

CNS/ATM Seminar on Institutional and Economic Considerations

(Tegucigalpa, Honduras, 30 September – 4 October 2002)

Report

1. Venues

1.1 A CNS/ATM Seminar on Institutional and Economic Considerations was held in Tegucigalpa, Honduras from the 30th of September to the 4th of October 2002. This Seminar organized under the auspices of ICAO Project RLA/98/003 was gracefully hosted by COCESNA.

1.2 The Seminar was officially opened by Mr. Carlos Stehli, Deputy Director of the ICAO Lima Regional Office and Mr. L. E. Marin Executive President of COCESNA. 58 people representing 18 States and 8 international organizations attended the Seminar.

1.3 **Appendix A** presents the Agenda and **Appendix B** a partial list of participants.

2. Agenda Items and Topics

2.1 The Agenda included 5 Agenda Items divided into topics and a Discussion Panel. The following paragraphs summarize the topics and presents comments resulting from the Discussion Panel.

2.1 General Considerations related to the Institutional Aspects

2.1.1 On this agenda item, ICAO presented a general overview of the present status of the RLA 98003 activities as well as information on the ICAO Policy and Institutional Guidelines for the implementation of the CNS/ATM Systems. In addition, a review was made of the main worldwide and CAR/SAM Regions events including milestones that could be of interest for the understanding and discussion of the Seminar's agenda items.

2.1.2 The President of COCESNA made a comprehensive explanation of its Organization, stressing its role as an integration tool of Central America Air Navigation Systems and as an international/multinational ANSP that could be considered as a model to be adapted to the SAM and CAR CNS/ATM scenarios.

2.1.3 Afterwards an interesting set of presentations was made by private and corporate national and international organizations stressing the need to improve the efficiency and effectiveness of the ANS. The concept of "SINGLE SKY" was presented and discussed as well the need to develop global and regional institutional models for the ANSP. Considerations were made on the merits of separation of the regulator and service provider activities.

2.2 Institutional Issues and Systems

2.2.1 Under this agenda item, important presentations were made by EUROCONTROL, highlighting the different aspects of its airspace management, mainly concerning the institutional and legal aspects, development and current status of the European ANS with its peculiarities and difficulties. It was observed that the European experience of EUROCONTROL as a multinational ANSP organization certainly would need to be taken in consideration in the study of the CAR/SAM possible options.

2.2.2 A presentation on the legal and institutional aspects concerning the provision of CNS/ATM and GNSS at the global and regional level was made and generated a lot of interest but also raised many questions by the participants.

2.2.3 FAA, of United States, gave the seminar an update on the status of the developments of the GNSS with its augmentation GBAS and SBAS. The Seminar was informed on the WAAS and GBAS trials being performed in the CAR/SAM Regions, under RLA 00/009.

2.2.4 Furthermore, International Organizations, such as SITA, and nationally corporative bodies, such as AIRWAYS INTL, New Zealand, provided the meeting interesting insight of their organizations.

2.3 CAR/SAM CNS/ATM current and future Institutional Issues and States/organizations/Territories experiences and Plans

This agenda item was dedicated to the CAR/SAM environment.

2.3.1 First, ICAO made presentations informing the group on the outcome of the RAN CAR/SAM 3 and the recent GREPECAS meetings and activities, explaining the contents of CAR/SAM ANP and the FASID. Also information was given on the progress and experiences in the CAR Region on Institutional arrangements. Finally a presentation was made on the studies being performed by the RLA 98/003 concerning the application of Directives on Multinational Facilities and Services in the CAR/SAM Regions as well as envisaged institutional aspects relating to the implementation of the CNS/ATM Systems. It also provided information on the methodology being used to establish the most advisable multinational organizational arrangements as well as a list of services/facilities that would be good candidates and benefit if operated by means of a regional or sub-regional mechanism.

2.3.2 Subsequently four States (Argentina, Brasil, Chile and Colombia), made presentations on their activities related to their national CNS/ATM implementation plans as well as making some comments on their views of institutional issues.

2.4 Discussion Panel Comments

2.4.1 Four themes were proposed to the Discussion Panel.

Theme 1 Evaluate from a technical and operational standpoint the advantages of sharing the resources of the States and Organization, considering the capabilities of the new systems. Chaired by R. A. Salvati (Argentina)

While the meeting recognized the expected capabilities of the new technology it also observed that in many instances, there were still some uncertainties that prevented them from making major commitments and investments concerning the implementation of new systems. Many States are doing their utmost to maintain the present equipment until such times, as those issues are resolved. The de-activation of systems must be carefully planned and in phase with adjacent Regions and users.

It was suggested that a survey be made detailing the strengths and weaknesses of each and every State in the Region and then, as a result of the above, propose more direct strategy, taking advantage of those strengths to foster further improvements. To continue to invest in systems without a major plan can lead to wastage and duplication of systems. ICAO must provide a clear vision and promote a systematic approach to the implementation of available technology.

In that respect, it was observed, that while the technology was available, its capability to meet requirements was still an issue, as such, it was difficult for States to make decisions. To facilitate the evaluation and planning process, there should be a mechanism i.e. a journal or WEB Site where States could share their experiences and prevent the repetition of costly errors. Furthermore, ICAO should further study and inform States on possible multinational arrangements necessary for the implementation of systems and services.

Theme 2 Consider the possible advantages of system and service implementation and financing through multinational arrangements, in view of their high cost.

Chaired by Mr. A.M. Pequeno (Brasil)

Recognizing that many of the systems used in the provision of CNS/ATM do, by nature, require multinational arrangements it was also observed that other application could benefit from the sharing of expensive resources. Noting that this vision in the provision of facilities and services was, except for COSESNA, new in the Regions, there was a need to draw on the experiences of others (EUROCONTROL). ICAO, as such should undertake through GREPECAS, its Sub-Group, Task Forces and Project undertake the necessary studies and provide guidance in these matters. In addition, an information center would be most useful to keep State Planners of their evolution.

As mentioned above, it would not be possible for anyone State to provide all that is needed for CNS/ATM. As such, GREPECAS should undertake to review those systems that by nature must be shared and suggest most appropriate arrangements for the operation and administration of those systems. This could possibly lead to the establishment of a Regional Implementation Organization or Executive Organization that would develop detail plans and monitor implementation of those Regional Functions in addition to coordinating related State implementation activities.

While this new vision in the provision of facilities and services is very pragmatic and logical, it will meet with some political resistance. It is up to the planner to convince the decision makers through Scenarios, Costs and Benefits analysis showing the advantages as well as the disadvantages of such approaches. This reluctance is not new and EUROCONTROL is a good example on how these divergences were resolved for the good of the aeronautical community. **Political Will and cooperation are a must if CNS/ATM is to succeed.**

Theme 3 Considering the involvement of many States and Organizations in the provision of facilities and services analyze what type of organization/administration would be necessary to make it acceptable. Chaired by Mr. L. Rossi (Chile)

Considering the many different types of institutional arrangements available, careful considerations must be given to their viability (self financing), political acceptability and ability to perform effectively at the operational and technical level. In this regard, considering that systems such as REDDIG, CARSAMA, ATFM, etc. are already being implemented, ICAO should undertake to study and propose arrangements that could be suitable, keeping in mind that this could form the base or at least be used as a benchmark for the development of a future regional arrangement that could include other applications.

It goes without saying that situations, conditions and needs differ from State to State and as such the organizations should have the necessary flexibility to adapt in general and in a case by case situation.

Considering the vast experiences of international organizations involved in the provision of facilities and services they should be invited to actively participate in the elaboration of arrangements. In line with the above, their participation should be one of proposing approaches, technical/operational solutions but not to the extent that they would overly influence the decision. States must strive to have as many options as possible and be the sole master of the final decision.

Theme 4 Considering that this new approach to the provision of facilities and services will be very different from the present ones, what difficulties are foreseen in making this transition. Chaired by Mr. E. G. Rivera Flores (Colombia)

In the past technical improvements were gradual and as such, could be addressed one by one over time but the introduction of CNS/ATM is a completely new way of providing facilities and services and along with it a complete new set of inter-related problems among which is the issue of sovereignty. Whether it is a real problem or a perceived problem it must be addressed. It is a reality and failure to deal with it adequately could jeopardize the realization of a global seamless ATM system. All must be onboard. It was repeated that Article 1 of the Convention was very clear on that issue just as much as Article 28 which says that a States is always the end-party responsible. Furthermore, the fact that a State gives permission to another body to perform some functions is an act of sovereignty in itself.

Keeping the above in mind, whatever arrangement is consider it must include the necessary measure to further ascertain State sovereignty in order to eliminate any doubts that might still persist since failure to do so might eliminate the necessary “Political Will” to implement CNS/ATM.

2.5 Finance and Economic considerations

2.5.1 Under this Agenda item, the seminar was briefed on the commercialization of facilities/services and its related transition including issues concerning the current ATM financial framework. This presentation was performed by AIRWAYS INTL, New Zealand, which made some interesting comments on their experience as a national State owned corporative ANSP organization.

2.5.2 Furthermore, ICAO made a presentation on financial and economic considerations relating to CNS/ATM implementation and the CNS/ATM PET (Planning and Evaluation Tools), was

introduced to the audience as an important element to help the States perform Cost Benefit Analysis and Business Cases for the implementation of the CNS/ATM elements. A session was dedicated to comments on the advantages and difficulties in the development of business cases. Samples of study cases were presented on the subject.

3. Conclusions of the Seminar

3.1 On this final phase of the Seminar, the participants were informed on the future plans and work programs of the RLA 98/003 and a summary of the discussions/conclusions of the Seminar as follows:

- **The global nature of the CNS/ATM requires institutional arrangements different from those existing in the CAR/SAM Regions.**
- **The study of institutional aspects should lead to a decision process on institutional implementation options.**
- **The options adopted must address critical areas and criteria.**
- **The options should give due considerations to the operational, technical and economical viability criteria.**
- **The final decision will be political.**
- **Therefore, the need for States to have political will to implement CNS/ATM.**

4. Recommendations

4.1 Institutional and economic issues were new subjects for most of the participants. The level of interest was very high and so was the need to cover in more details, Institutional, legal and financial considerations and planning through additional Seminar/Workshops. In line with the above, the following recommendation has been formulated:

Recommendation 1: Additional Seminars/workshops on Institutional, Legal and Economic and financial planning.

That the Project Coordination Committee includes in the next work programme additional seminars on Institutional, Legal, Economic and Financial Planning as applied to CNS/ATM implementation in the Regions.

4.2 The seminar noted that Regional CNS/ATM systems elements were already being implemented and that no official long-term structures are yet in place to finance, administer and operate these systems. Furthermore, it observed that the temporary delegation of those functions to different States was not conducive to the establishment of an arrangement that will, over time, be able to group these different elements. To this effect, it formulated the following recommendation.

Recommendation 2: Investigation and evaluation of Multinational Arrangements for the Financing, Administration, and Operation of Regional facilities and services.

That GREPECAS urgently undertake to:

- a) Review Regional CNS/ATM systems elements that could and should be administered and operated through a multinational arrangement; and

- b) Study possible multinational arrangements that could effectively fulfill the long-term role of administering and operating Regional facilities or systems;
