

**International Civil Aviation Organization
UNDP/ICAO RLA/98/003 REGIONAL PROJECT
Transition to CNS/ATM Systems in the CAR/SAM Regions**

Visits to States

1. Visit Program

1.1 Two meetings were held in each visit. One for high level managing personnel of each State and another for the technical/operational staff involved in the CNS/ATM planning and implementation activities.

1.2 The presentations included the following topics:

- Status Report on the activities developed by the Project, including details on the tasks associated with the different phases of the project and their evolution. In addition, summary information on Planning and Evaluation Tools (CNS/ATM PET) for the implementation of CNS/ATM systems was presented.
- ICAO's Global and Regional planning activities with emphasis on the FASIDs contained in Volume 2 of the Regional Air Navigation Plan. In addition, specific details were given on the Project activities related to the implementation of RNAV-RNP so far carried out and RVSM activities, which is in the process of implementation.
- Institutional arrangements to facilitate the implementation of CNS/ATM elements, as well as a review of the pertinent Articles of the Chicago Convention highlighting the sovereignty of States, territory, privileges and responsibilities, etc. This presentation highlighted the fact that institutional arrangements should be established based on a regional coordination in order to avoid a proliferation of disjointed institutional arrangements, which could increase the cost and complicate the co-ordination for the implementation of multinational facilities and services.
- Detail of the on-going and future activities required for the achievement of a "Global Seamless ATM" system and the strategies to be used taking into consideration the present financial condition of States and Airlines, the uncertainties of some CNS elements and the results of the scheduled 11th Air Navigation Conference (November 2003). In line with the objective of a "Global Seamless ATM" it was noted that this could only be achieved through the interconnection of all ATM automated systems and the creation of appropriate databases. As an initial activity to achieve the above, it was indicated that a complete audit of all automated systems used in the Regions for the provision of Air Navigation Services (ANS) should be carried out and that an "ATM Automation Test Bed" be established to verify system connectivity and harmonization of procedures. Finally, it was observed that

some form of an executive co-coordinating committee would likely be required in order to ensure the timely and coordinated execution of the tasks.

1.3 Each session was terminated with an informal discussion on the topics presented above, as well as the exchange of information concerning their activities related to the planning and implementation of CNS/ATM in their State.

2. General Comments

2.1 The States participation was excellent even though in some cases, it was not possible for the Director Generals to attend the complete session. The presentations were well attended and the achievements of the project to date appreciated, even though it was observed that most of the benefits accruing so far were mostly for the airlines.

2.2 While all States agreed on the need for Institutional Arrangements in the provision of facilities and services, they were still very cautious as to the final determination of these matters. Furthermore, it was recognized that a proliferation of independent arrangements would complicate the efficient operation of a “Regional Seamless ATM” system.

2.3 As for the future, they agreed on the need to be cautious pending the resolution of some of the uncertainties associated with some CNS elements and the need to insure financial readiness and the most adequate political decision.

2.4 Recognizing the difficulties that could be incurred in interconnecting automated systems; States were almost unanimous in the need for setting up an “ATM Automation Test Bed” to gain experience and detail steps and procedures for the eventual interconnection of all the regional systems.

2.5 Even though most States have already produced their CNS/ATM National Plan, they are not in a position to publish it, as they require the approval from their respective administrations.

3. Specific Comments by States

3.1 Peru

3.1.1 Considering the recent re-organization of the DGAC and CORPAC, and the relatively recent appointments of the new officers, there were not too many comments forthcoming.

3.1.2 Part of the attendees were from the airlines who expressed concerned about the possible high cost of the new systems which might translate into increased user charges. In addition, they also observed on the very high cost of upgrading and certifying their aging fleet for RVSM.

3.1.3 The meeting was informed that the CNS/ATM Transition National Plan was in the process of being reviewed and once approved, will be published.

3.2 Chile

3.2.1 Some concerns were expressed with regard to the integration and harmonization of systems and procedures noting that the already proliferation of communications systems such as REDDIG, MEVA, E/CAR would complicate their integration and might affect final performance.

3.2.2 It was well accepted that an “ATM Automation Test Bed” should be setup to further detail the transition activities that would be required in interconnecting automated systems at the hardware, software, communication and application levels.

3.2.3 They commented on the value of using such a tool as CNS/ATM PET to develop scenarios, verify their viability, highlight the critical parameters and assist in the determination of required cash flow throughout the life cycle of the planning period.

3.2.4 Chile informed the team that while the CNS/ATM National Plan has been completed and a costs and benefits analysis is being performed It will require Government approval before it is published.

3.3 Argentina

3.3.1 In general, very positive comments were made concerning the project and more specifically with regard on the need for institutional arrangements.

3.3.2 Having just completed the implementation of a new ACC Automated System they were very favorable in participating in an “ATM Automation Test Bed” noting that already arrangements have been made for sharing radar data with Uruguay.

3.3.3 With regard to the legal aspect, Argentina is still not very clear as to its implications and will further pursue the matter.

3.3.4 Argentina has already completed the development of their CNS/ATM National Plan but is awaiting government approval prior to its publication.

3.4 Brazil

3.4.1 Brazil recognized the value of institutional arrangements and suggested that REDDIG could be a good start in setting up the necessary framework within which all future arrangements would be treated.

3.4.2 It was also observed the need that the CNS/ATM transition consider the general aviation operating in the Regions, failing to do so might necessitate the retention of conventional systems.

3.4.3 As part of the planning, it observed the lack of details on the mitigation procedures that would be used in case of non-performance at all levels (systems, administration, operations). The meeting was informed that this matter would be given special attention.

3.4.4 As for the other States, the CNS/ATM National Plan has been completed but not approved yet.

3.5 Paraguay

3.5.1 Very favorable general comments were made about the achievements of the project but not specific observations. The attitude was very positive but could detect some hesitations as to the future steps that will be taken by the State with regard to CNS/ATM implementation.

3.5.2 Paraguay is also concerned about the legal implications related to the provision of services using multinational and or services provided by foreign organizations.

3.5.3 Paraguay also suggested that considering the fast pace of changes related to CNS/ATM, it would be useful if ICAO was to setup a WEB page to inform States on technical issues, activities carried out by the organization and other States on CNS/ATM matters etc.

3.5.4 The CNS/ATM National Plan is not yet completed.

4. Summary and Conclusions

4.1 The State visits have been very beneficial enabling the Project to establish contacts with State Planners that will need to be extensively involved in:

- the development of scenarios;
- the establishment of institutional arrangements;
- the implementation of automated systems, including the setup of an “ATM Automation Test Bed”.

4.2 The proposition to establish an executive body to oversee the implementation and coordination of CNS/ATM should be examined and along with it, the elaboration of mitigation means and procedures.

4.3 Taking into consideration that National Plans for the transition to CNS/ATM are still in most cases being prepared, reviewed, or in the approval process, further follow-up with States is required before any meaningful scenarios can be developed since the needs of States are an integral part of the planning process.

4.4 Included for further consideration is also the need to give due consideration to:

- fleet readiness in the determination of the RVSM implementation date;
- general aviation as a significant user community of ANS;
- establishment of an institutional framework to protect against the proliferation of administrative and operational arrangements of CNS/ATM elements during the transition period and pending the establishment of a permanent multinational arrangement;
- conducting additional seminars/workshop concerning legal, institutional and economic issues; and
- the setting up of a WEB page to inform States on CNS/ATM technology evolution and related activities.
