



Agenda Item 1: Review of the results of the work of the GREPECAS contributory bodies and their respective Terms of Reference
g) ATM/CNS/SG

Improvement of working arrangements of the ATM/CNS Subgroup

(Presented by the Secretariat)

SUMMARY

This working paper presents information on the status of implementation of the tasks assigned to the ATM/CNS/SG, as well as an analysis of the functioning of this complex mechanism created as result of the GREPECAS re-organization and its future perspectives. Considering the ICAO RPG's structures in the ATM and CNS fields, the GANP and current ICAO working arrangements, proposals are presented to improve the current Subgroup working arrangement. Action by the meeting is presented in paragraph 4.

References:

- GREPECAS/14 Meeting Report
- GREPECAS procedure Handbook
- ATM/CNS/SG/5 Meeting Report

1. Introduction

1.1 The ATM/CNS/SG was created during GREPECAS/9 Meeting (August 2001, Decision 9/20) as result of a reorganization of the Group. The main reason to create the ATM/CNS/SG was to strength the coordination in the development of tasks related with the implementation of ATM/CNS matters including those of multinational nature involving institutional aspects in considering their intra/inter-regional implementation aspects. The structure of the Subgroup considers two Committees the ATM/COMM and the CNS/COMM as Contributory Bodies and a Steering Committee to coordinate the functioning of the Subgroup between meetings as well as during the same.

1.2 The Subgroup has already held five meetings, summarizing the results, they shown that in the ATM field the Subgroup obtained good results concerning the implementation of the RVSM, and RNAV routes with the support of the Regional Technical Cooperation Project RLA/98/003, as well as a adequate planning was performed for the CAR/SAM ATFM developing the ATFM operational concept and recently the planning made in respect of the PBN, additionally the Subgroup provided support for the development of the Contingency Plans Catalogue, recognized by the ANC as an very good and interesting

initiative. The results in the CNS field are modest it was most related with the planning and restructuring of the CAR/SAM ANP regarding Tables formats to present the requirements and support some routine tasks of the regional Offices concerning the AFS developments (REDDIG/MEVA networks), one aspects that occupied a good time of the CNS/COMM work was the Navigation field where the work has been supported by two Technical Cooperation Projects the RLA/00/009 and the RLA/03/901 related with plans to define the most adequate GNSS for the CAR/SAM regions, still pending of results.

1.3 From the beginning the functioning of the Subgroup as a whole represented a heavy financial burden for ICAO and the States. The meetings of about 90 persons with a duration of five days, were divided in two sections, the first and the last days met the plenary (the Subgroup) and other three days in the middle were dedicated to the Committees work. It was always considered that this arrangement presented an insufficient time for the Subgroup work especially for the contributory bodies work, mainly considering that very few preparatory work were made between Subgroup meetings.

2. Analysis

2.1 Current situation of the Subgroup work arrangements

2.1.1 The creation of the ATM/CNS/SG was done under some special mechanism in the ICAO structure of PIRGs, whose functioning it is not clear contained and ruled in the GREPECAS Procedure Handbook, because, the mechanism is in a certain way an “small” RPG, which has Contributory Bodies, the ATM/COMM and CNS/COMM, working as Subgroups with the capability to be represented in the GREPECAS meetings (unlike the other Subgroups Contributory Bodies) and a Steering Committee like a kind of “ACG”. However, the following matters should be noted that are affecting the functioning of the Subgroup:

Membership

The Subgroup has no really membership, it is assumed that the Subgroup membership is the composition of the membership of the Committees, but because the responsibilities of the Committees are ruled by their Chairman, and these bodies work as genuine Subgroups, this situation creates an double line of action presenting a duality that it is difficult to manage because finally the “members” of the Subgroup are under the action line of the Committees Chairman’s and not under the Subgroup Chairman. Therefore it should be recognized that the Subgroup membership is VIRTUAL and figurative.

On the other hand, considering the concept of Subgroup in the GREPECAS Handbook, which should be formed by a reduced group of experts with precise TORs and Tasks with defined target dates, the ATM/CNS/SG do not met this requirement.

Work Programme

Tasks assigned by GREPECAS to the Subgroup shall be the basis to develop TORs and Tasks for the Committees, a carefully study of this issue shows that this is not performed in this way, the tasks assigned to the Subgroup are of general nature and more than tasks are long term objectives of coordination, in contradiction with the GREPECAS Handbook. The Committees generate their work programmes without a possibility of analysis by the Subgroup, which has not clear objectives to guide the work of the Committees. It become clear when considering the Work Programmes of the Subgroup and the Committees that they are different entities and not correlated to work as an GREPECAS Contributory Body as a whole. For reference of the meeting, the current Subgroup TORs and Working Programme is presented as **Appendix A** to this working paper.

Work Capacity

In reviewing Appendix A, it should be noted that the Subgroup has no capacity to develop its tasks, due to the following reasons:

- a) has no real membership, therefore no specific human resources, and
- b) has no time to develop the tasks. During the Subgroup meeting of five days, only during the morning of the first day (one hour and half) is dedicated to analyse the papers that the Secretary/Chairman may present and these papers normally are of informative nature. The rest of the time is taken by the Committees and the last day to review mainly the Committees work reports.

The above situation could be more precisely appreciated if it is consider the application of project management software to manage the Subgroup Task.

Functioning of the Contributory Bodies

Considering the current operation of the Subgroup, the Committees, as it was indicated, operate as genuine GREPECAS Subgroups. The coordination function of the Subgroup by means of the Steering Committee became weaker and weaker with the time and no improvements could be envisaged under the current working arrangements.

Financial resources

The Subgroup is an especial and complex mechanism similar to GREPECAS. To hold a meeting it is required an especial support of a State providing a huge financial support and coordination activities.

2.2 Current situation in other PIRGs

2.2.1 In considering the development of CNS/ATM matters, it would be interesting to note the way how other PIRG's treat this important issue from the technical/operational point of view. In this regard, it should be noted that APANPIRG, MIDANPIRG and APIRG have a specific Subgroup to consider the ATM issues and the same are treated together with the AIS and SAR subjects. Concerning CNS MIDANPIRG and APIRG has a specific CNS Subgroup while APANPIRG treats the CNS matters together with the MET issues. Likewise, EANPG has a Group to deal with ATM matters and other Groups to deal with AFS matters. On the other hand, it would be of interest to note that as part of the matters to be developed by ICAO in implementing the Strategic Objectives, it is expected that the ICAO Council will align all the TORs and Working Programmes of the PIRGs so as to harmonize programmes and structures of the PIRG's.

2.3 Conclusion

2.3.1 As results of the matters indicated above it could be concluded on the following:

- a) The ATM/CNS/SG it is a mechanism that it is not complete lined-up with the GREPECAS handbook procedure regarding its functioning as GREPECAS contributory body.

- b) The ATM/COMM and CNS/COMM that detent the real potential power to develop tasks in the technical and operational field are working without the necessary coordination arrangements and are not guided by clear objectives established by the Subgroup. The intended coordination mechanism for the development of ATM and CNS matters in a harmonized and systematic way has been not really established in the current situation and it is not described in the GREPECAS Handbook.
- c) Under the current shortage of financial recourses, the Subgroup current working arrangement limits the working capacity of the mechanism affecting results.

2.3.2 The ACG/7 meeting should note that based on the above, a re-organization of the working arrangements of the ATM/CNS Subgroup should be introduced so as to work in a more effective and efficient way, considering the current ICAO Global Air Navigation Plan and the ICAO working arrangements to implement performance objectives in the CAR/SAM Regions based on the Global Plan Initiatives (GPIs) connected with the ICAO Business Plan.

3. **Proposals to improve the Working arrangements to develop ATM/CNS matters as result of implementation of performance objectives.**

3.1 Implementation of performance objectives (operational requirements) under the ATM operational concept to introduce ATM improvements requires the deployment of operational environment to share information in order to take decisions (CMD) among parties of the involved ATM community. This new concept imply the establishment of automated processes and implementation of recently defined navigation applications, which development should be planned in a coordinated way to provide the corresponding CNS/ATM technologies so as to support the solution identified to implement the performance objectives.

3.2 In GREPECAS from the technical/operational point of view, the above is mainly under the responsibilities of the ATM/CNS Subgroup; however the current working arrangements of the Subgroup require modifications to perform a coordinated planning of the implementation of identified performance objectives. In this regard it is felt that improvements to the current working arrangements are needed in order to:

- a) provide a more flexible and efficient working schedule for the development of ATM and CNS matters so as to improve working capacity in terms of time and effectiveness.
- b) agreed a common working programme in the operational/technical field so as to implement performance objectives to be established by the ATM field.
- c) provide an effective means of coordination and monitoring of the status of implementation of the task commonly agreed.
- d) provide an effective means of coordination with other GREPECAS contributory bodies to implement the performance objectives.

Presentation of Proposals

3.3 Regarding the establishment of a common work programme, it should be noted that there are three important issues to be developed: implementation of the PBN Road Map, implementation of the ATFM based on the existing CONOPS ATFM and the so called ATM automation that it is related to the technology solutions to interoperate ATM applications hosted in ATC automated systems so as to

interchange data with specific standard communications protocols among these systems. These are, at least, the existing pending matters, which implementation requires coordination between the CNS/COMM and the ATM/COMM and also with other contributory bodies (AGA/SG, AIM/SG and AERMET/SG) to introduce ATM improvements in the CAR/SAM Regions.

3.3.1 The proposals presented in this working paper to improve working arrangements and to obtain points a), b), c) and d) indicated in paragraph 3.2 are based on:

1. the simplification of the ATM/CNS/SG mechanism; and
2. considering the existing implementation mechanism in both the CAR and SAM regions, which were established under proper characteristics of collaboration among the involved States (SAM region uses widely the technical cooperation ICAO programme), the focusing of the common working programme to the matters of inter-regional nature to harmonize the implementation processes that due to the nature of the implementation arrangements, have their proper characteristics.

Proposal No. 1, No. 2 and No. 3 below are presented intended to fulfil the above.

Proposal No. 1

To organize the ATM/CNS/SG as a normal Subgroup according the GREPECAS Procedural Handbook defining, membership, adequate TORs and the corresponding Work Programme with specific tasks. It operates as foreseen in the GREPECAS Procedural Handbook.

3.3.1.4 Due to the wide scope of the issues to be handled by the Subgroup, the modus operandi of the structure would be as follows:

- a) The Subgroup should designate a Chairman, a Vice-Chairman and two Secretaries one ATM and one CNS.
- b) The Subgroup may create the necessary Task Forces to develop specific tasks; the Secretaries of the Subgroup would support the Task Forces work as usually.
- c) During the GREPECAS Meeting the Chairman presents the results of the Subgroup work supported by the presence of the both Secretaries.

3.3.1.4.1 This structure is a very simple one and cost/effective for the States and GREPECAS. It would allow the examination of ATM and CNS matters implementation by GREPECAS, having the assurance that the same are due coordinated and harmonized. In this regard, and unlike the situation in other GREPECAS Contributory Bodies, implementation of ATM improvements need of a close and strong coordination between ATM and CNS areas. This structure would allow the focusing of the GREPECAS work in the CNS/ATM areas in a very precise and specific way, especially in relation to the inter-regional planning and implementation and also would allow the monitoring of the CAR/SAM regions implementation process in a systemic way. This proposal is more effective to carry out a complete coordination, harmonization and integration of work between both the CNS and ATM areas. The working programmes of the Task Forces would have an adequate and clear guidance from the instructions adopted from the Subgroup. Coordination with other GREPECAS Contributory Bodies could be made according to the GREPECAS Procedural Handbook.

Proposal No 2

- i) To elevate to the category of Subgroups the current ATM/COMM and CNS/COMM.
- ii) To establish an Internal Coordination Group (ICG) mechanism between the ATM/SG and the CNS/SG to be described in the GREPECAS Procedural Handbook composed by:
 - A Chairman to be elected from the two Chairmen's and the two Vice-Chairman's of the mentioned Subgroups
 - A Secretary to be designated by the GREPECAS Secretary
 - The rest of the Chairman's and Vice-Chairman's of the mentioned Subgroups
 - The Reporters of the SG's Task Forces.

3.3.1.2 The modus operandi of this structure is as follows:

- a) The Subgroups operate as per established in the GREPECAS Handbook developing common issues as part of their work programme and other important particular issues.
- b) The ICG meets in one of the ICAO Regional Offices premises, at least once before SG's meetings to agree and plan the future common work of the SG's including coordination with other GREPECAS contributory bodies. Before of any SG's meetings the ICG establish a teleconference using the Webex or similar internet service to exchange views concerning the work to be performed by the particular SG. Likewise, the ICG using internet service exchange views concerning the results of the SG's work before a formal GREPECAS meeting so as to coordinate the presentation of information by the SG's for GREPECAS revision.
- c) At each GREPECAS ACG meeting, the Chairman of the ICG prepare an information paper over work performed by the same and results obtained.

3.3.1.3 This proposal provides a more flexible working arrangement for the Subgroups, as well as allows possibilities to obtain a better support from the States due to lesser cost involved. In the other hand, the GREPECAS Procedural Handbook define the coordination mechanism (ICG) so as the ATM and CNS matters to be discussed by GREPECAS, are coordinate and adequate harmonized between them and with the other Contributory Bodies. Information on the ATM and CNS SG's coordination would be available at each ACG Meeting. Extensive use of internet facilities is considered according GREPECAS recommendation to eliminate costs.

Proposal No 3

To elevate to the category of Subgroups the ATM/COMM and CNS/COMM and establish the coordination arrangements as foresee in the GREPECAS handbook. This proposal is similar to the No. 1; however the coordination mechanism is let to the criteria of each Subgroup.

4. **Action Suggested**

4.1 The meeting may wish to consider the information presented in this working paper aimed at improving working arrangements for a more effective and coordinated implementation of ATM performance objectives in the CAR/SAM regions, currently being pursued under the ATM/CNS mechanism. In so doing the meeting is invited to:

- a) review the proposals presented in paragraph 3.3 above;
- b) if any of the proposals are accepted by the ACG/7 meeting, instruct the GREPECAS Secretary to document its for examination by the forthcoming GREPECAS/15 meeting and to seek the opinion of the ATM/CNS/SG/6 meeting; and
- c) propose other proposals as necessary.

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APPENDIX A

AIR TRAFFIC MANAGEMENT/COMMUNICATIONS, NAVIGATION AND SURVEILLANCE SUBGROUP (ATM/CNS/SG)

1. Terms of reference

- a) To promote and follow-up the implementation of the CNS/ATM systems required in the CAR/SAM ANP and to place special emphasis on identifying, evaluating and proposing, according to the established procedures, the corresponding corrective actions to the /deficiencies affecting air operations.
- b) To carry out permanent coordination with various GREPECAS Contributory Bodies in order to ensure appropriate integration of all tasks contributing to the implementation of the CAR/SAM ANP.
- c) To develop and harmonize, in the CAR/SAM Regions, action plans to facilitate implementation of CNS/ATM systems, in order to reach a consistent and coordinated implementation, especially in multinational projects of regional/inter-regional nature, taking into account homogeneous areas and main air traffic flows contained in the CAR/SAM FASID.
- d) Taking into consideration the material prepared by the different ICAO groups of experts in the CNS/ATM field, develop guidance material to keep and upgrade the technical and operational quality for the provision of CNS/ATM services.

2. Work programme

TASK NUMBER	TASK DESCRIPTION	PRIORITY	DATE	
			START	END
ATM/CNS/1	Follow up, coordinate and manage the work of the CNS and ATM Committees.	A	Permanent	
ATM/CNS/2	To establish inter- and intra-regional coordination on CNS/ATM systems applications.	A	Permanent	
ATM/CNS/3	To inform on the development of the new air navigation systems, SARPs development, as well as the work of the ICAO CNS/ATM Groups of Experts.	A	Permanent	
ATM/CNS/4	Refer urgent (U) priority deficiencies, with proposed corrective action, to the Aviation Safety Board.	A	Permanent	
ATM/CNS/5	Supervise the work programme of the Automation Task Force	A	Permanent	

- END -