of meeting #8 to 10-14<sup>th</sup> April 2000. Proposals for hosts would be gratefully received.

S1#7            8 – 11 February 2000  
~~S1#8~~         ~~3 – 7 April 2000~~  
 S1#8            10 – 14 April 2000

Sophia Antipolis, hosted by ETSI (ad hoc on 7/2/00)

S1#9            17-21 July 2000  
S1#10          13-17 November 2000

It is planned to send out a list of proposed ad-hoc meetings, with dates, scopes and agendas by 7 January 2000.

## **12    Closure of Meeting**

The chairman thanked the delegates for their contributions to the meeting and for their hard work. He thanked the host, Pacific Bell for all the facilities at the meeting and such an impressive environment, the first time for S1 in the US. The chairman also thanked Mark Younge from Omnipoint for supplying a LAN that worked so well – very valuable for a totally electronic meeting. He also thanked the secretary for his hard work and dedication.

The chairman closed the meeting and left hastily to pack his suitcase!

**ANNEX A – Table of documents**

Doc. No.	Title	Source	Doc Pack
846	Bearer Modification without pre-notification and Requirement for R99	DoCoMo	DP11
858	Draft Report of TSG S1		
859	CR for 22.105 Multimedia – option for quality	BT	
860	Multimedia – option for quality	BT	DP11
861	Draft agenda for SA1 meeting #6	MCC	DP11
862	Report of SA and SMG	Chairman	DP6
864	LS to EP UMTS on Request for information on Virtual Home Environment (VHE) work on fixed network access	VHE adhoc group	DP11
865	LS on SAT/MexE <-> CAMEL Interworking / Traceability	S1	
866	CR to 02.07 on GSM 400 (rev of 647)	Ericsson/Nokia	
867	CR to 02.40 on GSM 400 (rev of 648)	Ericsson/Nokia	
868	CR to 22.129 on Performance requirements for real time services and requirements for handover between UMTS and GPRS (rev 843)	S1	
869	LS to SA2 and RAN groups on CR at TDoc 843	TS 22.129 Rapporteur (3GPP SA WG2)	DP11
870	Liaison Statement on Multimedia Messaging (MMS)	MMS ad hoc	DP11
871	Liaison Statement on Multimedia Messaging (MMS) and stage 1	MMS ad hoc	DP11
872	Draft VHE agenda	Motorola	DP11
873	CR on MExE SAT servers	Motorola	DP11
874	LS on MExE SAT servers	Motorola	DP11
875	LS (to TSG-SA WG1, copy TSG-SA WG2) on Capability of UE to receive CBS messages in connected mode	RAN 2	DP11
876	Response (to TSG-CN WG1, copy TSG-SA WG1, TSG-SA WG2, SMG2 WPA) to LS on Information about current status on UE idle mode operation	RAN 2	DP11
877	Editorial CR to 22.129	NEC	DP11
878	RAB pre-emption	RAN WG3	DP11
879	Response to Liaison statement on PLMN selection for GPRS MS	SMG2	DP11
880	LS concerning the GSM/EDGE RAN	SMG2	DP1
881	Draft of GSM/EDGE RAN Radio Requirements	SMG2	DP1
882	Draft report of meeting SA1 #5	MCC	DP1
883	“User Control” requirements for SIM toolkit stage 1	France Telecom	DP1
884	Emergency Call Handling	EPT	DP1
885	Missing Rapporteurs	MCC	DP1
886	Accuracy Classes for LCS	Nortel	DP7
887	DEG/HF- 00003: Issues concerning user identification in future telecommunications systems	HF	DP1
888	LS on Dialled Services in CAMEL Phase 3	TSG CN WG2	DP1
889	CAMEL Control of VoIP Services FTR	TSG CN	DP1
890	Liaison Statement Collaboration for open interfaces	TSG SA WG2	DP1
891	Response to Liaison “Interaction between MMS, SAT, MExE, non MExE terminals and Camel Open Service Architecture”	TSG CN WG2	DP1
892	Security issues in VHE/OSA	TSG SA WG3	DP1
893	All-IP architecture for release 2000	Orange	DP1
894	Handover scenarios for “all-IP” network in release 2000	Orange	DP1
895	Naming of CAMEL in R99 and R2000	TSG CN WG2	DP1
896	Advanced Multimedia Messaging Service	MMS subgroup	DP1
897	LS on the Functionality of MSP Phase 2 and CR to 22.097	TSG CN SS ad hoc	DP1
898	LS on Service/Baseline Implementation Capabilities	TSG CN SS ad hoc	DP1

Doc. No.	Title	Source	Doc Pack
899	LS on Service code for Follow Me	TSG CN SS ad hoc	DP1
900	LS on: Handover issues for CS Data from 2G to 3G PLMNs	TSG N3	DP1
901	Liaison statement on Release'99 clean-up	TSG N3	DP1
902	Outline of IMode Presentation	NTT DoCoMo	DP1
903	Proposed LS to SMG on the requirement for ERAN to support the 3rd Generation evolved Circuit interface for Release 2000	TSG SA WG2	DP1
904	Response to LS on Connectionless services during the call	TSG RAN	DP1
905	GPRS-136HS EDGE – Motivation Presentation	Northstream	DP3
906	Concept Proposal for EGPRS-136	Northstream	DP3
907	Editorial CRs to 22.085 (CUG)	Telia	
908	Editorial CR to 22.081(Line Identification SS)	Telia	DP6
909	Transfer of Location Services to 3GPP	T1P1	DP2
910	Requirements for Telephony Support for the Hearing Impaired	T1P1	DP2
911	Industry TTY Forum Liaison Report	T1P1	DP2
912	User Identification Solutions in Converging Networks	Castle Consulting	DP3
913	Email on IP over Cellular	RHC WG	DP2
914	Voice service requirements for R 2000	Nortel	DP2
915	Minimum feature set for R2000	Motorola	DP2
916	R200 IP report	Motorola	DP2
917	New services and IPv6	Nokia	DP2
918	PS Domain feature list evaluation for release 2000	Nokia	DP2
919	Feature list for R2000	AWS	DP2
920	"Wish List" for S1_IP Features	Samsung	DP2
921	Proposed R'00 service requirements	Ericsson	DP2
922	Rationalisation of Documents for GSM Release 99 and UMTS Release 99	BT, Lucent, Nokia, Vodafone	DP2
923	CR to 02.01- Mainly an editorial update for GSM/3GPP use.	Nokia	DP2
924	CR to 22.002 made only applicable to CS Domain	Nokia	DP2
925	CR to 02.03 on Editorial update for GSM/3GPP use	Nokia	DP2
926	CR to 22.101 Mainly editorial update for GSM/3GPP use	Nokia	DP2
927	CR to 22.105 Mainly editorial update for GSM/3GPP use	Nokia	DP2
928	Liaison statement on 02.06 specification transfer to 3GPP	Nokia	DP2
929	Summary for S1 EMAIL AGREEMENT BEFORE S1#6	Nokia	DP2
930	Proposed liaison statement to SA2 concerning message screening	Nokia	DP2
931	Proposed liaison statement to SA2 concerning multical	Nokia	DP2
932	CR to 22.135 Clarification of PS domain requirements	Nokia	DP2
933	CR to 02.34 on SoLSA correction	Nokia	DP2
934	CR to 22.034 on SoLSA correction	Nokia	DP2
935	CR to 22.043 Mainly editorial update for GSM/3GPP use	Nokia	DP2
936	Liaison statement on BEARER MODIFICATION WITHOUT PRE-NOTIFICATION	Nokia	DP2
937	CR to 22.034 Draft CR on HSCSD changes for 3GPP	Nokia	DP2
938	Proposed liaison statement to SA2 concerning HSCSD specifications	Nokia	DP2
939	CR to 22.030 Mainly editorial update for GSM/3GPP use	Nokia	DP2
940	Liaison Statement CLIR provisioning per profile for an MSP Subscriber	TSG CN WG2	DP3
941	CR to 22.078 on CSE ability to change CLI PI for an MO call	TSG CN WG2	DP3
942	CR to 02.07 on Fixed Number Dialling	France Telecom	DP3
943	CR to 22.101 on Support of FDN service in UMTS	France Telecom	DP3
944	FDN service	France Telecom	DP3

Doc. No.	Title	Source	Doc Pack
945	Should "Follow Me" remain in GSM or be transferred to 3GPP ?	Siemens	DP3
946	CR to 22.094 on Introduction of the rôle of a " Follow Me service supervisor:"	Siemens	DP3
947	CR to 02.68 on Interaction with CCBS service	Siemens	DP3
948	CR to 02.69 on Clarification of interaction with CCBS service	Siemens	DP3
949	CR to 22.004 on Applicability of CCBS to TS91/TS92	Siemens	DP3
950	Report on MMS ad hoc	MMS ad hoc	DP3
951	Stage 1 of Multimedia Messaging Service (3G TS 22.140 version 1.2.0)	MMS ad hoc	DP4
952	CR to 02.07 on COMPACT Cell Selection part 1	SMG2 EDGE WS	DP4
953	CR to 02.07 on COMPACT Cell Selection part 2	SMG2 EDGE WS	DP4
954	CR to 02.71 on U.S. specific Emergency Services requirements included as an informative annex.	T1P1	DP4
955	CR to 22.071 on U.S. specific Emergency Services requirements included as an informative annex.	T1P1	DP4
956	Presentation on GAIT	Lucent	DP4
957	LS on Open Issues on 3G to 2G Handover (packet Switched domain)	TSG CN WG2	DP4
958	Liaison Statement to S2 on Combined Mobility Management	TSG CN WG2	DP4
959	Liaison statement to SA1 concerning message screening	3GPP SA WG2	DP4
960	Draft LS on anonymous access for release 99	3GPP SA WG2	DP4
961	LS on: Handover issues for CS Data from 2G to 3G PLMNs	3GPP SA WG2	DP4
962	Proposed LS to TSG-N3, N1, and S4 on Bearer Modification Without pre-notification and Requirement for R00	NTT DoCoMo	DP4
963	Registration, Interrogation and Restriction of Packet Domain	NTT DoCoMo	DP4
964	The clarification of location services support in Release'99 for packet switched services. (LCS)	NTT DoCoMo	DP4
965	Service concept for R2000	BT, AT&T, NORTEL	DP4
966	3GPP Vocabulary TR 21.905	One2one	DP4
967	SAT Handover notification and termination of call	MMO	DP4
968	Email on all IP ad hoc planning	Nokia	DP4
969	Method for progressing work on R'00	Nortel	DP4
970	SAT Incoming Communication Event	MMO	DP4
971	Cell Broadcast Service (CBS) & GPRS	MMO	DP4
972	CR to 22.060 on GPRS & SMS-CB Interworking	MMO	DP4
973	LS on Service requirements of CBS reception when UE is in CONNECTED mode	RAN WG 2	DP4
974	Liaison: Cell Broadcast Service (CBS) Reception in Connected Mode	MMO	DP4
975	Comments on the Multicall stage1 (22.135)	TSG S2	DP4
976	R00 Work Plan	Telia	DP4
977	Liaison Statement on 'Comments on T2-99785'	TSG SA WG2	DP4
978	LS on Service/Baseline Implementation Capabilities	TSG CN WG1	DP4
979	LS on Information about current status on UE idle mode operation	TSG CN WG1	DP4
980	Response on LS on Information about current status on UE idle mode operation	TSG CN WG1	DP4
981	Reply to LS on Common Identification for Relocation Co-ordination	TSG CN WG1	DP4
982	Response to LS on Service/Baseline Implementation Capabilities	TSG CN WG3	DP4
983	LS ON BEARER MODIFICATION WITHOUT PRE-NOTIFICATION	TSG CN WG3	DP4
984	Liaison statement on Release'99 clean-up	TSG CN WG3	DP4
985	LS to S1 on 3G Services	TSG CN WG3	DP4
986	User service requirements for Global Virtual Home Environment (VHE)	SPAN2	DP4
987	Applicability of GPRS and EDGE requirements and tests	SMG7	DP4
988	Liaison statement on Multicall	TSG CN WG2	DP4
989	Liaison statement on 3G-H.324M	TSG CN WG2	DP4
990	Liaison Statement on support of White Book SCCP (07/96)	TSG CN WG2	DP4
991	22.121 of VHE V3.1.0	Rapporteur	DP4

Doc. No.	Title	Source	Doc Pack
992	Are Terminal Capabilities / terminal User Profile available for VHE ?	Siemens	DP4
993	CR to 22.121 on MeXE SAT servers	Ericsson	
994	Model for Technical project co-ordination and management	TSG Chairmen	DP4
995	Overview of TSG#5 results	MCC	DP4
996	I-Mode presentation	NTT DoCoMo	DP5
997	LS to S2 on SCFs to be supported for R'99	SA1	DP7
998	LS to Liaison statement on BEARER MODIFICATION WITHOUT PRE - NOTIFICATION	NTT DoCoMo/Nokia	DP6
999	Editorial CRs to 22.085 (CUG)	Telia	DP6
1000	Proposed PIAFS service requirement	Ericsson	DP6
1001	LS to CN3 on Modem interworking and X.25 for GPRS	Nokia	DP7
1002	PLMN selection ad hoc output	P.Dwyer	DP6
1003	LS to CN1 and RAN2 on use of IMSI for Common Identification for Relocation Co-ordination	Josep	DP7
1004	Proposed liaison statement to SA2 concerning message screening	Nokia	DP6
1005	Liaison: Cell Broadcast Service (CBS) Reception in Connected Mode	MMO	DP6
1006	Registration of Interworking profile and CR to 22.060	NTT DoCoMo	DP6
1007	CAMEL ad hoc Report	Mannesmann Mobilfunk	DP6
1008	Addition of new general bearer service user data characteristics for 33.6kbit/s modem, FTM and multimedia calls	Ericsson/DoCoMo	DP6
1009	Mobile IP support in Release 99	Telia	DP6
1010	CR to 22.060 on Mobile IP support in Release 99	Telia	DP6
1011	CR to 22.100 on Mobile IP support in Release 99	Telia	DP6
1012	VHE/OSA Service Capabilities Features and MMS	TSG T WG2	DP6
1013	Liaison Statement on Multimedia Messaging Service (MMS) requirements	GSM Association SERG	DP6
1014	Draft VHE report	VHE Chairman	DP7
1015	CR to 02.94 on Introduction of the rôle of a " Follow Me service supervisor:"	SA1	DP6
1016	LS to CN SS ad hoc on Follow Me	Siemens/Nokia	DP11
1017	Comments on Multicall Stage 1 (3GPP 22.135)	Lucent	DP6
1018	LS to SA2 and CN2 on handover with multiple PDP contexts	Paul/Tommi	DP7
1019	CR to 22.129 on handover with multiple PDP contexts	Paul/Tommi	DP11
1020	CR to 22.135 on handover with multiple calls	Paul/Tommi	DP11
1021	Ambiguity in the NITZ feature	Ericsson	DP6
1022	Emergency Call Clarifications	Ericsson	DP7
1023	CR to 02.01- Mainly an editorial update for GSM/3GPP use.	ad hoc	DP10
1024	CR to 22.002 made only applicable to CS Domain (rev of 925)	ad hoc	DP10
1025	CR to 02.03 on Editorial update for GSM/3GPP use (rev of 926)	ad hoc	DP10
1026	CR to 22.101 Mainly editorial update for GSM/3GPP use	ad hoc	DP10
1027	CR to 22.105 Mainly editorial update for GSM/3GPP use	ad hoc	DP10
1028	CR to 22.043 Mainly editorial update for GSM/3GPP use	Nokia	DP11
1029	CR to 22.030 Mainly editorial update for GSM/3GPP use	Nokia	DP10
1030	Update of 1002 from PLMN selection ad hoc (beer group)	ad hoc	DP8
1031	Revision of 952 CR to 22.101 on COMPACT Cell Selection part 1	SMG2 EDGE WS	DP8
1032	Revision of 953 CR to 22.101 on COMPACT Cell Selection part 2	SMG2 EDGE WS	DP11
1033	Registration of Interworking profile and CR to 22.060	NTT DoCoMo	DP7
1034	LS to on Bearer modification without prior notification (Revision of 998)	NTT DoCoMo	DP10
1035	CR to 22.078 on Enhancement of the capabilities of dialled services	Siemens	DP7
1036	Version 2.2.0 of 22.094	Siemens	DP7
1037	LS to S2 on SCFs to be supported for R'99 (revision of 997)	SA1	DP8



Doc. No.	Title	Source	Doc Pack
1038	CR on Fixed Number Dialling to either 02.07 or 22.101	ad hoc	DP8
1039	LS to T3 on FDN	France Telecom	DP8
1040	CR to 02.68 on Interaction with CCBS service	Siemens	DP7
1041	CR to 02.69 on Clarification of interaction with CCBS service	Siemens	DP7
1042	CR to 22.004 on Applicability of CCBS to TS91/TS92	Siemens	DP7
1043	LS to SA2 on anonymous access for release 99	Rapporteur	DP9
1044	CR to 22.060 on anonymous access for release 99	Rapporteur	DP9
1045	LS to CN3 on PAD/Packet (see also 1024/99)	Vice chairman	DP8
1046	LS to CN3 and S2 on new general bearer service user data characteristics for 33.6kbit/s modem	NTT DoCoMo	DP8
1047	CR to 22.100 on Mobile IP support in Release 99	Ericsson/Vchairman	DP9
1048	CR to 22.078 on CSE ability to change CLI PI for an MO call	SA1	
1049	CR to 22.060 on GPRS & SMS-CB Interworking	SA1	DP8
1050	LS to CN3 on PAD/Packet (see also 1024/99) revised 1045	SA1	DP8
1051	CR to 02.34 on SoLSA correction	Nokia	DP8
1052	CR to 22.034 on SoLSA correction	Nokia	DP8
1053	Alternative quality of LCS classes	Nokia	DP8
1054	Report of R'2000 ad hoc	Vice chairman	DP8
1055	PS domain feature list evaluation for R'2000	Vice chairman	DP8
1056	Update of 1002 from PLMN selection ad hoc (beer group)	ad hoc	DP9
1057	LS to N2, T3 and SMG9 on PLMN selection	ad hoc	DP9
1058	LS on Mailbox indicator presence on the SIM	SMG9	DP9
1059	Reply to LS on additional Terminal Baseline Implementation Capabilities for secure interoperation with GSM	TSG T2	DP9
1060	Terminology in T2 SWG6 (TR21.904)	TSG T2	DP9
1061	Draft LS on push services for GPRS	Notel, DoCoMo	DP9
1062	LS on RAB linking	Nortel Networks	DP9
1063	Response to LS on Connectionless services during the call	MMO MMO	DP9
1064	Proposed liaison statement to SA2 concerning multical (revised 931)	Nokia	DP11
1065	CR to 22.135 based on 1017	SA1	DP11
1066	CR to 22.129 based on 1017	SA1	DP11
1067	LS on Mailbox indicator presence on the SIM	Ericsson	DP9
1068	Liaison statement for clarification of necessity of registration Interworking profile for activation on PS domain	NTT DoCoMo/Nortel	DP9
1069	Reply to LS to S1 on 3G Services	CN3	DP10
1070	LS to SMG7 on Applicability of GPRS and EDGE requirements and tests	Lucent	DP11
1071	LS to CN1 and RAN2 on use of IMSI for Common Identification for Relocation Co-ordination	Josep	DP11
1072	Reply to LS on additional Terminal Baseline Implementation Capabilities for secure interoperation with GSM	NTT DoCoMo	DP11
1073	LS to N2, T3 and SMG9 on PLMN selection	Ericsson	DP11
1074	Clarification of dealing with LCS	NTT DoCoMo	DP11
1075	CR to 22.002 made only applicable to CS Domain (rev of 1024)	ad hoc	DP11
1076	CR to 02.01- Mainly an editorial update for GSM/3GPP use.	ad hoc	DP11
1077	LS on Support of SoLSA with UTRAN	Beer meeting	DP11
1078	Revision of document 885/99 on missing rapporteurs	SA1	DP11
1079	Reserved to allow the secretary to use 1080 for the meeting report	MCC	
1080	Draft report of meeting #6	MCC	

**ANNEX B – Participants list**

Surname	FirstName	Company	Telephone	email
ABARCA	Chelo	Alcatel France	+33 1 6963 1411	
ADEL	Rouz	General Services		
AHNBERG	Thomas	Telia	+46 40 105 169	
AKKE	Magdalena	Motorola		
ALLEN	Nicholas	Nortel Networks	+44 1628 434493	
ARNOLD	Bernhard	Lucent Technologies	+49 911 526 6313	
ASHWELL	Wayne	BT	+44 1473 227171	
ASLAKSEN	Erik	Telenor	+47 9067 2136	
BARNES	David	Communication &		
BELLORDRE	Philippe	France Telecom	+33 1 452 95795	
BERGERON	Eric	TIW	+1 514 673 8495	
BISHOP	Craig	Samsung Electronics	+44 1784 428600	
BOS	Lieve	Alcatel Bell		
BRADEN	Christian	T-Mobil	+49 228 936 3365	
CASALS	Josep	Telecom Modus	+44 1372 804827	
CATALDO	Mark	Motorola	+44 1793 566297	mcatald1@email
CHAMBERS	David	Motorola	+44 1793 566244	chamberd@ecid.
CHAN	Alan	Nokia	+44 1252 865232	
CHEESEMAN	David	InterDigital	+44 1473 742131	
CHUMMUN	Ferial	Sony	+31 653 102519	
CLAYTON	Michael	ETSI	+33 492 944266	
COLES	Adrian	BT Cellnet	+44 7711 350011	
COX	Alan	Vodafone AirTouch	+44 1635 673332	
DAHLKVIST	Mikael	Ericsson	+46 46 193142	
DAVIDIAN	Jean-Jacques	NTT DoCoMo	+33 1 5688 3030	
DWYER	Paul	Vodafone AirTouch	+44 1635 673194	
ERIKSSON	Olle	Ericsson	+46 8 757 0088	
EVEN	Anne	France Telecom	+33 1 4529 6320	
FISCHER	Ralf	Bosch	+44 5341 285852	
FYRO	Magnus	Ericsson	+46 8 404 4245	
GALLAIRE	Jean-Paul	France Telecom	+33 1 4529 4732	
GRUBER	Roland	Siemens AG	+49 89 722 46292	roland.gruber@m
GUTIERREZ	Conchi	Telefonica Mobiles	+346 3000 2226	
HARMER	Julie	BT Mobility Services	+44 1473 647169	julie.harmer@bt.
ISHIKAWA	Norihiro	NTT DoCoMo	+81 468 403819	
KITSUI	Takashi	NTT DoCoMo	+81 355 639886	kitsui@serdev.nt
KLEIER	Stephan	Mannesmann	+49 211 533 3807	
KOKKOLA	Tommi	Nokia	+358 9511 68078	
KONDO	Megumi	NTT Mobile	+81 3 5563 7204	
KWANGCHUN	Lee	ETSI		
LEE	Kwangchun	ETRI (Korea)	+82 42 860 6843	
LEITGEB	Manfred	Siemens AG	+43 1 1707 21355	
LELONG-GILBERT	Anne-Gaelle	Alcatel	+33 1 5566 6556	
LUCAS	Philippe	Dolphin	+44 1256 367223	
MAWAMURA	Katsuya	NTT DoCoMo	+81 355 639886	
MEISZNER	Eckhard	Siemens AG	+49 89 7224 4858	
MOILANEN	Iris	Sonera Ltd.	+358 2040 71250	
MONTEGROSSO	Emanuele	TIM	+39 06 3900 4671	
NOLDUS	Rogier	Ericsson	+31 161 249400	
NOUSIAINEN	Reijo	Viag Interkom	+49 89 1480 3177	reijo.nousiainen

OGUNBEKUN	Jumoke	Fujitsu	+44 181 606 4671	
OLSSON	Anita	Telia Mobile AB	+46 70 639 8591	
OMTVEIT	Olav	Telenor Mobil	+47 22 784781	
PALVIAINEN	Keijo	Nokia	+358 9 5116 9669	
PETERS	Marco	Alcatel Bell	+32 3 240 8576	
PETRONE	Valentina	TIM	+39 06 3900 9017	
POSTMANN	Erwin	Siemens AG	+43 1 1707 21398	
PROVENDIER	Berni	Alcatel	+33 1 5566 7232	
RAUCH	Horst	T-Mobil	+49 228 936 2730	
REED	Barbara	BT	+44 1473 227869	
ROBINSON	Bill	Motorola	+44 1256 790548	
RUANT	Dorine	Mitsubishi CMT	+33 1 5568 5658	
SCHMIDT	Gunnar	Bosch	+44 5341 285853	
SHIMIZU	Toshihiro	MCI	+44 1635 876059	
SMITH	David G.	BT Cellnet	+44 1473 605441	
STAACK	Jens	Nokia	+358 9 511 0	
SUGIYAMA	Takeshi	NTT Mobile	+81 468 403332	
SWETINA	Jorg	Siemens AG	+43 1 1707 21422	
TARAZI	Roger	Tellabs	+961 3 307437	
TAINEN	Seppo	Sonera Ltd.	+358 2040 9673	
TIMONEN	Petri	Sonera Ltd.	+358 2040 65341	
TOIVANEN	Annukka	Nokia	+358 5055 02110	
TOLVANEN	Mika	Nokia	+358 5055 68310	
TSAMPALIS	Yannis	Motorola	+1 815 885 0062	
VAN RIJSSEN	Erwin	Ericsson	+31 161 242602	
VELDKAMP	Eric	KPN Research	+31 70 332 5048	
WIMMER	Bernhard G.	Siemens AG	+49 89 722 23247	bernhard.wimmer
WOHLERT	Randolph	SBC Technology	+1 512 372 5838	rwohlert@tri.sbc.
YAHAGI	Masahiko	NTT	+81 471 857161	
YOSHIDA	Naomasa	NTT DoCoMo	+81 355 639886	
YUHN	Melody	Samsung	+972 761 7731	
YUKIC		Ericsson		
ZARRI	Michele	Mercury Personal	+44 208 214 4169	

**ANNEX C – Document Index**

<b>800</b>		918/99	23
846/99	4	919/99	23
858/99	4	920/99	23
859/99	13	921/99	23
861/99	4	922/99	9, 10
862/99	5	923/99	10
864/99	18	924/99	10
865/99	16	925/99	10
866/99	9	926/99	10
867/99	9	927/99	10
868/99	4, 19	928/99	11
869/99	19	929/99	4, 19
870/99	13	930/99	14
871/99	14	931/99	19
872/99	16	932/99	19
873/99	16, 20	933/99	20
874/99	20	934/99	20
875/99	12	935/99	10, 11
876/99	7	936/99	4
877/99	19	937/99	20
878/99	18	938/99	20
879/99	12	939/99	10, 11
882/99	4	940/99	11
883/99	13	941/99	11
884/99	4	942/99	9, 11
885/99	26, 28, 34	943/99	9
886/99	14	944/99	9
887/99	6	945/99	9
890/99	18	946/99	9
892/99	18	947/99	10
893/99	23	948/99	10
894/99	23	949/99	10
896/99	14	950/99	13
897/99	12	951/99	14, 22
898/99	7	952/99	7, 10, 21, 22
899/99	8	953/99	7, 10, 21, 22
		954/99	14
		955/99	14
<b>900</b>		956/99	25
900/99	19	957/99	19
901/99	11	958/99	19
902/99	24	959/99	14
903/99	24	960/99	12
904/99	13	961/99	19
905/99	21	962/99	4
906/99	21	963/99	19
907/99	20	964/99	14
908/99	20	965/99	24
909/99	14	966/99	25
910/99	8	967/99	20
911/99	8	968/99	22, 23
912/99	6	969/99	24
913/99	23	970/99	21
914/99	23	971/99	12
915/99	23	972/99	12
916/99	23	973/99	12
917/99	23	974/99	13

975/99.....	19	1036/99.....	9
976/99.....	24	1037/99.....	17, 18
978/99.....	7	1038/99.....	9
979/99.....	7	1039/99.....	9
980/99.....	7	1040/99.....	10
981/99.....	7	1041/99.....	10
982/99.....	7	1042/99.....	10
983/99.....	4	1043/99.....	12
984/99.....	11	1044/99.....	12
985/99.....	6	1045/99.....	11
986/99.....	18	1046/99.....	8, 11
987/99.....	5	1047/99.....	11
988/99.....	18	1048/99.....	11, 16
989/99.....	8	1049/99.....	12
991/99.....	16, 18	1050/99.....	11
993/99.....	16, 18	1051/99.....	20
994/99.....	24	1052/99.....	20
995/99.....	5	1053/99.....	14
996/99.....	24	1054/99.....	22
997/99.....	13, 18	1055/99.....	23
998/99.....	4	1056/99.....	22
999/99.....	20	1057/99.....	22
<b>1000</b>		1058/99.....	5, 6
1000/99.....	21	1059/99.....	8, 25
1001/99.....	7	1060/99.....	25
1002/99.....	7, 21, 22	1061/99.....	13
1003/99.....	7	1062/99.....	18
1004/99.....	14	1063/99.....	13
1005/99.....	13	1064/99.....	19
1006/99.....	13	1065/99.....	19
1007/99.....	15	1066/99.....	19
1008/99.....	8, 11	1067/99.....	6
1010/99.....	11	1068/99.....	13
1011/99.....	11	1069/99.....	7
1012/99.....	18	1070/99.....	5
1013/99.....	14	1071/99.....	7
1014/99.....	16	1072/99.....	8
1015/99.....	9	1073/99.....	6
1016/99.....	9	1074/99.....	15
1017/99.....	19	1075/99.....	10
1018/99.....	20	1076/99.....	10
1019/99.....	20	1077/99.....	11
1020/99.....	19, 20	1078/99.....	26
1021/99.....	21		
1022/99.....	11	<b>C</b>	
1023/99.....	10	CN1.....	7, 15, 20, 21, 27, 28, 33, 34
1024/99.....	10, 11, 28, 34	CN2.....	15, 16, 20, 27, 28, 33
1025/99.....	10	CN3.....	4, 6, 7, 8, 11, 15, 19, 27, 28, 33, 34
1026/99.....	10		
1027/99.....	10	<b>R</b>	
1028/99.....	10, 11	RAN2.....	7, 11, 13, 27, 28, 33, 34
1029/99.....	10, 11	RAN3.....	11, 27, 28
1030/99.....	7, 10, 21, 22		
1031/99.....	22	<b>S</b>	
1032/99.....	10, 22	SA.....	4, 5, 7, 8, 9, 10, 11, 12, 14, 15, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 30, 31, 32
1033/99.....	13		
1034/99.....	4		
1035/99.....	15, 16		

SA2 .....7, 8, 11, 12, 13, 14, 18, 19, 20,  
27, 28, 30, 31, 33, 34  
SA3 .....10, 21, 28

***T***  
T2 .....6, 7, 8, 13, 17, 25, 27, 28, 34  
T3 .....9, 21, 27, 28, 34