

3GPP
Technical Specification Group Core Networks
Meeting #3, Yokohama, 21-23 April 1999

Document **NP-99109**

Source: **N3 Chairman**
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Title: **Liaison Statements sent by TSG-N3 / SMG3
WPD (from N3 #2 and N3 #3)**

Document for: **Information and Approval**

Attention: **Agenda item 5**

TSG-N3 #2 has sent the following Liaison Statements:

DOC	Subject	Source
T2-99186	LS to SA1 and T2 on real time fax	TSG-CN3
T2-99187	LS to SMG12 with copy to SMG3 WPD on Interworking issues for GPRS phase 2	SMG4 GPRS / TSG-CN3
T2-99191	Prop. WI for Service control (Camel) support for GPRS ISDN/PSTN IW (attachment to T2-99193)	SMG4 GPRS / TSG-CN3
T2-99192	LS: Reply to LS from SMG AAE (with T2-99198 attached)	TSG-CN3
T2-99193	LS on WI for Service control (CAMEL) support for GPRS PSTN / ISDN interconnect services (with doc. T2-99191 attached)	TSG-CN3

TSG-N3 #3 has sent the following Liaison Statements:

DOC	Subject	Source
N3-99063	CR to 07.03 on EDGE (attached to doc. N3-99068)	SMG3 WPD
N3-99066	LS to SMG1 on streamlining of data services for GSM R'99	SMG3 WPD
N3-99068	LS to SMG4 on introduction of EDGE (with doc. N3-99063 attached)	SMG3 WPD
N3-99070	LS to SMG7 on clarification on GSM 04.22	SMG3 WPD
N3-99071	WI description sheet for ASHDLC	SMG3 WPD
N3-99072	LS to CN1 on CC/SM	CN3
N3-99073	LS to T2, S2 on Terminal Capabilities	CN3
N3-99074	WI on real-time NT Fax	CN3

London, 15-19 March 1999

From: TSG-CN3

To: **TSG-S1, TSG-T2**

Subject: Real time fax services

LS on Real Time fax service

TSG CN3 thanks TSG-S1 for the Liaison Statement.

CN3 understands that there is a market requirement for a real time facsimile service, but CN3 does not understand why the facsimile real time service has to be provided by a non-transparent quality of service. Here, service requirements are merged with technology requirements. A clarification would be helpful.

SMG4 recently provided a study (22.45) on the facsimile service in GSM/UMTS. This study provides a real time as well as a store-and-forward facsimile service based on IP technology.

The real time non-transparent service was up to now not in the scope of this study, this has to be added.

UMTS 22.45 is a report until now because the proposed solutions have no impact on the UMTS architecture. Adding the required real time non-transparent service this report has to become a technical specification because this service has impact on the architecture and has to be standardized.

As a result the following facsimile services will be provided by UMTS R99:

- real time non-transparent based on enhanced GSM specifications (i.e. 03.46)
- real time based on T.38 as described in 22.45
- store-and-forward based on T.37 as described in 22.45

CN3 will elaborate a work item description for real time non-transparent facsimile service. Nevertheless TSG CN3 would appreciate a stage 1 description from TSG-S1. Stage 2 and stage 3 descriptions will be elaborated in due course.

SMG4/TSG-CN3/TSG-2

Tdoc T2-99187

London, England

15 – 19 March 1999

Liaison Statement

To: SMG12

Copy: SMG3 WPD

Source: SMG4 GPRS / TSG-CN3

Title: LS on Interworking issues for GPRS phase 2

SMG4 GPRS thanks SMG12 for their answer to the LS on Interworking issues for GPRS phase 2.

SMG4 GPRS has now passed their interworking issues for GPRS phase 2 onto TSG-CN3.

The LS (SMG12 Tdoc C-99-279) was discussed in TSG-CN3 and they wish to inform SMG12 that they have adopted the SMG4 GPRS Work Item on Interworking Issues for GPRS phase 2.

As encouraged by SMG12, TSG-CN3 will continue with the study of the H.323 based approach for modem and ISDN interworking.

SMG4/TSG-CN3/TSG-T2
London, 15-19 March 1999

T2-99192

From: TSG-CN-WG3

To: SMG_EXEENVIRONMENT reflector, SMG1/SMG4/SMG6 Ad Hoc on itemised billing

Attached: TDoc T2-99198

Topic: Reply to LS from SMG AAE (Applications and Automatic Execution Workshop)

TSG-CN-WG3 thanks SMG AAE for its liaison, originally numbered PE99-010 which it received via SMG4 GPRS. SMG4 GPRS felt that it would be inappropriate to respond to the liaison due to the fact that it was in the final stages of handing off this part of its work to TSG-CN-WG3.

TSG-CN-WG3 noted with concern the comments in reference to section 2 (traceability) of the liaison statement in the SMG4 GPRS meeting report.

Concern was expressed that the request involved looking into layers above the GPRS system. There is no provision for application type tagging within the IETF domain. There is also no provision in the GPRS layers for carrying this tagging information. The comment was made that the request as it stands was at best impossible and at worst unlawful interception. It was however resolved that this TDoc was more relevant to the TSG-CN-WG3/SMG3-WPD group. It will be re-presented before that group with the suggestion that it be re-presented before the upcoming Itemised Billing Ad Hoc that will be dealing with the related subject of itemised billing in IP traffic.

Given the similarity between the issue of source application logging and itemised billing for IP traffic, CN3 concurred with SMG4 GPRS in that it would be appropriate to forward the issue to the upcoming itemised billing ad hoc (proposed by SMG1 as a result of an LS from SMG6 GPRS. Ad-hoc yet to be arranged)

In conclusion TSG-CN-WG3 commends the attached liaison to the itemised billing ad hoc in the expectation that the combination of expertise there present can provide an authoritative opinion on this matter.

SMG4/TSG-CN3/TSG-T2

TSGT2#2(99)198

London, UK, 15-19 March 1999

TSG-T WG2 meeting #1
Nice (France) 27-29 January 1999

TSGT2#1(99)032

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ETSI SMG AAE
Copenhagen,
19 January 1999

Tdoc PE99-010

LIAISON STATEMENT

From: SMG AAE (Applications and Automatic Execution Workshop)
To: SMG, SMG1, SMG2, SMG3, SMG4, SMG6, SMG7, SMG8, SMG9, SMG10, SMG11, SMG12

SMG#27 set up an ad-hoc working group to discuss the ability of various applications to set up and control calls and other events which could be subsequently billed to the mobile customer.

This group has met twice and has agreed some text in the attached document (PE99-009) which should be taken into account in future work in SMG, in particular (but not exclusively) MExE and SIM Toolkit.

The attached document provides a detailed analysis of the ME Execution Environment, including the following areas:

- Defining a model for the ME Execution Environment – all of the applications running in this environment require resources from the ME core functions and the ME core functions need to be developed in a harmonised way for all interfaces and applications.
- Ensuring that changes to basic data needed for the fundamental operation of the ME (e.g. IMSI) are not made without due consideration to procedures necessary to assure the continued correct operation of the ME.
- Giving a focus to the end user and recognising that the end user may have many different requirements (e.g. user control, security, traceability) which could conflict with applications which generate automatic calls.
- Identifying additional requirements for the development of application environments such as MExE and SIM Application Toolkit

This will impact on the work of several STCs. Amendments to existing specifications may be required.

This liaison statement sets out some of the general principles and specific actions which the STCs need to take.

1. Service Requirements

A generic set of requirements needs to be established in the *SMG1* domain in order that the implementations of MExE, SIM applications etc. can be made in harmonised way. Therefore *SMG1* is asked to develop general service requirement for the applications where automatic execution is used. *SMG1* is asked to include the text from the attached document in these service requirements.

2. Traceability

SMG3 is asked to include additional signalling in Release 99 to allow the network to record the source application of an automatic call to permit better traceability. It may be desirable to make changes to earlier releases of GSM specifications in order to assure the recording of "source" information when roaming on earlier phase networks. *SMG3* is invited to comment on this.

SMG3 should ensure that this can work in conjunction with MSP and CCBS and check error handling situations. The source of call is divided into 7 categories:

1. MMI (including automatic repeat calls from the phone itself)
2. SIM Application
3. MExE Application
4. TE Application using 07.07/07.05
5. Intelligent Peripheral (e.g. advanced in-vehicle applications such as alarms)
6. Auxiliary Smart Card
7. Other

SMG4 and *SMG9* are asked to identify additional information (including the type and the size) which could be sent to the network to allow the network to record more precisely which piece of software caused the call attempt to be made.

According to the agreed principles in the attached document this needs to be made available for all interactions between the MS and the network (voice/data calls, GPRS transactions, SMS, USSD, Supplementary Services etc.)

In the case of GPRS, *SMG4* (in the first instance) should study the implications of multiple applications using the same PDP context and propose a solution where the network can record the volume of traffic (etc.) generated by each application.

Further work will of course be needed in billing systems to enable the networks to advise customers why certain charges appear on their bills.

3. User Control and Security

In addition to the above, *SMG4* and *SMG9* are asked to include in the MExE, TE control and SIM specifications the ability for the user to tell the ME their settings for particular application sets 1..7 above. The user may at any time change the settings and it is not acceptable to have an option at application install time without the ability to change the setting later. The user must have control over the settings outlined below even if the application is very highly trusted and comes from a network operator due to the possibility of collision with other activities the user wishes to undertake.

The following settings should be provided. Note that for ease of reading the term "call" is used but this should be taken to mean any network interaction including SMS, USSD etc.

A. Permission to make automatic calls

At least the following categories should be provided:

- i) the application is not allowed to make any calls
- ii) the application is allowed to make calls but the mobile must ask the user before a call is made
- iii) the application is allowed to make any calls without the mobile asking permission

B. Keeping a record

- i) the mobile shall record information about calls made by the application
- ii) the mobile shall not record information about calls made by the application

SMG4 and *SMG9* should discuss and decide whether additional granularity over and above categories 1..7 above can be provided (e.g. allowing the user to make settings for individual MExE/SIM applications).

SMG4 and *SMG9* should discuss and decide the degree to which information should be recorded if option Bi) is selected. The recording of information shall be mandatory, but the STCs should allow manufacturers flexibility to keep storage requirements to a minimum by storing information about only a few calls or storing only a summary of activity.

All of the above shall be mandatory for all the supported functions of the mobile.

4. Harmonised Development of ME Environment

SMG4 and *SMG9* should include text in their respective specifications to advise implementors that the prioritisation and control functions of the ME for MExE/SIM/TE applications need to be harmonised with the equivalent functions for the other applications in categories 1..7 above.

5. Additional Requirements

All other STCs are requested to read the attached document and provide comments to the SMG_EXEENVIRONMENT reflector list.

6. Future Work

SMG is invited to discuss and agree an appropriate way to forward this information to 3GPP.

SMG4/TSG-CN3/TSG-2

Tdoc T2-99193

London, England

15 – 19 March 1999

Liaison Statement

To: TSG -SA1, TSG-SA2, TSG-CN2, SMG1, SMG6, SMG6 GPRS

Source: TSG-CN3

Title: Proposed Work Item Description for Service control (CAMEL) support for GPRS PSTN / ISDN interconnect services.

SMG4 GPRS / TSG-CN3 has discussed the attached Tdoc T2-99191 proposing a new work item for service control for GPRS PSTN / ISDN interconnect services.

TSG-CN3 has endorsed this proposal and would kindly ask the addressee's to comment and help in making this proposal a formal work item.

Tdoc T2-99191 attached.

SMG4/TSG-CN3/TSG-2

Tdoc T2-99191

London, England

15 – 19 March 1999

Proposed Work Item Description for Service control (CAMEL) support for GPRS PSTN / ISDN interconnect services.

3.x GPRS and CAMEL release 99

3.x.1 SMG Work Area

	UMTS Radio Access
	GSM Radio Access
X	GSM-UMTS Core Network
X	UMTS Services

3.x.2 Linked work items

“Modem and ISDN interworking in phase 2 GPRS”
“Definition of 3G call control model and protocol(s)”
“Multimedia in UMTS”

3.x.3 Justification

There are a number of work items potentially addressing how GPRS will support “real time” (e.g. voice or video) services via GPRS and the PSTN/ISDN.

If we are to support GPRS interconnect to the PSTN and ISDN, for support of “real-time” services, it is important to provide a call related linkage to the CAMEL server in a compatible way to that currently deployed within the GMSC and VMSC, so that the users can have the same service capability across all access pieces.

Currently, within CAMEL phase 3, one of the requirements is to provide integration between GPRS and CAMEL and specifically this is addressing integration within the SGSN. However these current requirements only address interactions at the transport (PDP activation level). With the addition of “real time services” to GPRS whereby there are additional **call control** and **call related** events being supported, it is essential that CAMEL is further developed to interact with those call related actions. These actions are very compatible with existing developments on the GMSC and VMSC switched network platforms.

This proposed work item addresses the integration of the call control to be applied to GPRS with CAMEL in addition to the basic GPRS services already included in the scope of CAMEL Phase 3.

3.x.4 Service Aspects

With the introduction of call related services to GPRS it is important that services such as pre-paid and forwarding services, etc can be managed from the call control mechanism being introduced. This work item is therefore not a service development but a technology enabler to deliver new and existing services.

3.x.5 MMI-Aspects

3.x.6 Charging Aspects

It shall be possible for the CAMEL server to manipulate and control the charging information being generated as part of the call control mechanism being developed for GPRS.

3.x.7 Security Aspects

The integrity of existing GSM security mechanisms shall not be weakened with the introduction of new Release 99 services.

3.x.8 Impacts

Affects:	USIM	ME	NW	Others
Yes			X	
No	X	X		
Don't know				

3.x.9 Expected Output and Timescales (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. STC	2ndary rsp. STC(s)	presented for information at SMG#	approved at SMG#	Comments
Affected existing specifications						
Spec No.	CR	Subject		Approved at SMG#	Comments	

Note: Some GSM specifications might be affected.

3.x.10 Work item rapporteurs

3.x.11 Work item leadership

3.x.12 Supporting companies

BT, Vodafone, Motorola <others still required>

3.x.13 Others

<text> -- optional

Sophia Antipolis, France

13 – 15 April 1999

Liaison Statement

To: SMG1

Source: CN3/SMG3 WPD

Subject: Streamlining of Data Services for GSM Release 99

CN3/SMG3 WPD thanks SMG1 for the LS (originally addressed to SMG4). CN3/SMG3 WPD has reviewed the attached CRs and has the following comments:

1. It is unclear whether half-rate data services have been deleted since the LS does not mention half-rate, nor can this be deduced from the CRs. SMG4 had previously suggested the removal. Could SMG1 clarify?
2. CR to 02.01: The examples below Table 2 mention BS 3x and BS 61. These BSs have been removed. Therefore, the text in the examples no longer makes sense.
3. CR to 02.01 (deletion of terminal reference model). The cover sheet states that this CR affects the network. Is this true?
4. CR to 02.02: Section 3.1.3 should not be removed as X.31 flag stuffing is still needed for BS30 with NT access structure.
5. CR to 02.34: Interworking with CSPDN is removed. It is unclear whether interworking is removed only for HSCSD or in general. In case of the latter further changes are required to 02.01 (in Annex A.3.1).

Joint TSG-CN3/SMG3 WPD

Tdoc N3-99068

Sophia Antipolis, France

13 – 15 April 1999

Liaison Statement

To: SMG4

Source: CN3/SMG3 WPD

Subject: Introduction to EDGE

Please find enclosed a CR to 07.03. This CR has been agreed to by CN3/SMG3 WPD and constitutes the last of a set of CRs that SMG4, IWF subgroup, initially had the responsibility for. It is to be handled in the same way as those other CRs, i.e., when SMG2 WPB confirms that a TCH/F43.2 channel will be provided, it can be presented to the SMG plenary for approval.

Attachment: Tdoc N3-99063

CHANGE REQUEST No :		Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.
Technical Specification GSM	07.03	Version: 6.0.0
Submitted to SMG 29 <small>list SMG plenary meeting no. here ↑</small>	for approval <input checked="" type="checkbox"/> for information <input style="background-color: #ffffcc; width: 100px;" type="checkbox"/>	without presentation ("non-strategic") <input checked="" type="checkbox"/> with presentation ("strategic") <input style="background-color: #ffffcc; width: 100px;" type="checkbox"/>
PT SMG CR cover form is available from: http://docbox.etsi.org/tech-org/smg/Document/smg/tools/CR_form/crf28_1.zip		

Proposed change affects: SIM ME Network
(at least one should be marked with an X)

Work item: EDGE

Source: Ericsson **Date:** 07.04.1999

Subject: Introduction of EDGE

Category:	F Correction <input type="checkbox"/> A Corresponds to a correction in an earlier release <input type="checkbox"/> B Addition of feature <input checked="" type="checkbox"/> C Functional modification of feature <input type="checkbox"/> D Editorial modification <input type="checkbox"/>	Release:	Phase 2 <input type="checkbox"/> Release 96 <input type="checkbox"/> Release 97 <input type="checkbox"/> Release 98 <input type="checkbox"/> Release 99 <input checked="" type="checkbox"/>
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(one category and one release only shall be marked with an X)

Reason for change: Necessary changes introduced by EDGE WI.

Clauses affected:

Other specs affected:	Other releases of same spec <input type="checkbox"/> Other core specifications <input type="checkbox"/> MS test specifications / TBRs <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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Other comments:

<----- double-click here for help and instructions on how to create a CR.

3.2 Terminal Adaptation Function

The TAF is functionally part of an MT0, MT1 or MT2 (see GSM 04.02 [4]). The terminal adaptation provides facilities to allow manual or automatic call control functions associated with alternate speech/data, speech followed by data and circuit switched data services, in case of V series interfaces. The X.21 DTE/DCE interface allows only for automatic call control functions. The following functions are included:

- Conversion of electrical, mechanical, functional and procedural characteristics of the V-series, X-series and ISDN type interfaces to those required by a GSM PLMN.
- Bit rate adaptation of V-series and X-series data signalling rates and the ISDN 64 kbit/s to that provided in the GSM PLMN.
- The mapping of V.25 bis AUTO CALL/AUTO ANSWER procedures and X.21 procedures to the GSM PLMN Dm-channel signalling.
- The mapping functions necessary to convert S-interface signalling to PLMN Dm-channel signalling.
- Synchronization procedure, which means the task of synchronizing the entry to and the exit from the data transfer phase between two subscriber terminals. This is described in the specification GSM 07.01 [8].
- Filtering of channel control information. This is described in the specification GSM 07.01 [8].
- Compatibility checking (see GSM 07.01 [8])
- Layer 2 relaying (see annex 1)
- Flow control
- In Call Modification function (see section 4)
- Splitting and combining of the data flow in case of multislot substream data configurations

***** Next modified section *****

4.1 Rate Adaptation

Rate adaptation on the MS-BS interface is described in GSM 04.21. The synchronous data services make use of the following rate adaptation functions: RA1, RA2, RA1/RA1', ~~and RA1'~~ and, in case of TCH/F28.8 usage, EDGE-MUX. See also ~~Figure Figures 6, 7 and 8~~ in GSM 03.10. The D-bits of the rate adaptation frames are used to convey user data and the S- and X-bits are used to convey channel status information associated with the data bits in the data transfer state, or to carry substream numbering between the Split/Combine functions in case of multislot substream operation. For the S- and X-bits, a ZERO corresponds to the ON condition, a ONE to the OFF condition.

4.1.1 Rate adaptation - V-series

This is provided as indicated in specification GSM 04.21 [6]. The functions applied in this case are shown in figure 2 (see model 2b in figures 6, 7 and 8 of GSM 03.10 [3]).

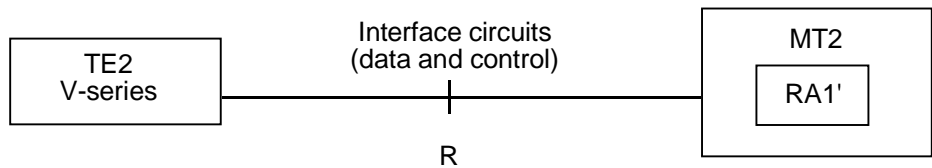


Figure 2: Rate adaptation for V-series terminals

4.1.2 Rate adaptation - X.21

This is provided as indicated in specification GSM 04.21 [6]. The functions applied in this case are shown in figure 3 (see model 2b in figures 6, 7 and 8 of GSM 03.10 [3]).

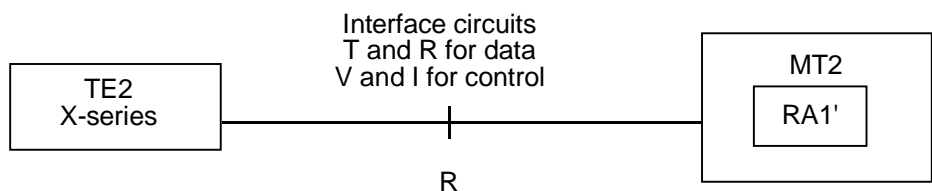


Figure 3: Rate adaptation for X.21 terminals

4.1.3 Rate adaptation - S-interface

The functions applied in this case are shown in figure 4 (see model 2a in figures 6, 7 and 8 of GSM 03.10 [3]).

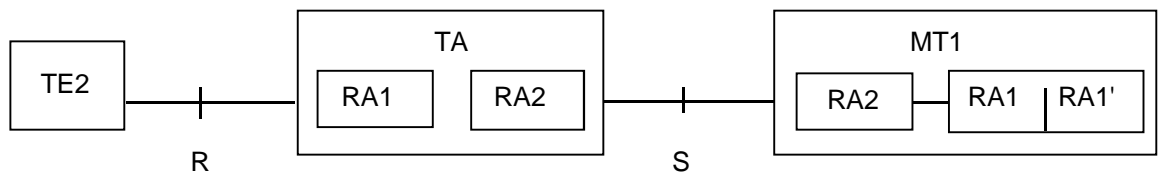


Figure 4a: Rate adaptation for S-interface

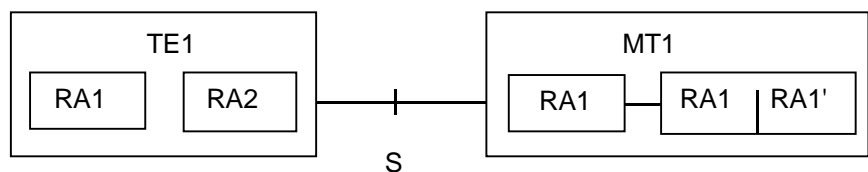


Figure 4b: Rate adaptation for S-interface (continued)

There are two cases to be considered for the RA1 function:

- a) V-series interface

For the V-series type of terminal equipments the rate adaptation functions are as described in GSM 04.21 [6].

b) X.21-interface

For terminal equipments using the X.21-interface the rate adaptation functions are identical to those described in GSM 04.21 [6], but the notation used is as described in CCITT recommendation X.30/1.461.

The notation used is as follows:

The conversion of the user rates of 2.4 and 4.8 kbit/s to 8 kbit/s and user rate of 9.6 kbit/s to 16 kbit/s shall be implemented by means of the 40 bit frame structure shown in figure 5.

Figure 5 shows that in addition to the basic frame, a two frame multiframe is employed. In odd frames, octet 0 contains all zeros, whilst in even frames octet 0 consists of a one followed by seven E bits. The order of bit transmission of the 40 bit frame is from left-to-right and top-to-bottom.

This two frame multiframe corresponds to the 80 bit frame structure presented in GSM 04.21 [6] as shown in figure 6. The 24 information bits P1,...,P8, Q1,...,Q8, R1,...,R8 of odd frames correspond with D1,...,D24 and those of even frames correspond with D25,...,D48 respectively. For the status bits there is the following correspondence: odd frame SQ,X,SR,SP = S1,X,S3,S4 and even frame SQ,X,SR,SP = S6,X,S8,S9.

Option for a manufacturer of mobile stations:

***** Next modified section *****

4.2.1.2 Channel coding TCH/F14.4 and TCH/F28.8

For information on the mapping of the interchange circuit signalling bits in the 14.5 multiframe structure, refer to GSM 04.21.

***** Next modified section *****

5.1.1 R-interface

For the protocol model and rate adaptation function applied in this case see Models 4b and 4e of Figures 6, 7 and 8/GSM 03.10).

5.1.2 S-interface

For the cases where the method indicated in CCITT X.30 is used see Models 4a and 4d of Figures 6, 7 and 8/GSM 03.10).

For the cases where the HDLC interframe flag stuffing shown in the recommendation CCITT X.31 is used see Models 4c and 4f of Figure 6, 7 and 8/GSM 03.10).

Joint TSG-CN3/SMG3 WPD

N3-99070

Sophia Antipolis, France

13 – 15 April 1999

LIASION STATEMENT**Subject: Clarification on GSM 04.22****From: SMG3 WPD****To: SMG7**

SMG7 has sent two Liaison Statements concerning the request for clarification on RLP issues to SMG4 (Tdocs SMG7-99-101 and 106).

The interworking work (containing also the responsibility for GSM 04.22) was moved from SMG4 to SMG3 WPD which jointly meets with TSG-CN3.

SMG3 WPD has discussed the received Liaison Statements and would like to give the following responses:

1. Clarification related to section 5.2.2.6. (XID negotiation) requested in Tdoc 101:

The phrase “a certain set of parameters” means that only those parameters shall be included in the XID command that the sender wants to negotiate with the remote RLP entity. Parameters that are not included in the XID command remain unchanged, i.e. the default values apply if this was the first XID exchange during a call.

The XID response may only contain values to parameters that were included in the received XID command. If the responding side is of lower version than the requesting side, then only those parameters are included in the XID response that are defined for the RLP version supported by the responding side.

This normally concludes the XID negotiation. However, if the receiver of an XID command wants to negotiate other parameters than contained in the received XID command it has to perform a second XID negotiation. For this it has first to respond with an XID response as mentioned before and then to start the second XID negotiation by sending an own XID command containing those parameters that it wants to negotiate. Values not contained in the XID command remain unchanged, either the default values or the values of the former XID negotiation process.

An XID negotiation process may occur several times during a call.

2. Clarification related to section 5.4.3. (value 0 for window size parameter) requested in Tdoc 101:

The value 0 does not make any sense for the window size. If anyone uses this value, no information transfer is possible. The minimum value that makes sense is 1.

3. Clarification related to section 5.3.3.2. (treatment of errors during numbered information transfer) requested in Tdoc 106:

Your second interpretation is correct. No frame with a given N(S) shall be retransmitted more than N2 times, even if some other I+S frames were acknowledged within this range.

Joint TSG-CN3/SMG3 WPD**N3-99072****Sophia Antipolis, France****13 – 15 April 1999**

Title: LS on UMTS Call Control and Session Management
Source: N3
To: N1
CC: S1, S2, TSG-T

TSG CN WG 3 has discussed the LS from S2 on UMTS Call Control and Session Management (copied to CN3) and would like to point out the following:

- TSG CN WG 3 have two work items which are expected to be directly affected by any work on defining Call Control and Session Management – these are “Modem and ISDN interworking in phase 2 GPRS” and “Service control (CAMEL) support for GPRS PSTN / ISDN interconnect services” (proposed). Interworking between GPRS and PSTN / ISDN by definition requires Call Control interworking. It is expected that TSG CN WG 3 will need to be aware of TSG CN WG 1’s work on the development of Call Control and Session Management.
- The LS also refers to associated handover requirements between GSM and UMTS. It is also important to consider associated compatibility of bearer capabilities which cannot be ignored when developing associated Call Control and Session Management. Again, TSG CN WG 3 need to be involved with bearer service aspects.

In this respect TSG CN WG 1 is also asked to inform N3 whenever they make Call Control / Session Management decisions which are likely to involve interworking and bearer services aspects.

Joint TSG-CN3/SMG3 WPD**N3-99073****Sophia Antipolis, France****13 – 15 April 1999**

Title: LS on Terminal Capabilities
Source: TSG-N3
To: TSG-T2
CC: TSG-S2

N3 has discussed the T2 request for input on Terminal Capability. The Terminal Capabilities in area of data services need to be studied in detail, therefore N3 is currently not able to provide a complete list.

Regarding the facsimile service N3 is already able to provide input. In the domain of service capabilities two mechanisms have been identified (as documented in 22.45):

- a store & forward mechanism (according to T.37)
- a real-time service

The real-time service needs two implementation capabilities

- real-time based on T.38
- real-time non-transparent based on an enhanced 03.46. The related WI 'Real-time non-transparent Fax G3' has been approved by N3.

Regarding circuit switched data services N3 is currently not able to provide input. N3 is expecting a WI to be generated either by TSG-R or TSG-N depending on the worksplit, which will cover definition of data services in the user plane. Input on the service capabilities could be given as soon as such a WI has been defined.

Regarding the implementation capabilities the input from N3 depends on architectural decisions to be made by S2. N3 is prepared to provide implementations capabilities after this decision.