

Status: approved

Place: Florence
Date: 1988.02.01 - 05
Participants: see annex 1
Agenda: see annex 2
Documents: see annex 3 and Doc 31/88 Rev 2

1 OPENING OF THE MEETING

Mr Novi, head of PTT region of Toscana, opened the meeting by wishing GSM a successful working session in Florence.

2 APPROVAL OF THE AGENDA

The approved agenda appears as Annex 2 to this report.

3 REPORT FROM GSM MEETING No 16

The draft report from GSM 16 was approved. Annex 4 of the report has been slightly amended. The new version will be issued with the next version of the report.

4 LISTING OF DOCUMENTS AND RECOMMENDATIONS

In addition to the recommendations, which are listed in Doc 31/88 Rev 2, the documents listed in Annex 3 were considered.

5 DISCUSSION ON THE RECOMMENDATIONS

The meeting split into two temporary subgroups, one (SG I) dealing with the recommendations which were up for approval and the other one (SG II) with the recommendations submitted for examination.

REPORT OF SUBGROUP I

REC 03.08, version 2.1.0

The present version of the recommendation takes account of the comments made at the recommendation reviews. Mr Audestad went through the recommendation giving explanations and identifying those parts of the recommendation which are still unstable. A few minor amendments were made.

On classmarks, the meeting noted that the storage of those is not covered by Rec 03.08. This is due to the fact that Rec 03.08 only covers those information elements which will be stored in the Location Registers. In the course of the discussion it became clear that the classmarks do not fall into that category, since the information is transferred to the network on a per transaction basis and it is only valid in the duration of a transaction. This information will thus be temporarily stored in the MSC, and the corresponding function will be specified in Rec 04.08.

It was agreed that table 1 should be supplemented with a row indicating whether the information element is temporary or permanent.

Decision: The recommendation was approved keeping in mind the need for amendments due to possible amendments in other recommendations. In particular sections 2.2.1, 2.1.3, 2.5.4 and 2.6.3 might need to be modified.

Some text need to be added on the subject of Access Priority Classes.

REC 03.09, version 2.1.0

Covering note in Doc 5/88.

Mr Audestad explained that the recommendation has been amended according to the decisions of GSM 16, ie those items of the CCITT version of the recommendation which are not relevant to the GSM system have been removed. A few more of those items were identified and removed in connection with the presentation.

Only a few comments to the recommendation were made, which all led to immediate amendments.

Decision: Approved, bearing in mind the possibility of consequential amendments due to modifications in other recommendations. This applies in particular to the terminology in the radio subsystem area and the cases considered on page 2.

REC 04.01, version 2.0.0

Mr Audestad made a presentation of the recommendation.

Decision: Approved.

REC 04.05, version 2.0.0

The recommendation was discussed already at GSM 16 and was not approved at that occasion. Some amendments have been agreed, but no new version has been produced due to lack of time.

The attention was drawn to figure 5 of the recommendation, which describes the principles of the specification of the L3 protocols. The meeting was asked to note in particular the service access point arrangement. It was emphasised that the figure represents a model and not a prescribed implementation structure. The data link protocols need not be implemented in separate software blocks.

The designations of the channels should be in line with other recommendations. The present designations are the ones used in the majority of the others.

Decision: The general principles of the recommendation were approved. It was recognized that there is a need to come back to the recommendation for a consideration of the details.

REC 04.06

Mr Audestad presented the proposed amendments to the recommendation, which are described in Doc 4/88, concentrating on items 2, 7, and 8. Reference was made also to Doc's 2/88, 6/88 and 14/88 which all deal with the results of the complexity reviews asked for at GSM 16. The conclusion of those reviews demonstrate a confidence in the present approach to the signalling, but some improvements can be considered.

In addition to those amendments mentioned in Doc 4/88, a great amount of editorial cleaning up needs to be made. An approved version will be prepared for the next WP3 meeting.

Most of the discussion was focused on the question of window sizes and the possibility of an implicate release on layer 2. A reduction of the window size was believed to significantly reduce the complexity. For the question of deleting the L2 release function some doubts were expressed whether the gain of this amendment is worth diverging from the standard HDLC protocol.

On a question regarding evaluation of frame erasure rates, it was explained that the residual errors indicated by the LCT tests - which are quite high - are valid only for speech and not for signalling. This is due to different error detection mechanisms, the one for speech using only 3 bits for the detection, and the one for signalling using 40 bits. A precise measurement is needed, but the preliminary estimates indicate a satisfactory performance, which meet the higher requirements of the signalling. It was noted that there is a high probability that a false frame which has passed the error detection is still rejected by layer 3 because of parameter errors.

Decision: Approved with the following comments:

- 1 Window size 1 shall apply for all signalling. For communication, the possibility of larger window sizes shall remain in the specification but it shall not necessarily have to be used in the early implementations. This approach allows for future evolution of the data services.

Mr Schmidt offered to review the entire recommendation in order to check its consistency in the light of this decision. A new version will be presented at GSM 18.

- 2 WP3 will study the advantages and drawbacks of the proposed deletion of the L2 release function.

REC 04.07

No draft of this recommendation has been produced yet since the work of L3EG until now has been focused on the elaboration of the peer-to-peer protocols of Rec 04.08. Doc 19/88 contains a list of contents for the forthcoming recommendation. WP3 asked for comments on the proposed structure.

Decision: The proposed structure was endorsed.

REC 04.08, version 1.2.0

See also Doc 8/88.

WP3 asked for approval of chapters 3, 5 and 6 which are fairly stable. The meeting noted that there are several areas in which future studies are needed. Recovery from abnormal situations and timing were mentioned as examples.

Decision: The meeting was not prepared to approve the recommendation at this stage. However the general principles applied were endorsed. It was also agreed that the recommendation was sufficiently mature to be used for tendering.

REC 03.05, version 2.1.0

A covering note, listing items for further study, is contained in Doc 3/88. Mr Audestad emphasised that the use of this recommendation is not mandatory for the operator but only for guidance.

It was noted that there is a need for traffic simulations in order to assess the delay distribution of the traffic. This evaluation might have some impact on the choice of duty cycle for the sleep mode. However, WP3 does not have the appropriate resources for this task.

The impact on the fixed network due to long call set-up times (around 6 seconds) was discussed. The sleep mode contributes significantly to this delay. However, this service was felt to be very essential and was not questioned. Besides, the experience from the existing analogue networks show that call set-up times of that order can be accepted in the fixed network.

A paper, showing the editorial amendments which need to be made, was drafted.

Decision: Approved, with the amendments as listed on the above mentioned paper.

REC 08.08, version 2.1.0

A covering letter in Doc 7/88 lists the open issues of the recommendation.

Decision: Approved, bearing in mind the need for further work in order to maintain the consistency with other recommendations and Rec 04.08 in particular.

REC 08.06, version 2.0.1

Clarification was given regarding the capability of the A-interface to carry O&M messages.

Decision: Approved.

REC 05.02, version 2.1.0

Mr Maloberti explained that the section on frequency hopping (6.2.3) is not up for approval at this stage. Some minor amendments of editorial nature were made.

Doc 32/88 which proposes a modification of the mapping of SDCCH was supported. The proposal was not believed to have any impact on the delay. A small impact on the quality of the slow ACCH will appear. WP2 was asked to study the proposal in detail and amend Rec 05.02 according to the result of the study.

It was noted that the text needs to be clarified regarding the allocation of CCCH.

An extensive discussion took place on the so-called "weak synchronisation". The proposal has been dropped in WP2 since it turned out impossible to reach an agreement.

The advantage of the function is that it offers a more rapid reading of the information from the adjacent base stations. The MS could be simplified since the 51 slot multiframe can be deleted. The drawback is the additional complexity and possibly also vulnerability of the network. No precise proposal on synchronization method has been proposed. It was felt that the drawbacks of the function have not been sufficiently assessed.

Decision: The recommendation was approved. It is up to those Administrations which are in favour of synchronization to clearly demonstrate its merits and drawbacks and to propose detailed solutions. WP2 is requested to perform an analysis of the weak synchronization, provided sufficient input concerning merits and demerits is provided. The impact on all other recommendations shall also be clarified.

REC 05.03, version 2.3.0

In addition to the recommendation itself, Doc's 28/88 and 18/88 were considered.

The proposal of Doc 18/88 caused an extensive discussion, most of which concerned the policy issue of providing low speed data on the full bit rate channel. From spectrum efficiently point of view this is not desirable. However, the meeting was informed that the signalling system does not offer the possibility to switch between channels of different speed, which means that the first generation of mobiles will not be offered the same services as those of the fixed network, unless low speed data is allowed on the full speed channel.

Decision: The recommendation was approved, provided the following modifications are made:

- 1 The proposal of WP4 presented in Doc 28/88 was adopted. The recommendation will be up-dated accordingly.
- 2 The meeting was in favour of allowing low speed data on the full speed channel. WP2 and WP4 were asked to study possible solutions.

Consequential amendments will have to be made in a number of recommendations.

- 3 The proposal of Doc 13/88 is subject to eximination by WP2/WP3 as part of the normal optimization of the signalling robustness.

REC 05.04, version 2.0.1

The view was expressed that the example of an implementation given at the last page of the recommendation should be removed. Some delegates claimed that the example would help the understanding of the recommendation.

Remaining items, which are necessary for the implementation of the modulator (masks, phase stability requirements etc) will be covered by Rec 05.05.

Decision: Approved. The example should be deleted. It was also agreed that, where examples appear in the recommendations this should be clearly stated.

REC 05.01, version 2.2.1

This recommendation is not mandatory but only used for explanatory purposes. The Administration of Italy was reluctant to approve this recommendation until the situation with regard to IPR's has been clarified.

Decision: Approved, provided that the outcome of the IPR discussion will not necessitate a reconsideration of the decision.

REC 05.08, version 2.1.0

Items for further study are listed in the covering note, Doc 10/88. Mr Maloberti made a detailed presentation of the recommendation introducing a few amendments.

Doc 1/88 from Italy raises a major holding factor. The problem concerns the question of the handover strategy which is not specified in the present version of the recommendation. Only examples are offered. It was pointed out that there are patent problems in this area.

The main arguments in favour of the present approach is that it allows flexibility both in respect of future development as well as the possibility to adapt the system to different environmental conditions. Several delegates claimed that it would be dangerous to be rigid on this very important function on which no experience exists.

The main argument against the present approach concern the difficulty to ensure the existence of an open market for the network components. It was made clear that in any case it is not the intention to fix the values of all the parameters (threshold levels, hysteresis etc).

The meeting noted the view that handover is not only made in order to avoid call interruption, but also for other reasons such as traffic capacity management. One could also envisage a fixed network having a certain knowledge of the topography of the area concerned, which would use this knowledge in the handover strategy.

The ideas behind the Radio Link Failure function was explained. This function is not related to handover (in which case it would be too slow) but sooner to call re-establishment. It must therefore not be too fast. 2 seconds was mentioned as a suitable value.

Decision: Approved, with the following comments:

WP2 was asked to develop and specify a "basic solution" for the handover and power control strategy. All manufacturers should quote the price for that basic solution, if requested. Administrations are however not obliged to implement the basic solution, but they are free to implement other improved versions.

The handover and power control strategy specifications shall be submitted to GSM 18 for approval. On the question of resources for this task, the WP2 chairman emphasised that WP2 is prepared to take on the task, provided that contributions on the subject will be available at the next WP2 meeting.

REC 05.10, version 2.1.0

A discussion arose on para 6.1 which deals with frequency stability. Some delegates were concerned about the implementation aspects of this requirement. The meeting concluded that the subject will be studied further at the handheld viability reviews. It was noted that the tolerances will also be specified in Rec 05.05.

Decision: Approved.

REC 02.01, version 2.0.0

Some text needs to be added to Annex A, section 1.1 "3.1 kHz Ex PLMN" to better explain what is ment.

Figure 1 was found a bit unclear since it seems to confuse the concept of "bearer service" and "bearer capability". A modified figure was produced and adopted.

Decision: Approved with the agreed amendments.

REC 02.03, version 2.0.0

The difference between "basic MHS service" and "advanced MHS service" was explained. The question was raised whether there should be one more telephony service defined, corresponding to telephony on the half rate channel. The matter of future evolutions is addressed in section 6 of the recommendation. The meeting, however, was of the opinion that clearly identifiable futur services such as the half rate speech should be defined already now.

Several clarifications were given regarding acknowledgements for the short message services. It was mentioned that WP4 is discussing a service with user acknowledgement.

Decision: Approved.

REC 02.04, version 2.1.1

Decision: Approved, keeping in mind the need for further work on the unstable parts defined in the covering note.

REC 02.07, version 2.0.0

Amendments were made in sections 1.5 (SIM) and 1.12 (analogue interface).

Decision: Approved.

REC 11.31, version 2.1.0

Decision: Approved.

REC 11.32, version 2.1.0

Decision: Approved with the agreed amendments.

(A question remains on deletion of an MS from the VLR after an authentication failure.)

REC 07.01, version 2.0.0

Decision: Approved.

REC 07.02, version 2.0.1

Decision: Approved with the agreed amendments.

REC 03.10, version 2.0.0

Decision: Approved with the agreed amendments, except for the sections where consistency with Rec 02.02 needs to be checked, specifically alignment of definitions of bearer services and the table dealing with connection types.

REC 04.21, version 2.0.1

Clarification is requested by WP2 on section 7.

Decision: Approved.

REC 02.02, version 2.0.0

It appeared that the recommendation has been modified in essential parts since the last version, and it was questioned whether the recommendation was in line with its scope as defined in section 0. The problems concern the terminology and the conceptual approach to the definitions of various service types. An amended version (Doc 57/88) was proposed by the Administration of France.

Decision: The meeting was not prepared to approve either version. WP1 will produce a new version of the recommendation, which will be submitted to the extraordinary meeting of GSM in March.

REC 03.41, version 2.1.0

The question was raised whether or not specific mechanisms are needed in the PLMN to support the MHS Access service. If not, the service offered by the PLMN is a connection type rather than a teleservice.

Decision: The decision on how to make progress on this recommendation was postponed.

REC 08.20, version 2.0.1

Decision: Approved.

REC 02.09, version 2.2.0

Changes of substance were made regarding the optionality of the authentication function and the subscriber identity confidentiality service.

Decision: Approved with the agreed amendments.

REC 03.20, version 2.0.0

(Annex 1 to the recommendation is contained in Doc 36/88.)

The chairman mentioned that the outcome of the work of AEG might have some impact on the recommendation. The meeting also took note of the statements of AEG presented in Doc 30/88.

The main changes from the earlier versions of this recommendation concern the encryption of signalling and data. The mechanisms for discrimination between different ciphering algorithms during the period of overlap when algorithms are changed, is not covered in the present version of the recommendation.

Mr van der Arend warned the network operators for implementing authentication at call set-up according to note 2 on page 11 of the recommendation, claiming that this arrangement introduces the first leak in the system.

Decision: Approved. In this context there was a discussion on the algorithm selection criterion on software implementability, adopted by GSM at the London meeting. It was proposed to delete this selection criterion, but no agreement could be reached. The meeting decided that if it is not possible to choose an algorithm which is suitable for both types of implementation, AEG is asked to define two algorithms and report their relative merits and demerits. GSM will then make a choice.

REC 02.30, version 2.2.0

Decision: Approved, except for para 5.2.5.1 which needs further study.

REPORT OF SUBGROUP II

Mr Hagedoorn reported on the work of the SG II session.

The following points of a general nature were brought to the attention of GSM.

- There should be a recommendation introducing the 02 series. This should not be combined with the present substance of Rec 02.01.
- Rec 11.40: Reproducibility of test results on MS's will be increased when all test houses apply the same type/make of system simulator. The PN/11.40 group is not in a position to organize that aspect.
- Rec 12.05: It will be possible to achieve further progress when some decisions have been made concerning all the options in Rec 02.20.

The report of the SGII session is annexed to the minutes of this meeting as Annex 4. It has not been discussed in the GSM plenary meeting.

6 REPORT OF THE B-INTERFACE GROUP

Mr Rosenlund presented the report of BEG, Doc 53/88. The report raises four questions to GSM, which were answered as follows:

1) B-interface definition

GSM was not able to reach a specific conclusion on the topic without having a document which analyses the consequences of the different possibilities. BEG was asked to produce such a document. As a guidance, GSM reminded BEG that the background for the B-interface is the prospect of having less expensive BS's in remote areas and that the solution should in any case fulfill that requirement.

2) Location of transcoders

Decision: BEG should as a first step investigate the consequences of the two solutions and find out if both are possible at all.

3) Further information on the matter will be provided from BEG.

4) Recommendation numbering

Mr Rosenlund was asked to sort out this question in collaboration with the PN.

Finally, Mr Rosenlund asked the Administrations to comment at the next BEG meeting on the functional splitting described in Annex 4 of Doc 53/88.

7 IPR-ISSUES

Mr Mallinder reported from the latest IPR activities. A written report is contained in Doc 46/88.

The view was expressed that GSM 18 should be provided with a list of those patents which might be applicable to the GSM system, to enable GSM to assess the risks associated with the present set of recommendations. After some discussion GSM concluded that such a list could quite easily be produced, but in order to reduce the list to a manageable size, quite comprehensive examinations of the individual patents would have to take place. It was reported that the 5 areas which had been initially examined were not included in the current specifications. It was agreed that the available search lists will be issued to GSM 18.

The attention was drawn to the patents of IBM on VAD. This particular aspect of speech coding is not covered by the royalty-free statements given earlier. Declarations from IBM indicate that they are prepared to discuss royalty-free use of individual, clearly defined patents, but no guarantee exists that such licences will be granted.

Decision: The further activities will be carried out in two steps:

- 1) The Administrations involved will - with the participation of both patent experts and WP experts - carry out searches and verify the applicability of identified patents within the area of the 05 and 06 series of recommendations. This activity shall be finalized by the end of March.
- 2) During April the Patent Panel will examine the patents and identify those of them that are applicable. A report will be prepared to GSM 18.

8 TEST PROGRAM

Mr Mallinder introduced Doc 107/87 Rev 1. The document received strong support from the Administration of Sweden, which also proposed that a body - eg the PN - should be appointed, which would be responsible for the tests.

No decision in that direction was taken. However, Mr Mallinder offered to elaborate a detailed program for the validation tests. This program will be presented at the extra-ordinary meeting of GSM in March.

9 APPROVAL OF RECOMMENDATIONS

GSM decided to approve/reject the recommendations as proposed by Subgroup I in their report.

10 ANY OTHER BUSINESS

Doc 11/88 - which reflects the agreed view of TMS on the GSM system concept - was considered, and Mr Lehnich explained that the purpose of the document was to warn GSM against applying a too technology oriented approach to the design of the system. The marketing aspects, said Mr Lehnich, are particularly important in the introduction phase of the system. Considering the general nature of the document, GSM found it difficult to draw specific conclusions on actions to be made, but it was recognized that these views should be kept in mind.

Doc 169/87 on scope statements for NET's was considered. The proposed scope statements were adopted.

Mr Mallinder reminded the Administrations to send the PN a list of those industries and contact persons at the Administrations to which the recommendations should be distributed.

11 PRELIMINARY REPORT OF THE MEETING

The preliminary report of the meeting was corrected and approved.

12 MEETING SCHEDULE

GSM 18: 25/4 - 29/4, Vienna
GSM 19: 20/6 - 23/6, Finland

It was agreed to have an extraordinary meeting on 15-16 March, which should be attended by the heads of delegation and some experts, in order to finalize the work on the remaining recommendations.

13 CLOSING OF THE MEETING

The chairman thanked the Italian Administration for the nice meeting arrangements and the good support.

CEPT-CCH-GSM
Meeting no 17
Florence, 1988.02.01 - 05

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) M. Mouly (LCT) |
| FRG: | A. Silberhorn F. Hillebrand F. Pernice W. Schmidt B. Edletisch C. Namislo M. Günther (PKI) |
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| Permanent Nucleus | B. Mallinder B. Haarpainter E. Haase M-B. Pautet R. Hagedorn S. Hansen J. Käll H. Ochsner P. Simmons H. Thiger |
| ECTEL-TMS | K. Lehnich (SEL) G. Naldi (OTE) |

CEPT-CCH-GSM
Meeting no 17
Florence, 1988.02.01 - 05

AGENDA

- 1 Opening of the meeting
- 2 Approval of the agenda
- 3 Report from GSM meeting no 16
- 4 Listing of documents and recommendations
- 5 Discussion on the recommendations
- 6 Report of the B-interface group
- 7 IPR-Issues
- 8 Test Program
- 9 Approval of the recommendations
- 10 Any other business
- 11 Preliminary report of the meeting
- 12 Meeting schedule
- 13 Closing of the meeting

CEPT-CCH-GSM
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EXTRACT FROM GSM DOCUMENT LIST

| <u>Doc No</u> | <u>Title</u> | <u>Source</u> |
|---------------|---|--------------------------|
| 1/88 | Comments on Rec 05.08 | Italy |
| 2/88 | Rec Review Meeting 20-22.1.88 PN offices, Paris | R ² - meeting |
| 3/88 | Covering note to Rec 03.05, draft 2.1.0 | 03.05 editor |
| 4/88 | Review of Rec 04.06 | 04.06 editor |
| 5/88 | Covering note to Rec 03.09 Hand-over procedures | 03.09 editor |
| 6/88 | Performance estimates for modified L2/L3 Radio Protocols | FRG, UK Sweden |
| 7/88 | 08 Series Recommendations | BSEG Chairman |
| 8/88 | Proposed structure of Rec 04.08 | L3 EG |
| 9/88 | Report 00-03 Rev 8: Action Plan | GSM/PN |
| 10/88 | Covering note to Rec 05.08 | WP2 |
| 11/88 | Marketing aspects of introducing the GSM system | TMS |
| 12/88 Rev 1 | The development of the 11-series of recommendations, or the equipment specifications | GSM/PN |
| 13/88 | Alternative coding schemes for signalling | WP2 |
| 14/88 | Analysis of the signalling system performance in the Pan-European cellular system | France |
| 15/88 | GSM program management information | GSM/PN |
| 16/88 | Report of GSM meeting No 16 (The Hague) | GSM |
| 17/88 | Diagram: GSM Hardware Tests | Sweden |
| 18/88 | Proposal for a simplified channel coding scheme | Sweden |
| 19/88 | Proposed structure of Rec 04.07 | L3 EG |

| <u>Doc No</u> | <u>Title</u> | <u>Source</u> |
|---------------|---|---------------|
| 20/88 | Covering note to Rec 12.02 | GSM/PN |
| 21/88 | Covering note to Rec 12.03 | GSM/PN |
| 22/88 | Covering note to Rec 12.06 | GSM/PN |
| 23/88 | Covering note to Rec 12.10 | GSM/PN |
| 24/88 | Covering note to Rec 12.11 | GSM/PN |
| 25/88 | Covering note to Rec 12.12 | GSM/PN |
| 26/88 | Covering note to Rec 12.13 | GSM/PN |
| 27/88 | Covering note to Rec 12.14 | GSM/PN |
| 28/88 | Coding Schemes for 9.6 kbit/s and 4.8 kbit/s data services. | WP4 |
| 29/88 | Action plan of WP4 | WP4 |
| 30/88 | Stability of Recommendations | SEG |
| 31/88 Rev 2 | List of Recommendations | GSM/PN |
| 32/88 | Modification of the SDCCH | Sweden |
| 33/88 | Status Report of BEG | BEG |
| 34/88 | Covering note to Rec 04.10 | Netherlands |
| 35/88 | Some notes from the GSM 17 pre-meeting for coordination | GSM |
| 36/88 | Covering note to annex 1 of Rec 03.20 | Netherlands |
| 37/88 | Covering note to Rec 03.05 version 3.0.0 | 03.05 editor |
| 38/88 | Update information sheet to Rec 03.09 | 03.09 editor |
| 39/88 | Covering note to approved version 3.0.0 of Rec 03.08 | PN |
| 40/88 | Update sheets to Rec 05.10 | PN |
| 41/88 | Update sheets to Rec 05.08 | PN |
| 42/88 | Update sheets to Rec 05.04 | PN |
| 43/88 | Update sheets to Rec 05.03 | PN |
| 44/88 | Update sheets to Rec 05.02 | PN |
| 45/88 | Update sheets to Rec 05.01 | PN |
| 46/88 | Brief Report of the PP Meeting 25 Jan. 88 | PN |

| <u>Doc No</u> | <u>Title</u> | <u>Source</u> |
|---------------|---|---------------|
| 47/88 | Update sheets to Rec 11.31 | PN |
| 48/88 | Update sheets to Rec 11.32 | PN |
| 49/88 | Covering note to Rec 02.02, version 3.0.0 | PN |
| 50/88 | Update sheets to Rec 02.07 | PN |
| 51/88 | Update sheet to Rec 02.09 | PN |
| 52/88 | Update sheet to Rec 02.30 | PN |
| 53/88 | Update sheet to Rec 03.20 | PN |
| 54/88 | Update sheet to Rec 04.21 | PN |
| 55/88 | Update sheets to Rec 07.02 | PN |
| 56/88 | Update sheet to Rec 08.20 | PN |
| 57/88 | Proposed revision of Rec 02.02 | France |
| 58/88 | Status of Rec 02.04 | WP1 |
| 59/88 | Report of GSM meeting no 17 (Florence) | GSM |

Examination of recommendations

A total of 25 recommendations were examined in subgroup II. The subgroup was chaired by R. Hagedoorn (PN), Mr. Kall (PN) acted as the Secretary.

Rec. 02.01 "Principles of telecommunication service....."

Mrs. Alvernhe presented the recommendation, version 2.0.0. A statement should be added indicating whether or not this rec. contains a subset of the ISDN-recommendations.

Figure 2 in this rec. is taken from rec. 04.02 and for definitions of Mobile Terminations reference is made to 04.02. It was felt that rec 02. 01 should define Mobile Terminations in clear text with reference to the user access.

A small drafting group drafted on a proposal to prepare the rec. for the approval session on wednesday.

The first and third paragraph of section 0, scope were agreed to be deleted.

A sentence has been added to § 3.1:

"The reference configuration shows the MS to consist of Mobile Termination and terminal equipment"

A new page 5 has been prepared giving a generic definition of Mobile Termination.

Definitions of MT0, MT1, and MT2 were seen to be too detailed for rec. 02.01.

§3.3. has been amended and retitled "Terminal Equipment".

In annex A, § 1.4 the text concerning 8KHz integrity was deleted and replaced by: "-Structure, further study is required".

In the contents list the title for section 2.4 should start "categorization....."

It was felt that there should be a recommendation containing an introduction to the 02-series. This should not be combined with the substance of 02.01.

The GSM X.X on page 10 should be GSM 06.10.

The figure 2.1 should indicate the a, b and c cases.

Rec. 03.10 "GSM PLMN Connection types"

Mr. Hillebrand presented rec. 03.10, version 2.0.0.

The following points were noted:

The second paragraph on page 4 should be clarified, e.g. making clear that handportables without any data support are permitted.

It was proposed to make use of the concepts MT0, MT1 and MT2 also in rec. 03.10 as in 02.01 and 04.02.

The scope gives the impression that 03.10 is a recommendation of the modelling type. In reality 03.10 covers also implementational items.

The scope references recommendations of the 01, 02, 03 and 04 series which master 03.10.

It was proposed that also the 07 series, which is mastered by 03.10 would be referenced.

Rec. 11.10 (0.10.0) "MS conformity specifications"

Mr. Hagedoorn (PN) introduced Rec.11.10, version 0.10.0

It was pointed out that terminal adaptors will be specified in a separate recommendation and that this will be NET 11.

In the radio requirements of rec.11.10 dBuV (E.M.F.) has been used.* The 05-series refers to dBm.

On page 82 the section about SOS button should be deleted.

The recs. 05.05 and 11.10 should be further harmonized in the joint meeting between WP2 and the PN-MS/BS/SS group in Madrid on the 2nd of March.

The table on output power levels on page 18 is an interpretation of the WP2 requirements.

It was asked whether mechanical tests and requirements, e.g. for shock and vibration, should be included in rec.11.10.

Generally it was concluded that the rec.11.10 is on the right track and that it can be developed further accordingly.

Rec. 12.04 " Traffic administration" and Rec. 12.06 "System change control"

These recs. were introduced by Mr. Haarpaintner (PN).

The question was raised whether there will be a need for an additional interface between the RSS and OMC. It was noted that the functionality of the RSS-MS interface supports network management message transport between the RSS and OMC.

In section 3.2.5 on handover some clarification is needed concerning "duration".

The section 3.2.6: "Other information" could deal with statistics about MS equipment identity, IMEI.

Concerning rec. 12.06 version 1.0.1 it was noted that :
Inter PLMN information needs to be given concerning expected outages and other system changes that might affect other PLMN :s. This should be specified and Mr. Haarpaintner indicated that rec. 12.02 will cover inter PLMN information to be given to the customers.

Handling of subscribers complaints should be described in a 12-series rec.

PLMN availability could be indicated to the customers but this will have an impact on signalling and the MS man-machine interface.

In section 4.4 on reloading information it should be clarified what data has to be recorded and reloaded.

The points 2 and 4 in section 1 should be deleted and the points 1 and 3 should be combined.

Sections 4.4 and 4.5 should be restructured reflecting more of the relative importance and sequence of the described functions.

Rec. 03.41 "Technical realization of basic MHS access"

Mr Hillebrandt (FRG) introduced the version 2.0.0. of Rec. 03.41. The scope indicates that the Rec. shows one possibility out of many and this was confirmed to be true.

The rec. docs not exclude other means of access.

Access to future "advanced" message handling systems could be indicated in the rec.

The recommendation was considered to be correct.

Rec. 04.21 "Rate adaptation on the MS-BS interface"

Mr. Appleby (UK) presented version 2.0.0 of the rec.04.21.

The scope reflects that the rate adaptation functions are mandatory if an MS is designed to support services according to any of the alternative configurations given in rec. 03.10, page 27. (as chosen by the operator).

In section 1, general approach, the word "equivalent" in the third paragraph was changed to "identical".

WP2 should be asked whether the frame of 240 zeroes, as indicated in section 7, cause any problems.

Section 5.4 on synchronisation states "for further study". It was clarified that this refers to studies within the CCITT.

Rec. 08.20 "Rate adaptation on BS/MS interface"

Mr. Appleby (UK) introduced version 2.0.0. of rec. 08.09.

The abbreviation TxC should not be used for "transcoder" in this rec.

The F1 - F3 bits in figure 2, octet no.5, should be E1, E2, and E3.

Rec. 07.02 "Terminal adaptation functions (TAF) for services using asynchronous bearer applications".

Mr. Hillebrand (FRG) introduced version 2.0.0. of rec. 07.02

An editorial note was added in § 3.4: "The buffer sizes N1 and N2 and the threshold values can be fixed as soon as the rec. 04.22 has been progressed further."

Rec. 05.05. "Transmission and reception"

Mr. Maloberti (F) introduced version 1.1.0 of rec. 05.05. Many items in this rec. are still under study, and will be reconsidered in WP2.

The question was raised whether it is appropriate to refer to EIRP in § 4.

The difficulty of specifying antennas and antenna installations was noted.

The binary sequence referred to in § 5. 2 will be defined later.

The detailed description of the method of measurement in § 4. 2 will be revised.

There seemed to be a discrepancy between the power level in clause 4. 1, and the levels in Annex V. This was clarified by referring to the scaling factor in clause 4. 2.

It was questioned whether the levels in § 5. 1, concerning blocking are stringent enough. This section should be verified.

The requirements would apply for the MS as well as the BS. It was pointed out that the requirements for adjacent channel interference in § 6.3.2. would not allow the use of every second channel in a BS. This requirement will be studied further in WP2.

The levels of spurious emission in § 4.3 were discussed and should be verified. It was pointed out that the spurious emissions power budget might be different for digital systems than for analogue systems.

It was noted that there might be a need to specify different requirements for the MS and BS concerning output RF spectrum and adjacent channel interference.

Intertransmitter intermodulations is not included in 05.05, such requirements will be necessary for the BS and one of more versions of MSs. This will be considered in WP2.

"In band signal to noise ratio" was reported to be included in "phase noise".

Section 6 applies to hopping and non hopping equipment, just as to equipment with or without DTX and/or DRX.

It should be clarified whether direct connection RSS-RSS is allowed.

Rec. 02.08 "Quality of Service"

Mr. Cox (UK) introduced version 1.0.0 of rec. 02.08.

Mrs. Alvernhe, presented the amendments agreed in the list WP1 meeting.

On § 4.1.3 it was pointed out that the time to connect a call, (6 s), is totally unacceptable.

§ 4.1.6. Time to alert, could be split up for single- and for multiple paging attempts.

The WP3 should confirm whether the requirement, .4s, is appropriate. It was expressed that a time below 2 seconds could not be expected due to the speed on the DCCH.

The term "unintelligibility" in § 3.2.2 was proposed to be changed to "intelligibility" and the text amended accordingly. This parameter should be studied further. (Also for non-voice services)

Intelligibility being specified for the telephony services, it was expressed that b.e.r.s. would be the equivalent of this for the other services.

The area and time in § 4.2.2 should be combined.

It was proposed that the scope should reflect that the requirements in the rec. are design objectives, and should include a legal disclaimer WP1 should discuss this further.

A parameter for speech quality should be added in § 3.2 and SCEG should give information about this. It was proposed to split § 3.1.6 into two-one with DRX and one without DRX.

It was proposed to add parameters for paging success rate and call success rate separately, this will be studied.

The 10 seconds in 4.2.3 was considered to be more a value for a timer, than to be a performance specification.

The 40 ms requirement for interruption of user traffic in § 4.1.9 was confirmed to be valid for single message blocks.

It was clarified that the performance specified in this Rec. would be as experienced by the user of a vehicle mounted MS. The performance experienced by the user of a handheld MS might be lower

Recommendations, which were not examined

01.02, 01.04, 02.05, 12.14 for lack of time.
Rec. 03.50 was not available.