

Status: approved

Place: the Hague
Date: 1987.12.14 - 18
Participants: see annex 1
Agenda: see annex 2
Documents: see annex 3

1 OPENING OF THE MEETING

Mr de Jongh opened the 16'th meeting of GSM talking about his experience of the development of the CEPT organisation during the last years.

2 APPROVAL OF THE AGENDA

The approved agenda appears as Annex 2 to this report.

3 LISTING OF DOCUMENTS AND RECOMMENDATIONS

(ref. annex 3)

The documents to be considered during the meeting were GSM Doc's 131/87 - 200/87.

4 REPORT FROM GSM MEETING No 15

The report was corrected and approved. The number of the document is GSM 200/87.

5 IDENTIFICATION OF ITEMS NEEDING PARTICULAR ATTENTION INCL. IDENTIFICATION OF REC. REVIEW MATERIAL

GSM went through Doc 147/87 identifying the relevant versions of the recommendations to be considered and stating for each of the recommendations whether it contained any holding factors. The result of that discussion is summarized in Doc 178/87, which was also used for allocating the further discussion of the recommendations to the GSM plenary or to the two subgroups.

GSM noted that some Rec's will be merged together. Thus Rec 02.01 will go into Rec 01.05, and 05.09 will go into Rec 05.02.

At the request of several WP's, Rec 01.04 on terminology will be distributed by the PN as soon as possible. However, the PN emphasised that Rec 01.04 is of limited value in its present form due to incompleteness and inconsistency.

GSM agreed that BSEG could submit Rec's 08.06 and 08.08 directly to GSM 17 without a prior examination by WP 3.

6 PLENARY DISCUSSION ON RECOMMENDATIONS NEEDING PARTICULAR ATTENTION

GSM went through the recommendations containing holding factors as identified in Doc 178/87. During the discussion the two documents resulting from recommendation reviews - Doc's 145/87 from the PN and 167/87 from FRG - were also considered.

* Rec 02.02 *

The question of provision of the 9.6 kbit/s data service was discussed and the position of Italy on this matter was noted (Doc 164/87).

Decision: The 9.6 kbit/s service should be recommended for provision "A". However, GSM agreed to ask the MOU rapporteur group on marketing issues to study the demand for the service. If this study indicates a potential demand for the 9.6 kbit/s service, GSM will change the designation from "A" to "E3".

* Rec 02.03 *

GSM discussed the emergency services of the GSM system, considering also Doc's 162/87 and 173/87 which address the same problem.

Decision 1: It shall be an option of the network operator whether to accept emergency calls coming from mobile stations which do not transmit an IMSI.

Decision 2: Access to emergency services shall be gained by use of a uniform procedure which alleviates the users difficulty to keep track of the different national emergency telephone numbers. In addition national procedures are always possible.

PN/MMI was entrusted with the task to elaborate suitable procedures for this service. Guidelines for the work are given in Doc 190/87 Rev 1.

Mr Hillebrandt was asked to inform the chairman of WG SF of the decision of GSM.

*** Rec 02.04 ***

The discussion was focused on the problem of the Call Barring Service (Doc's 163/87 and 158/87). It was generally agreed that the service was desirable and should be supported by all networks. However, the method for activation/deactivation of the service caused some discussion.

Decision: Activation/deactivation via the network or via an administrative procedure shall be a mandatory function supported by all networks. The implementation of an on-line control procedure from the MS shall be optional to the network operator.

*** Rec 02.09 ***

GSM discussed the default service offered to subscribers when authentication can not take place due to circumstances in the network for which the user is not responsible. In addition to the recommendation, Doc 172/87 was considered. The need for authentication at automatic location up-dating was also discussed, as well as the technical possibility to disable the authentication procedure in general.

Decision 1: The solution proposed by WP 1 in the present version 2.1.1 of the recommendation was endorsed. (Unauthenticated calls are allowed when, but only when, a successful registration has taken place).

Decision 2: Authentication will always take place in those cases which cause changes of the Mobile Station Roaming Number. Authentication in the remaining cases (which will occur at automatic location up-dating) is left to the network operators discretion.

*** Rec 02.11 ***

GSM noted that WP 1 has reached an agreement on the problem of barriers to the roaming service.

*** Rec 03.01 ***

GSM discussed the queing and the call reestablishment (CRE) function (Doc 171/87). On queing it was noted that there might be problems due to the unbalance in the call handling capability in the two calling directions. On CRE a long discussion took place, from which the following was noted:

- CRE should not be confused with hand-over. CRE might take place at any moment during a communication due to a sudden degradation of the signal level.

- CRE is motivated by the fact that in a digital system the difference between a good quality channel and an unusable channel is small, measured in terms of field strength or C/I. Retaining the objective of a high capacity, only very low shadowing margins can be allowed.
- The value of the CRE function was questioned with the motivation that the MS might as well wait out short interruptions in the communication, and set up a new call if the interruption is too long.
- CRE is a function mainly implemented in the MS. Problems might occur since the network will have difficulties to keep track of what is going on in the MS and vice versa. This problem is particularly difficult if the CRE process is allowed to take a long time.
- There might be difficulties to validate the hand-over function if the CRE is implemented.

Decision 1: The necessary mechanisms for queing shall be specified by GSM. The implementation of the function is optional for the network operator.

Decision 2: Complete signalling schemes, covering the network signalling and the functions in the network, shall be provided to the next WP 3 meeting in March 1988. (An addition to Rec 03.01 and Rec 04.08 is required). The Administration of UK offered to produce the required documentation.

*** Rec 03.07 ***

The WP 3 chairman urged GSM to find an Administration which would volunteer to carry out simulations of the location register restoration procedure.

The question was raised whether the specified procedures need to be used if other procedures could also be identified. The WP 3 chairman claimed that a unified procedure needs to be adopted, since several VLR's belonging to different networks are involved.

*** Rec 08.08 ***

A contribution from the Administration of Sweden - Doc 182/87 - advocating a MSC/BS interface more close to the transceiver or a second, possibly national interface, caused considerable discussion. The reason for the Swedish position was the concern about the cost of the infrastructure in rural areas. Although some delegates recognized the disadvantages of the present interface specified by BSEG, there was not support for a re-orientation of the BSEG approach, which had been accepted by all Administrations as a compromise solution.

Decision: The GSM decision is reflected in Doc 198/87 Rev 1 which was approved. A Terms of Reference for the "B"-interface group (Doc 199/87 Rev 1) was adopted.

*** Rec 11.01 ***

GSM agreed to delete the last words of the note in section 6 on the need for further studies by CCH/SP.

SUBGROUP DISCUSSIONS:

The meeting split into two temporary subgroups, one (I) dealing with the recommendations submitted for approval (chaired by Mr Haug) and the other one (II) with the recommendations submitted for examination (chaired by Mr Mallinder).

The purpose of subgroup I was to produce a report on the approval of recommendation to be submitted to the full GSM group for adoption. This reads:

SUBGROUP I: ADVICE TO GSM ON REC's FOR APPROVAL

The meeting agreed not to deal with recommendations 03.04, 09.02 and 09.03 during the present meeting. New, final versions of those Rec's will be sent out to all Administrations and to the GSM heads of delegation by Mr Vernhes during January 1988. Comments to the recommendations should be made directly to WG SPS.

GSM decided to adopt the use of a colour signal as described in Doc 195/87 in order to specify the state of approval of the recommendations. The Administration of France could not support this decision.

The following recommendations were fully approved with no or very small comments (small amendments agreed during the discussion are not reported):

Rec 01.06, green	(Further clarification on the application of the concepts of "essential" and "additional" are needed).
Rec 02.10, green	(Approved in version 2.2.2 produced as a result of the discussion).
Rec 02.11, green	(Approved in version 2.2.2 produced as a result of the discussion).
Rec 02.12, green	
Rec 02.14, green	
Rec 02.15, green	
Rec 03.12, green	(A new section 6, containing a reference to Rec 02.09 shall be added).
Rec 04.02, green	
Rec 08.04, green	
Rec 11.01, green	

On remaining recommendations, the following was concluded:

* Rec 02.06 *

The recommendation was not approved (red) because of the following points which need clarification and further study:

- 1 The concept of classmarks, MS types, type of usage and attributes need to be better defined.
- 2 The applications of the above mentioned concepts need clarification.
- 3 The question of where different types of information should be stored, and at what occasions (registration, call set-up etc) the information shall be sent from the MS to the network, needs to be defined. For solving this problem, it was recommended to

gather a group of experts representing several working parties. The Administrations of FRG and UK offered to support this activity.

GSM will decide later in which recommendation this information will be included.

Further comments:

- GSM agreed that the Mobile PABX is a low priority item which for the moment should be regarded as an evolutionary capability.
- The figures stated for the hand-held MS were discussed and it was pointed out that they deviate considerably from the target figures defined by GSM 15. However, since the figures of Rec 02.06 will be used for type approval, an upper limit has been used. GSM thus decided to retain the figures proposed by WP 1.

*** Rec 02.09 ***

GSM decided that use of the Subscriber Identity Confidentiality Service should be optional for the network operator, but not an option for the user as stated in the present version of the recommendation. The service shall be provided for all visited subscribers who use this service in their home network.

Further on, GSM decided to approve (green) those parts of the recommendation which concern definitions. However, those parts which concern optionality need further consideration, in particular regarding the terms of provision to the user. Those parts of the recommendation remain red.

It was noted that the decision to adopt the DCCH solution might have some consequences for the recommendations, which in that case will be reflected in the next issue.

*** Rec 02.13 ***

GSM decided that the roaming entitlement shall not be different for the various teleservices subscribed to by the one and same subscriber. (Such an arrangement would have a severe impact on the signalling. It is not supported by the MAP).

The recommendation was not approved (red). Further studies on the subject of entitlements is required. The "administrative link" mentioned in the last paragraph needs clarification.

*** Rec 03.01 ***

After some amendments, the recommendation was approved (green) with exception for section 2.3 which is still unstable, and section 3.3 which requires further study. These sections are red.

Section 4.5 on DTMF will consist of a simple reference to a new Rec 03.14. (The Administration of UK offered to contribute to its elaboration). Section 5 will contain only a reference to the Series 12 Rec's, which will be worked out by the PN. GSM emphasized that all of the present Section 5 should be covered.

*** Rec 03.02 ***

The recommendation was approved (green) with the comment that improvements are necessary in the area of terminology and definitions. This applies in particular to the base station and base station control unit.

In this context GSM decided that lists of definitions shall be allowed in the individual recommendations. Rec 01.04 shall be a summary of all these lists. The definitions shall be pure copies of the ones appearing in the other Rec's.

*** Rec 03.03 ***

After adding a new section 4.3.2 on Base Station Identity Code (BSIC), the recommendation was approved (green) with the comment that terminology problems in connection with the BSIC need to be tackled. It was also noted that the length flexibility function of the BSC and LAI need some further elaboration.

*** Recommendation Series 4 ***

Based on a number of calculations on frame success rate and procedure success rates presented in Doc 161/87, a general discussion on the entire philosophy of the Series 4 Recommendations took place.

In the course of the discussion, various arrangements for activities outside the Working Parties were proposed in order to ensure that the overall performance of the system meets the target. Views were divided on the desirability of such activities. Some Administrations claimed that they would constitute an insurance against difficult situations which might only be discovered at a late stage and that the question was too important not to be dealt with urgently. Others claimed that such activities might cause disturbance in the project, that conflicts might arise between the WP's and the new groups and that the new group might draw resources from the WP's.

Decision: GSM agreed on a the common WP 2/WP 3 working program for the optimization phase as described in Doc 194/87 Rev 1. The set-up of a separate working group for this optimization was not supported by GSM. Administrations carrying out optimization activities outside GSM are invited to report the results to all relevant working bodies.

*** Rec 04.03 ***

The recommendation was approved (green), bearing in mind that it needs to be supplemented with figures from the Series 5 Rec's when these have been finalized. It was confirmed that the text is in a stable condition.

*** Rec 04.05 ***

Some amendments were made to section 4.2. The following comments were made:

- Describing the random access bursts as LAPD_m primitives is made purely for modelling purposes. It is not the intention to enforce a specific implementation on the manufacturers.
- Decisions on window sizes should be taken in connection with the optimization process.

GSM decided not to approve the recommendation (red).

*** Rec 04.06 ***

It was noted that the recommendation needs to be supplemented with a paragraph in section 2 on the strategy for bit filling and idle frames. This work needs cooperation with WP 2 in order to take account of the possible impact on the spectrum.

GSM agreed that editorial comments to the recommendation should be sent directly to the editor. A final version of the recommendation, which also takes the result of the optimization into account, is expected to GSM 18.

GSM decided not to approve the recommendation (red).

*** Rec 12.00 ***

The recommendation was approved (green) with the assumption that relevant parts of section 5 of Rec 03.01 will be incorporated into section 1 of Rec 12.00. (Remaining parts of section 5 will go into other Rec's in the 12 Series).

SUBGROUP II: ADVICE TO GSM ON REC'S FOR EXAMINATION

Mr Mallinder presented the report of subgroup II, which is attached to this report as Annex 4. The GSM working bodies are invited to consider the comments to the various draft Rec's. The subgroup had found that:

- in the recommendations examined there are apparently no major holding factors
- there is coordination work to be done between the working bodies
- in some recommendations mandatory and optional items must be identified.

7 APPROVAL OF RECOMMENDATIONS

GSM decided to adopt the report of Subgroup I as the view of the full GSM group.

8 IPR ISSUES

GSM considered Doc's 149/87 and 168/87 noting the following:

Patent club

GSM noted the opinion of the Patent Panel that the patent club should be established as a legal body. Although the reasons for such an arrangement were recognized, several speakers expressed severe doubts on the possibility to do this in practice and in due time. It was noted that only T-Com is in the position to form the legal body. It was proposed to start by forming a Patent Club which could later be made a legal entity. No decision was made.

Problem areas

Three problem areas were identified:

- 1 Appropriate texts need to be developed for inclusion in the system procurement contracts. Those texts will regulate the terms on which the technical results coming out of the contract shall be made available to other members of the Patent Club.
- 2 The present statements from the proponents of various system elements on royalty-free use, is not legally binding. This is due to the fact that the statements are based on the principle of reciprocity. Since the statements have different meaning depending on the law according to which it shall be interpreted, the reciprocity is set aside. Therefore new statements need to be developed.
- 3 IPR's held by a third party is a still unsolved problem.

In connection with the patent club there might be an additional problem insofar that all industries which are members of the club will enjoy the same rights irrespective of how valuable IPR's they have made available to the club. On the other hand it is not the wish of GSM to exclude small industries from supplying equipment for the system or to allow some industries to dictate the terms of membership.

Representation in the Patent Panel

GSM noted that some Administrations have industry representation in the Patent Panel. GSM agreed to accept this.

Conclusion

The IPR issues will be addressed by MOU in connection with the concerted procurement activities. The MOU Administrations were invited to provide inputs to the MOU meeting concerning the problems mentioned above.

Mr Mallinder mentioned that the GSM 17 Rec. Review Report will point out where patent problems occur in the recommendations.

9 HAND-HELD VIABILITY

Doc 133/87 from ECTEL was introduced and discussed briefly. GSM asked WP 2 to consider the document further. Industry experts will be available for a more detailed explanation of the ideas of the document.

GSM considered Doc 148/87, taking particular note of the conclusions on pages 7 and 8. Mr Mallinder explained that the estimations of the required amount of software for the MS control processor are based on the software for current ISDN terminals (layers 1, 2 and 3 plus some margin). GSM also noted that the 2 Watt output power mobile station described in the tables of the document will not have coverage in rural areas. Nevertheless GSM decided that this type of mobile stations should be allowed in the system. GSM finally asked the PN to continue the HH-Viability Review activity and to report continuously.

Doc's 175/87 and 176/87 on the SIM were considered, and some discussion arose on the question whether the SIM should be mandatory or optional in the MS. For information Mr Lehnich told the meeting that this question had been studied by TMS, but no common opinion had been achieved yet. GSM took note of the requirements on the authentication implementation proposed in Doc 175/87, and the view was expressed by some delegates that GSM should go on specifying the requirements on the implementation instead of the implementation itself. However GSM felt that it was too early to take any decision at all on this matter for the moment.

10 ACTION PLAN

Action Plan

GSM took note of the new Action Plan (Doc 146/87) and in particular the summary of changes. A new recommendation - Rec 03.14 - on support of DTMF needs to added.

Registration of Status Reports

* WP 1 *

Doc 141/87 was introduced. No comments were made.

Classmarks: Doc 136/87 was considered. The WP 3 chairman told GSM that the issue had been addressed in WP 3 and that WP 3 felt that the classmark concept was not necessary. The information contained in the classmark is handled by the normal signalling procedures specified in Rec 04.08.

The installation of a new expert group for the SIM was discussed. GSM decided to establish such a group and the terms of reference proposed by WP 1 in Doc 159/87 were approved. SIMEG should report to WP 1. Resources will be offered from at least France, FRG and the Netherlands. The Administration of the Netherlands offered to arrange the first meeting.

*** WP 2 ***

Doc 142/87, and in particular Annex 4 of the document, was considered. The following was decided:

- 1) (Termination of WP 3) See below.
- 2) (Joint WP 2/WP 3 activities) GSM decided as suggested by WP 2.
- 3) (Speech and signalling requirements) The necessary studies will be carried out in connection with the optimization mentioned in the context of the discussion on the Series 4 Recommendations.
- 4) (Interference from ISM equipment) No comment was made.
- 5) GSM was in favour of including the extended frequency band capability in the system.
- 6) (Sleep mode) GSM adopted as a Working Assumption that sleep mode shall be a mandatory function for all MS's.

Discussing Doc 165/87, GSM supported the proposed study on a weak synchronization of the GSM system. The study should show the advantages and the costs of such a function before a decision on the introduction will be made.

*** WP 3 ***

The question of simulations of the location register restoration procedures was brought up again. Mr Audestad emphasised that the recommendations on this matter are focused on the aspects of the related internetwork communication. The Administration of UK promised to investigate, before early January 1988, if there is a possibility to contribute with the necessary simulations.

Discussing the future termination of WP 3, GSM agreed that - considering the need for checking the consistency of the recommendations - WP 3 should continue its work at least until late May 1988.

*** WP 4 ***

Doc 144/87 was considered. No comments were made.

*** SEG ***

Doc 160/87 was considered. No comments were made.

*** SCEG ***

Mr Natvig presented the SCEG report, Doc 191/87. GSM noted that speech has turned out to be more robust than expected. The new recommendation 06.12 on missing speech frames will be delayed due to the DTX study.

Most of the GSM discussion was concentrated on the question of DTX. It was noted that there is a severe lack of resources for the work in this area. There was agreement that the DTX function serves two purposes, battery saving and spectrum efficiency improvement, but the views were divided on the question whether the spectrum efficiency will really be improved unless there is a more detailed specification - applicable to all MS's - on the amount of silence to be removed.

GSM decided to make another effort to find resources for this task, and the Administrations of France, FRG and Sweden declared that they would be able to contribute.

11 ANY OTHER BUSINESS

GSM seminar

The further discussion on the possibility to arrange a special session on GSM during the DMR seminar will take place by telephone.

12 SUMMARY OF DECISIONS

A summary covering most of the decisions made during the meeting was presented and corrected.

13 MEETING SCHEDULE

The following meeting schedule was agreed:

Meeting no 17:	1/2 - 5/2 1988, Florence
Meeting no 18:	25/4 - 29/4 1988

For the Florence meeting, GSM decided to have a pre-meeting starting on Friday 29/1, attended by the heads of delegation and the working body chairmen. This meeting will be spent on preparations for the main meeting, which in its turn will be focused on the task of finalizing the recommendations. Monday and Tuesday of the main meeting will be devoted to WP 3 matters. A schedule for the whole Florence meeting will be dispatched no later than January 20.

14 CLOSING OF THE MEETING

The Chairman closed the meeting by thanking the Administration of the Netherlands for the marvellous support given to GSM during the meeting, saying that the Netherlands had once again confirmed its solid reputation as outstanding meeting organizers.

CEPT-CCH-GSM
Meeting no 16
The Hague, 1987.12.14 - 18

LIST OF PARTICIPANTS

Chairman:	T. Haug
Secretary:	T. Beijer
Austria:	E. Tallowitz F. Hoffenreich (SIEMENS)
Belgium:	L. Taghon
Denmark:	A. Foxman E. Mortensen H. Olsen
Finland:	M. Pasanen M. Hovi (MOBIRA)
France:	P. Dupuis B. Ghillebaert M. Alvernhe A. Maloberti C. Dechaux (ALCATEL) T. Billon (MATRA)
FRG:	A. Silberhorn F. Hillebrand F. Pernice W. Schmidt B. Edletisch C. Namislo K. Eckert (SEL) M. Günther (PKI)
Greece:	Y. Mouroulis
Ireland:	B. Corkery
Italy:	F. Grimaldi R. Vannini
Netherlands:	D. Hoefsloot C. Geus M. Meijer P. van der Arend

Norway:	P. Bliksrud B. Löken J. Natvig J. Audestad
Portugal:	O. Reis Luis
Spain:	C. Lluch F. Aparicio L. Rodriguez Valmayor
Sweden:	Ö. Mäkitalo G. Fremin J. Uddenfeldt (ERA) P. Björndahl
Switzerland:	R. Klingler
United Kingdom:	S. Temple D. M. Barnes E. W. Beddoes R. Potter R. W. Tompkins A. Cox M. Appleby P. Knight
Permanent Nucleus	B. Mallinder B. Haarpainter E. Haase M-B. Pautet
ECTEL-TMS	K. Lehnich (SEL) J. Noordanus (PHILIPS)

CEPT-CCH-GSM
Meeting no 16
The Hague, 1987.12.14 - 18

AGENDA

- 1 Opening of the meeting
- 2 Approval of the agenda
- 3 Listing of documents and recommendations
- 4 Report from GSM meeting no 15
- 5 Identification of items needing particular attention
incl. identification of Rec. Review material
- 6 Plenary discussion on recommendations
needing particular attention

Subgroup discussions:

- Subgroup I: Advice to GSM on Rec's for approval
- Subgroup II: Advice to GSM on Rec's for examination

- 7 Approval of recommendations
- 8 IPR Issues
- 9 Hand-held Viability
- 10 Action Plan
- 11 Any other business
- 12 Summary of decisions
- 13 Meeting schedule
- 14 Closing of the meeting

CEPT-CCH-GSM
 Meeting no 16
 The Hague, 1987.12.14 - 18

EXTRACT FROM GSM DOCUMENT LIST

<u>Doc No</u>	<u>Title</u>	<u>Source</u>
131/87	Proposal for increased activity on Complexity Reviews	ad hoc group
132/87	Laiason statement to MOU on the GSM decision process	GSM Chairman
133/87	Letter from TMS on spurious emissions	TMS
134/87	Covering note to GSM Rec 09.07, Version 1.0.0	GSM WP3
135/87	Short message service split responsibility among WP4 and WP3	GSM WP3
136/87	Mobile Station classmarks	GSM WP1
137/87	Covering note to GSM Rec 03.01, Version 2.2.0	GSM WP3
138/87	Covering note to GSM Rec 03.02, Version 2.2.0	GSM WP3
139/87	Covering note to GSM Rec 03.03, Version 2.2.0	GSM WP3
140/87	PN Status Report	GSM PN
141/87	WP1 Status Report	GSM PN
142/87	WP2 Status Report	GSM PN
143/87	WP3 Status Report	GSM PN
144/87	WP4 Status Report	GSM PN
145/87	Recommendation Review Report	GSM PN
146/87	Action Plan	GSM PN
147/87	Program Management information	GSM PN
148/87	Hand-held viability review	GSM PN
149/87	Patent Panel advice to GSM	GSM PN
150/87	Covering note to GSM Rec 03.05, Version 2.0.0	GSM WP3
151/87	Covering note to GSM Rec 03.07, Version 2.0.0	GSM WP3

<u>Doc No</u>	<u>Title</u>	<u>Source</u>
152/87	Covering note to GSM Rec 03.12, Version 2.2.0	GSM WP3
153/87	Final draft of GSM Rec 04.02, Version 2.0.0	GSM WP4
154/87	Letter to GSM on DTX	SCEG/DTX
155/87	Action Plan for WP4	GSM WP4
156/87	Transparent support of services	GSM WP4
157/87	Comments on the definition of authentication in Rec 03.20	GSM WP1
158/87	Justification of outgoing call barring services	GSM WP1
159/87	Draft Terms of Reference of the SIM EG	GSM WP1
160/87	Status report to GSM 16	GSM SEG
161/87	Overview of L2 frames/L1 blocks on MS-B5 interface	Sweden
162/87	Emergency calls (Rec 02.03)	Italy
163/87	Barring of outgoing calls	Italy
164/87	Data transmission at 9600 bit/s (Rec 02.02)	Italy
165/87	Weak network synchronization for the GSM system	WP2 ad hoc
166/87	Inclusion of GSM-presentation in DMR III seminar	Denmark
167/87	Results of first review phase on 31 GSM Rec's	FRG
168/87	IPR in GSM	UK
169/87	Scope statement for NET 10	UK
170/87	Clarification of DTX/DRX definitions and Working Assumption	UK
171/87	Implementation of Call Re-establishment	UK
172/87	Security issues	UK
173/87	SOS function in GSM	UK
174/87	The signalling element confidentiality function	France
175/87	The authentication function implementation	France
176/87	Smart card mobile station	FRG
177/87	Evaluation of validation hardware for joint speech and radio transmission performance	Sweden

<u>Doc No</u>	<u>Title</u>	<u>Source</u>
178/87 Rev 1	List of Rec's	GSM
179/87	Status of Rec. 02.04	WP1
180/87	Status of Rec. 03.11	WP3
181/87	Draft status report of draft Rec. 04.08	WP3
182/87	Statement by Sweden at GSM/WP3-meeting, The Hauge 7-10 Dec. 1987	Sweden
183/87	Deleted	
184/87	Potential Holding Factors in several recommendations	FRG
185/87	Modular concept for interfaces between BS and MSC	Drafting group
186/87	Extract from the 8th BSEG Meeting Report	BSEG
187/87	GSM-seminar	FRG, France
188/87	Integrating satellite systems in the terrestrial cellular pan European system (GSM).	CCTS
189/87	Developments in the area of Fixed Satellite Service	CCTS
190/87 Rev 1	Guidelines to the PN/MMI Group	GSM
191/87	Status report of SCEG	SCEG
192/87	Deleted	
193/87	Suggestion for clarifications and possible simplifications of Rec 04.06	FRG
194/87 Rev 1	Course of action for optimizing signalling delay/success	GSM
195/87	Approval codes	UK
196/87	Reply to GSM Liaison on Terminology	WP NA2.1
197/87	Proposal for creation of an action plan for coordinated introduction of options on the system side	Austria
198/87 Rev 1	Modular concept for interfaces between BS and MSC	GSM
199/87 Rev 1	Terms of Reference for the "B" interface group	GSM
200/87	Report of GSM meeting no 15 (London)	GSM

CEPT-CCH-GSM

Annex 4

Meeting no. 16

The Hague, 14-18 December 1987

REPORT OF SUBGROUP II: ADVICE TO GSM ON REC'S FOR EXAMINATION

Subgroup II (SG2) chaired by Mr. Mallinder (PN) examined the Rec's listed in column 87 Doc. GSM 178/87, rev. 1.

The chairman clarified that this report will be annexed to the report of GSM 16 and that it also will be sent to the WP's, of which Rec's were examined during this session.

If there is no WP meeting scheduled prior to GSM 17 then the findings from this session shall be considered during the R2 meeting in January 1988.

It was also clarified that even Rec's, having final draft status could still contain "items for further study" provided these issues are clearly indicated in a covering note to this Rec.

Recommendation GSM 03.05

Draft: 2.0.0 (date: 9-12-1987)

From : WP3 (editor: Finland)

- As stated in the scope of the Rec., the contents are intended for guidance only (therefore optional).
- Sections 8,9 and 10 contain the actual technical performance objectives, they constitute the core of this recommendation. Therefore, the other sections (2 to 7) should be reduced in length and only point to those recommendations (e.g. 03.02 and 11.30 series for section 3) which cover these issues more accurately.

Recommendation GSM 03.08

Draft: 2.0.0 (date: December 1987)

From : WP3 (editor: Norway)

- All parameters (summarized in table 1) are indicated as M (mandatory) or C (conditional to e.g. subscription). SG2 agreed to suggest GSM that all delegations should be advised to review this table and to send their comments to the PN prior to Jan. 15, 1988.
- The full list of supplementary services in section 2.6.1.1 should be replaced by a reference to Rec. GSM 02.04.
- All areas for further study (i.e. these are indicated in the notes spread in the text of the different sections) should be summarized in a covering note. The editorial note in section 2.3 is still valid, pending some studies in SEG.
- In section 4 two mandatory requirements are addressed regarding the access to subscriber data in the LRs.

Recommendation GSM 03.10

Draft: 1.0.0 (date: 7-12-1987)

From : WP4 (editor: France)

The scope statement should be rephrased, to indicate more clearly the purpose of the recommendation.

In particular, clarification about aspects identified and defined should be given (e.g. table 1 is defined, i.e. mandatory).

Pointers to other recommendations in paragraph 3 of the scope should be more specific to those parts referenced.

Table 1 and the corresponding figures should be presented more closely together.

- The current working assumption of WP4 is that all data services of rate ≤ 2.4 kbit/s should be accommodated on half-rate channels. SG2 indicates that there exists a possibility to accommodate such services at lower costs by using full-rate channels (intermediate rate of 16 kbit/s). Delegations with views on this should contribute to WP4.

Amendment to Rec. 03.10

- It is recommended to include the tasks developed by the chairman of WP4 in the Rec. regarding rate adaptation.

RAO	asyn [kbit/s]	<----->	syn [kbit/s]	standard [S]
RA 1	≤ 2,4	<----->	4	[S]
	≤ 4,8	<----->	8	S
	≤ 9,6	<----->	16	S

RA 1'	≤ 2,4	<----->	3,6	[S]1
	≤ 4,8	<----->	6,0	S1
	≤ 9,6	<----->	12,0	S1

RA2	16	----->	64	S
-----	----	--------	----	---

- The chairman of WP4 confirmed that no implementation specific solutions are suggested by WP4.
- Table 2 requires some refinement.

Recommendations GSM 02.04 and 03.11

- 02.04: draft 1.3.1 (date: 12-1987)
from WP1 (editor: Netherlands)
- 03.11: draft 1.0.0 (date: 12-1987)
from WP3 (editor: Netherlands)

Both recommendations are very much aligned with other ISDN specifications and whenever possible they are following the ISDN description. As a consequence, there are still some non-stable sections, as listed in the covering note, awaiting completion within the framework of ISDN.

Rec. 02.04

- It is suggested to remove the 1 para of "scope", which gives background information only and to include it into section 3.1 on page 6.
The second and third para of "scope" shall remain.
- The definitions in section 2 are considered very useful and shall be put in Rec. 01.04.
- It was confirmed that table 3.1 on page 6 is a recognized CCITT table on Telecommunication Services.
- Table 4.1 on page 9 is an executive summary on the supplementary services also indicating how to activate/de-activate these services. Page 11 is redundant with this table and therefore shall be removed.
- Service no. 5.15, Advice of charge is not stable (see covering note) and needs to be discussed in plenary so that WP1 and WP3 can get the necessary guidance.
- The GSM decisions regarding "Call Barring" needs to be reflected in Rec. 02.04.
- It is recommended to improve the numbering, e.g. by means of two rather than one digit, used in Rec's 02.04 and 03.11 so that in the case of new services being added the different groups of services will remain. The editor agreed but indicated that for the time being other requirements are more important and therefore the renumbering was given a low priority.
- The general quality of service requirements should be removed from this Rec. and go into Rec. 02.08. Thus leaving in Rec. 02.04 only the specific quality of service requirements. Such as, for "Advice of charge" on page 135.
- Furthermore WP3 was requested to complete all items still marked "for further study" prior to GSM 17.

Rec. 03.11

The structural correspondence between Recs 03.11 and 02.04 is very useful and should be maintained.

The scope statement is contained in section 1, introduction :

- . The first para is mandatory; the technical realization is as per this document.
- . The reference in the 2nd para should read 04.10 instead of 04.08. The para should start ---- supplementary services may require ----.
- A revision of this para is expected for the R2 session in 1.1988.
- . It was clarified to use the term "visitor" LR and not "visited" LR.

The definitions in chapter 2.2 shall be removed to Rec. 01.04.

It is expected that at a later date all definitions of supplementary services will be removed from Rec. 03.11.

Recommendation GSM 03.20

Draft: 1.0.0 (date: December 1987)

From : SEG (editor: France)

The meeting examined the Rec. together with

Annex I, dated 11 December 1987, editor NL

Annex II, dated 11 December 1987, editor NL.

- Annex II has to be added under contents (page 1).
- Both annexes need to be considered by the MSC group while elaborating the 11.3i Recs.
- The scope statement is not consistent with the specific points covered in Annex I and II since the function split is not addressed in the scope.
- The definition of authentication in section 3.1, first para is not correct and shall be removed; a reference to Rec. 02.09 has been suggested by WP1.
- The note 2 on page 2 is not consistent with the function split contained in Appendix I, II of this Rec.
- On page 3 the IMSI and TMSI terminology is not correct.
- In section 2.2, first para, the last sentence is misleading since Rec. 03.03 does not give the exact length and format of the TMSI.

The sentence should start: The max. length and guidance for defining the format of TMSI are given in Rec. 03.03.

- The figures in section 2.3 can be taken out to facilitate Rec. updating since they are also contained in Rec. 09.02.
- Currently this Rec. assumes the positive case only; failure sequences/situations are not being covered. The Rec's. 09.02 and 04.08 have to be amended to cover failure situations.

Recommendation GSM 04.08

Draft: 1.0.0 (date: December 1987)

From : L3EG (editor: FRG)

The meeting noted that L3EG intend to present a revision of Rec. 04.08 directly to GSM 17; it is expected that the new version will sufficiently cover items so that a sizing exercise, can be performed by developing of systems.

Consequently L3EG will ask GSM 17 to approve parts of Rec. 04.08 which are stable and immediately needed.

Delegates expressed concern about this course of action, it is felt that GSM will have major difficulties approving this Rec. since

- Failure aspects still need to be described.
- The available draft is not well structured for validation with the tools available.
- Furthermore the alarming findings in GSM Doc. 161/87 underline the need to have the necessary validation tools available as soon as possible. It is suggested that these indications should be rapidly progressed in the plenary.
- The current scope statement and the fact that the list of contents is still missing make it difficult to assess the exact aspects Rec. 04.08 is intended to cover.
- It is unlikely that due to other commitments the editor of this Rec. will attend the joint WP2/WP3 editor meeting in week 4 of 1988.

Connectionless services, and how they shall be provided, are still outstanding; Rec. 04.08 has to take account of this.

Recommendation GSM 04.09

Draft: 1.1.0 (date: Dec. 1987)

From : WP3 (editor: Norway)

- The introduction indicates that Rec. 04.09 is not mandatory but it assists in the modelling of MS and BS behaviour. Therefore it was agreed that the title should be:

"Mobile Management Entity Model"

- A clear scope statement is required.
- Rec. does not show the process or events triggering the primitives.
- It is not clear where the primitives are defined and whether they are optional or mandatory; Rec. 04.04 should contain full definitions of the priorities.
- Since Rec. 04.09 is purely for modelling purposes it is suggested to withdraw the reference to Rec. 04.03 from Rec's. 11.10 and 11.20. However, it is still anticipated that the usefulness of this model can be used for the MS and BS equipment specs.

Recommendation GSM 03.41

Draft: 1.0.0 (date: 27.11.1987)

From : WP4 (editor: Norway)

- . A clear scope statement is missing.

It was concluded from the first sentence under "General" that this Rec is not mandatory but a Rec. of descriptive nature for the convenience of network operators.

- . The Rec. gives a clear overview how value added services can be realized, it addresses the message handling services and also indicates with a reference the range of bearer services which are envisaged.

The interworking, however, from the MS via the PLMN to the PAD is missing.

Recommendation GSM 04.21

Draft: 1.1.0 (date: 26.11.87)

From : WP4 (editor: U.K.)

- It was clarified that this recommendation is mandatory for MS equipped with this function. Therefore the word "described" in the 1. line of the scope paragraph shall be replaced by "defined".
- It should be noted that Rec. 08.20 is still missing.
- The 2nd para in the scope statement should be removed into an editorial note to avoid linkage with the mandatory requirements in the first paragraph.
- A clearer reference to the architecture contained in 03.10 is required.

The description of radio frame mapping and terrestrial frame mapping is considered adequate (see chapter 5 , page 6). The WP2 chairman confirmed that Rec. 04.21 complies with the 05 series of GSM Rec's.

Recommendation GSM 05.02

Draft: 1.1.0 (date: 4-12-1987)

From : WP2 (editor: UK)

Recommendation GSM 05.09

Draft: 1.2.0 (date: 11-1987)

From : WP2 (editor: F)

- Both Rec's. were taken in conjunction since, as result of a recent WP2 editors meeting, Rec. 05.09 shall be incorporated into Rec. 05.02.
- The scope statement from Rec. 05.02 considered with elements from the introduction section in Rec. 05.09 are adequate and indicate the mandatory character of both Recs.
- The mathematical presentation in Rec. 05.02 is difficult to read but it was felt that the main text together with the examples already given and the additional diagram similar to figure six but showing the control channels, which is under preparation, are clear enough.
- Delegates were not in a position to comment upon the technical details in the two Recs.
- On request, the chairman of WP2 confirmed that he is not expecting IPR difficulties arising from the proposed SFH algorithm.

Recommendation GSM 05.10

Draft: 1.1.0 (date: 11-1987)

From : WP2 (editor: UK)

- The current version needs editorial corrections
 - . e.g. on page 3, the formula for FN is wrong;
 - . section 5.2 may need to be redrafted; this is subject to the decision taken in plenary regarding the alternative frame structure requiring a loose synchronization;
 - . to replace "pure sinc wave bursts" by "frequency correction bursts" (BCCH 1).
- The "introduction" in the scope statement. The first sentence of section one will be deleted. It has been confirmed that Rec. 05.01 has been presented at GSM 15 for examination. Rec. 05.01 is a guide to the 05 series of GSM Recs. and only of descriptive nature.
- Section 2 should more specifically refer to the revised Rec. 05.02 and use the same definitions.
- In section 5.1, a single frequency source is meant and not a single frequency standard.
- The meeting noted that the requirements for cells with extra long propagation delays are covered in Rec. 03.30 section 3.8. Consequently section 5.5 of this Rec. needs to reflect the flexibility stated in Rec. 03.30 regarding extra long delays.
- MS frequency stability and tolerance during DRX still need to be defined.
- In section 6.1; it was classified that the [] from 0.1 ppm should be removed.
- Section 6.4; [] should be replaced by () since these values have been agreed.

Recommendation GSM 12.02

Draft: 1.1.2 (date: 11-1987)

From : OMEG (editor: F)

- Scope statement (first paragraph in section 1.1) does not distinguish between mandatory and optional; para 2 and 3 give background information and can be deleted.

- Section 4 should also take account of the "white list".
- The following references shall be added:
 - . in section 4 to Rec. 02.16;
 - . point 2.1 to Rec. 02.17;
 - . section 2 to Rec. 02.13;
 - to Rec. 02.14.
- It is felt that OMEG did not consider Rec. 02.18.
- On page 9, the reference to country code (column 3) shall be deleted, the table should be checked for consistency.

Recommendation GSM 12.03

Draft: 1.0.3 (date: 12-1987)

From : OMEG (editor: UK)

An explicit scope statement is missing; there is an implied scope statement in section 1.2, second paragraph which should be rewarded.

-- This Rec. describes the control --

-- It provides for security services --

- Proposed text does not distinguish between mandatory or simply guidance given to the operators; some further clarity is needed.
- In section 3 four different cases should be considered and clearly indicated; What is optional or mandatory and shall be applied internationally or within PLMN only?
- Regarding section 4 it is felt necessary to clarify that the use of OMAP will not increase the signalling load.
- Section 2.1, second para. OMEG was advised not to rely on assumptions and to use in such a situation the positive statement: OMEG agreed

Recommendation GSM 12.06

Draft: 1.0.0 (date: 12-1987)

From : OMEG (editor: S)

- Clearer distinction is required between national and international requirements.

Only aspects dealing with international co-operation shall become mandatory; the rest remains for guidance only.

- Section 4.6 shall be added to clarify the procedures by which the PLMN operators inform each other about changes to the system. It needs to be stated that the transfer of info between PLMN operators or with radio regulatory bodies should include : frequency, BSIC, Output power, ---.
- The Rec. should reflect the need to rely on bilateral agreements.
- The scope statement should reflect that this Rec. deals with the network administration.

Recommendation GSM 12.10

Draft: 1.0.0 (date: 12-1987)

From : OMEG (Editor : PN)

- The title shall be changed, e.g. to
"Maintaining integrity of subscriber equipment"
- The scope statement restricts the Rec. to aspects which can interfere with network operations; to activities needed for network protection.
- The idea of bilateral agreements for the provision of technical support among network operators shall be elaborated.
- Utility of a test call as currently proposed is questioned (section 2); it is felt that the network resources and also the human resources would not allow for this.
- MS selftest shall be mandatory.

Recommendation GSM 12.11

Draft: 1.0.0 (date 12-1987)

From : OMEG (editor: F)

- Scope statement is required.
The general text implies that the Rec. is for guidance. GSM, however, has asked for a mandatory set of tests for the BS.
Consequently the scope statement has to reference the third para of section 4.2.
- OMEG was advised to consider the decision taken at GSM16 regarding the BS/MSC interfaces A and B and possible consequences for Rec. 12.11, e.g. will additional signalling capacity be required?
- The methodology of testing was questioned, delegates felt that other alternatives exist which may not yet have been sufficiently investigated.

- As a basic rule OMEG was advised that, functions which are required can be mandatory and have to be addressed as such, but the implementation of these functions is for guidance only.
- Section 4.4.1; delegates expressed concern that the enforced hand-over for maintenance purposes may introduce additional complexity and therefore recommend not to interact with the hand-over procedure for O&M purposes. Furthermore it was stated that a distinction is needed whether these interventions are performed as a result of a failindication or a routine testing.

Recommendation GSM 04.04

Draft: 1.1. (date: 9-12-1987)

From : WP3 (editor: NL)

The development of the Rec. was outlined:

- . When the first layer models were established, delegates were rather indifferent regarding the info to be carried in the different layers.
- . Then there was a migration from L1 --> L3 which has added to the complexity of L3 (Rec. 04.08)
- . Today the L2 has been simplified
 - L1 has been rationalized as well.
- . The layer 3 however is getting very complicated.
- The scope statement should clarify that this Rec. is constructed to assist in modelling the system and facilitates the co-ordination between WP2/WP3.
- WP2 shall examine whether it can follow the editor's suggestion that this Rec. is just a description and the mandatory features are in the 05 series. If WP2 can accept this demarcation line then parts of section 6 from this Rec. need to go back into the 05 series. Thus giving Rec. 04.04 the status of a co-ordination paper.
- It's expected that the planned editor's meeting in week 4 of 1988 between WP3/WP2 will clarify this item.

Recommendation GSM 07.02

Draft: 1.0.0 (date: 27-11-1987)

From : WP1 (editor: UK)

- Editor was requested to clarify why the 5 interfaces (I 420) were included in the scope statement; it was felt that this was conflicting with Rec. 07.07.

- It was clarified that only a subset of V25 bis is being used.
- Rec. 07.02 is not a general purpose description, it is offering a choice of interfaces and the entire features are optional. However, for the subset of this offering these interfaces (e.g. V25bis)/features then the Rec. being mandatory.
- Pointed to the
 - . GSM Recs specifying the bearer capability
 - . GSM Recs specifying the channel coding requirements shall be added.

Recommendation GSM 02.02

Draft: 1.4.1 (date: 30-11/4-12-1987)

From : WP1 (editor: FRG)

- Delegates had difficulties finding their way through the recommendation.
 - . The tables in the doc. are not self explanatory, the used abstractions can be found in section 3.
 - . The annexes to the Rec. (which are based on the ISDN presentation) have to be completed (e.g. quality of service from Rec. 02.08)
 - . It was agreed that all the figures should be improved.
 - . Definition of interworking attributes (figure 1 on page 3) are missing; it was clarified that Rec. 02.01 will contain the definitions when it has been considered with Rec. 01.05 and an appendix to Rec. 01.05 gives the required definitions.
 - . The final version of Rec. 02.01 will contain both, the list of attributes and also the definitions.
- Delegates felt that WP1 should organize for an internal Rec. review to improve the quality of the Recs and to avoid the difficulties outlined above.
- The chairman of WP1 will clarify if there are no E1 bearer services as showing in tables 2,3.
- WP1 was requested to reconsider the usefulness having in one Rec. (02.02) the ISDN presentation while the other Rec. contains the original WP1 presentation (Rec. 02.03)

Recommendation GSM 02.03

Draft: 1.3.1 (date: 30-11/4-12-1987)

From : WP1

- Delegates felt that this Rec. needs some further elaboration.
- For consistency it is suggested to include the ref. of the technical realisation specifications.
- It could not be clarified whether operators could offer in addition to the harmonized GSM set up services other services.

Recommendation GSM 11.31 and 11.32

Draft: 1.1.0 (date: 12-1987)

From : PN (editor: PN)

The PN outlined the development of Rec. 11.31 and 11.32 to take account of the guidance from GSM 14. The participation in the ad-hoc group is predominately from industry. The overall principle: Rec. 11.31 and 11.32 are "integrating Recs which provide a consistent way of identifying the appropriate recommendations".

Guidance given to the editor:

- To maintain the approach of identifying appropriate Recs and to reference these in the appendix and in the text.
- The comments on Rec. 03.05 to be taken into account.
- Section 7.3 to be modified according to the latest position of Rec. 02.04 and 03.11.
- HLR, section 7.3.13
HO between MSC's can impact upon the successful functioning of this aspect; a possible solution could be to hold the incoming call.
Note reference in B.N.
- VLR, section 4
VLR to MSC interface is mandatory only applies when both entities are geographically separated.

Recommendation GSM 09.07

Draft: 1.0.0 (date: 12-1987)

From : WP4 (editor: UK)

Delegates noted the comments made by CEPT/NA2 and agreed that prior to any examination by GSM this document should be referred back to WP1 and WP4 for examination.

Recommendation GSM 02.07

Draft: 1.8.1 (date: 11-1987)

From : WP1 (editor: UK)

- Scope statement; the first para will be deleted.
The 2nd para is clear and directed .
- Since the implementation of DTX is still under discussion it was suggested to remove items 3.19 and 3.20 from the table 3 on page 6.
- Situation regarding the status of table 1 to 3 needs to be clarified within WP1. The list is considered to be exclusive by at least one delegation while others feel that the list is open-ended.
- Concentration between Rec. 11.10 and Rec. 02.07 is required to address the features which still undergo type approval.
- The note on page 7 is unclear; verification with E 161, E 163 and E 164 is required. Furthermore delegates felt that WP1 may not leave the most competent body to decide upon the indication of the country code and suggested that this should be done by the MMS group.
- The last sentence on page 15 shall be removed.
- SOS-button has been deleted.

Recommendation GSM 01.07

Draft: 1.1.1 (date: 12-1987)

From : WP1 (editor: UK)

- The editor outlined the development of the Rec.
- The first para of section 2.1 defines the scope; the purpose of this Rec., however, is still unclear.

- It was agreed that the Rec. should be presented to GSM together with a document (prepared by the PN) indicating that other bodies are also dealing with related subjects: CEPT, CCH, CENELEC.
- The flow diagram is not in line with the GSM approval procedure proposed by the PN (Rec. Approval Procedure).

Recommendation GSM 02.16

Draft: 1.2.1 (date: 12-1987)

From : WP1 (editor: NL)

- The scope statement is contained in the 2nd para of section "0".
- Reference to the "blacklist" is missing.
- Considering the GSM decision taken on monday the section 7 can be deleted.
- Clear distinction between optional and mandatory is missing in section 4.
- The meeting agreed to refer the Rec. back to WP1 and to ask
 1. For carefull consideration of optional and mandatory features.
 2. For legal advice regarding the consequences of procedures suggested in the light of the different "date protection laws" in various countries.

Recommendation GSM 08.06 an 08.08

Rec. 08.06

- No clear scope statement; para 1.1 and 1.2 suggest the scope.
- MTP when used the first time should be explained.
- Rec. 12.03 should be referenced in section 3.1 as far as security management is concerned.
- The meeting expressed concern regarding the proposed form of policing (as part of security management), reference 3.1 - second paragraph, and felt that this requirement may not be consistent with the O&M philosophy : to gain from the OMC access via the MSC to the BS.

The meeting concluded that these two recommendations require full examination after final elaboration in the January BSEG meeting.

The proposed working assumptions of the functional split are given in GSM Doc. 198/87. This aspect was widely discussed in plenary in conjunction with the B interface proposals.