

RAAC/6 REPORT

INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF THE SIXTH MEETING OF CIVIL AVIATION AUTHORITIES OF THE
SAM REGION**

(RAAC/6)

(Panama, Panama, 18 to 20 August 1999)

August 1999

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HISTORY OF THE MEETING

ii.1 PLACE AND DURATION OF THE MEETING

The Sixth Meeting of Civil Aviation Authorities of the SAM Region was held in the city of Panama, Panama, at the premises of the Continental Hotel. The Meeting commenced on 18 August and ended on 20 August 1999.

ii.2 OPENING CEREMONY AND OTHER MATTERS

Mr. Renato Claudio Costa Pereira, Secretary General of the International Civil Aviation Organization, welcomed all participants to this Sixth Meeting, on behalf of the Organization.

Then, Lic. Eustacio Fábrega, Director General of Civil Aviation, on behalf of his Administration expressed the honour of hosting this important event and wished all participants a happy stay in Panama.

Mr. Paulo Imre Hegedus, Regional Director of the ICAO South American Office, expressed the sincere thanks of the Organization to the Government of Panama for hosting the Meeting, and emphasized its scope and the importance of the topics to be discussed and wished the Meeting all success in the work entrusted to it.

ii.3 ORGANIZATION, OFFICERS AND SECRETARIAT

Mr. Eustacio Fábrega (Panama) was elected Chairman of the meeting and Mr. Jose Luis Harmes was elected Vice Chairman. Mr. Paulo Imre Hegedus, Secretary of the Meeting, was assisted by Mr. José Miguel Ceppi, Deputy Regional Director and Mr. Onofrio Smarrelli, CNS Regional Officer of the ICAO SAM Office.

ii.4 WORKING LANGUAGES

The working languages of the Meeting were English and Spanish. The documentation and the report of the Meeting were issued in these two languages.

ii.5 AGENDA

The Meeting approved the Agenda, as presented.

Item 1: Privatization and its impact on international aviation safety**Item 2: Regional Activities that will comprise the following matters:**

- a) Regional safety oversight cooperative programme in the CAR/SAM Regions;
- b) Planning and Implementation of the CNS/ATM Systems;
- c) Third CAR/SAM Air Navigation Meeting;
- d) Problems related with the Year 2000 (Y2K) Regional Contingency Plan;
- e) Pan American Civil Aviation Institute;
- f) Resolution A 32-1 of the ICAO Assembly: Increasing the effectiveness of ICAO (measures for continuing improvement in the 1999-2001 triennium and beyond); and
- g) World Radiocommunication Conference (CMR-2000) of the International Telecommunication Union (ITU).

Item 3: Other matters**ii.6 ATTENDANCE**

The Meeting was attended by 46 representatives of 15 States and four delegates of two International Organizations.

ii.7

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LACAC

ORGANIZACION DE AVIACION CIVIL INTERNACIONAL
Oficina Regional Sudamericana

SEXTA REUNION DE AUTORIDADES DE AVIACION CIVIL
DE LA REGION SAM

(Panama, Panama, 18 - 20 de agosto de 1999)

ORDEN DEL DIA No. 2

- | | | |
|----|-------------|---|
| 1. | 0900 - 1030 | Asunto 2 b) - NE/05, NE/12, NE/13, NE/16, NI/07,
Asunto 2 c) - NE/06
Asunto 2 d) - NE/07, NI/03 y NI/08 |
| | 1030 - 1100 | Pausa para café |
| 2. | 1100 - 1230 | Asunto 2 e) - NE/08
Asunto 2 f) - NE/09 |
| | 1230 - 1300 | Pausa para café |
| 3. | 1300 - 1430 | Asunto 2 g) - NE/10 y NE/15
Asunto 3 - NE/11, NE/14, NE/17, NI/09 |

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
SOUTH AMERICAN OFFICE**

**SIXTH MEETING OF CIVIL AVIATION AUTHORITIES OF THE
SAM REGION**

(Panama, Panama, 18 - 20 August 1999)

ORDEN OF BUSINESS No. 2

- | | | |
|----|-------------|---|
| 1. | 0900 - 1030 | Item 2 b) - WP/05, WP/12, WP/13, WP/16 and IP/07
Item 2 c) - WP/06
Item 2 d) - WP/07, IP/03 and IP/08 |
| | 1030 - 1100 | Coffee break |
| 2. | 1100 - 1230 | Item 2 e) - WP/08
Item 2 f) - WP/09 |
| | 1230 - 1300 | Coffee break |
| 3. | 1300 - 1430 | Item 2 g) - WP/10 and WP/15
Item 3 - WP/11, WP/14, WP/17 and IP/09 |

Item 1: Privatization and its impact on international aviation safety

1.1 The review of this agenda item began with an analysis of the concession processes in 57 airports belonging to South American States. The analysis included type and period of concession, the areas handed over, airport authorities, income earned by the awardee, income earned by the State and rate system. This information is contained in **Appendix A** to this part of the report.

1.2 The meeting recognised that air transport in the region was strictly circumscribed to State economic development policies and, based on these, airports had been incorporated into the services susceptible of being “privatised” within the framework of globalisation and increased economic flexibility, placing them in the list of state entities that should be handed over to the private sector, together with telephone companies, seaports or electric power generation and distribution companies.

1.3 One of the problems faced by civil aviation administrations related to gaining access to high government authorities, especially those responsible for public finance, to make them aware of the problems of air transport and the resources that these organisations require to provide a safe, cost-effective and efficient service. Likewise, aeronautical authorities should work in close collaboration with State entities in charge of the privatisation process.

1.4 During the discussion, most of the States attending the meeting shared their experience with airport privatisation or concession, and exchanged viewpoints, especially regarding the control that aeronautical authorities should maintain, pursuant to the commitments undertaken under the Chicago Convention and its related documents.

1.5 It was stressed that ICAO does not foster airport privatisation processes, but rather the States themselves are the ones who freely and sovereignly define the economic policy to be applied in the air transport field, particularly regarding airport infrastructure management, which is kept in the hands of the State, handed over to private sector entities or carried out through joint ventures with third parties. The States, as signatories to the Convention on International Civil Aviation, cannot waive their responsibility for enforcing the standards, recommended practices and procedures related to this instrument of international law. Furthermore, safety should continue to be the main objective of all those involved in civil aviation, while preserving the other characteristics of the aeronautical activity. In view of that stated in the previous paragraphs, the Meeting felt advisable to adopt the following conclusion:

CONCLUSION 6/1 AIRPORT CONCESSION

The States of the Region are encouraged to:

- a) carry out the airport concession process independently from the process of privatisation of companies of a different nature; and
- b) include the national aeronautical authority in the airport concession committee.

1.6 Recognising the need for aeronautical authorities to establish internal mechanisms to supervise the airports managed by the private sector in order to ensure compliance with the aforementioned international regulations, the Meeting adopted the following conclusion:

CONCLUSION 6/2 AIRPORT SUPERVISION

That the SAM States, in order to monitor compliance with the standards and recommended practices contained in the Annexes to the Chicago Convention by the airports managed by the private sector, establish as soon as possible the appropriate mechanisms, providing broad airport supervision powers.

1.7 The meeting also agreed that one of the most outstanding characteristics of the airport privatisation process was that, in most cases, ground services and the commercial areas at airports had been given in “concession” for a specific period of time and under preestablished conditions; therefore, it was not a “pure privatisation” nor a total or partial transfer of assets, but rather a “temporary concession”.

1.8 The meeting also discussed the need to clearly distinguish between the two types of services provided at airports, that is, passenger services at the terminal and their resulting income, and air navigation services, for which passengers pay when purchasing their flight tickets from the airlines. Accordingly, the authorities of the Region should consider that civil aviation administrations started facing budgetary problems after the privatisation process because, previously, the income generated by the commercial areas at the terminal somehow subsidised air navigation services.

1.9 Since it was acknowledged that the problem described in the previous paragraph was affecting some States, the meeting stressed that airport privatisation or concession should not affect civil aviation administration resources earmarked for the provision of air navigation services. In other words, civil aviation administrations should have the adequate economic capacity to sustain its qualified technical staff and ensure equipment maintenance and replacement.

1.10 The meeting took note of the concern of the Secretary General of ICAO regarding airport privatisation processes, and of the corresponding actions he was submitting to the consideration of the ICAO Council:

- a) the need to establish a common language to explain the meaning of the terminology used by States in these processes;
- b) the adoption of actions aimed at raising the awareness of economic/financial authorities, both national and from international organisations, that were involved in these processes;
- c) the proposal of guidance material so that the States may stipulate in their request for bids the level of training required for professionals who will be designated as airport administrators or managers;
- d) the establishment of guidelines and mechanisms to assist States in the conduction of privatisation processes and/or remediation of possible distortions in the processes already carried out; and
- e) the creation of a committee composed of States, IATA and ACI, to study the problems involved in airport privatisation and to propose measures in keeping with that stated in the previous paragraphs.

1.11 The meeting unanimously felt that the actions proposed by the Secretary General, which appear in the previous paragraph, would open a path for settling most of the concerns of civil aviation authorities regarding this issue. It also agreed on the urgent need to adopt the aforementioned actions lest irreversible conditions might develop if they were not adopted in a timely manner. Consequently, the following conclusion was formulated:

**CONCLUSION 6/3 ACTIONS TO BE ADOPTED BY ICAO REGARDING
AIRPORT PRIVATISATION PROCESSES**

- a) Whereas:
 - i ICAO does not foster airport privatisation processes but rather the States themselves freely and sovereignly define the economic policy to be applied to air transport;
 - ii the States, as signatories to the Convention on International Civil Aviation, cannot waive their responsibility for enforcing the standards, recommended practices and procedures related to this instrument of international law; and
 - iii safety should continue to be the main objective of all those involved in civil aviation;

- b) the Civil Aviation Authorities of the South American Region: give their broadest support to the ICAO Secretary General so that ICAO may adopt, as soon as possible, the required measures set forth in paragraph 1.10 above.

1.12 Proceeding with the discussion of this agenda item, there was consensus on the need for civil aviation authorities to have detailed information available on each of the privatisation processes in the States of the Region, in order to apply said experience and results in future processes that might be undertaken. In line with the above, the following conclusion was adopted:

CONCLUSION 6/4 DRAFTING OF A SURVEY

That the ICAO Regional Office prepare a survey to collect full information on the various privatisation or concession processes carried out in the States of the Region, with the purpose of disseminating said experiences.

1.13 Finally, the meeting was informed that ICAO continues conducting the necessary studies to include airports and air navigation services in State auditing processes.

Item 2: Regional activities that will comprise the following matters:**a) Regional safety oversight co-operative programme in the CAR/SAM Regions**

2.1 In discussing this agenda item, the Meeting was reminded that, through the safety oversight programme, the ICAO contracting States ensure the effective compliance with the standards and recommended practices (SARPs) contained in the Annexes to the Convention on International Civil Aviation and related documents.

2.2 The meeting took note of the following actions carried out by ICAO on safety oversight matters:

- Establishment of a technical and financial contribution mechanism for the conduction of a programme to assess the operational safety status in the contracting States, on a confidential and voluntary basis (June 1995).
- Recommendation by the General Directors of Civil Aviation Conference on a Global Strategy for Safety Oversight to refine the aforementioned programme, identifying the need to establish a universal safety oversight audit programme to be carried out by ICAO, involving compulsory, systematic and harmonised regular audits of operational safety, and a higher level of transparency and dissemination of the results thereof (November 1997).
- Adoption by the ICAO Assembly, at its 132nd Session, of Resolution A32-11, creating a universal safety oversight audit programme and entrusting the Council with its introduction starting on 1st January, 1999 (September 1998).

2.3 At the same time, the United States Federal Aviation Administration (FAA) had established an international air safety assessment (IASA) programme for those States that had aircraft operators flying or intending to fly to or from said country.

2.4 As a result of these assessments, the FAA determined that air carriers in eight SAM States did not enjoy an acceptable level of safety oversight by their respective authorities and, therefore, would not be allowed to operate to or from the United States or the number of frequencies said carriers were allowed would remain frozen until the situation had been remedied. To date, only one of these States had been able to overcome the identified deficiencies and re-establish an acceptable level.

2.5 In view of this problem, the ICAO South American Regional Office, making use of all the mechanisms at its disposal, established a strategy based on the joint and co-ordinated efforts of ICAO's Regular Programme of Activities and Technical Co-operation Programme, in order to overcome the identified deficiencies.

2.6 Furthermore, it was recalled that the Fifth Meeting of Civil Aviation Authorities of the South American Region (1996), upon examining the level of compliance with the standards and recommended practices related to air safety in the SAM Region, requested ICAO to study the feasibility of creating a multinational organisation that would meet the common needs of the States in connection with the fulfilment of their responsibilities and, in the event of a positive result, that it take the necessary action for its establishment (Conclusion 5/10).

2.7 In response to this request, ICAO, through RLA/95/003 Project, established a Working Group which conducted a feasibility study on the establishment of the multinational safety oversight system, covering legal aspects, technical considerations, personnel availability, operational and organisational structure, long-term viability of the system and cost of an arrangement of this nature.

2.8 The aforementioned group, *inter alia*, concluded that the closest possibility for the establishment of the system was to take advantage of the framework provided by the Latin American Civil Aviation Commission, through an agreement with ICAO, and proposed a draft memorandum of understanding between LACAC and ICAO and draft regulations for the system. This memorandum was examined by the two organisations in successive meetings and was signed in the city of Montreal, on 1 October, 1998.

2.9 To complete the System documentation, LACAC drafted an agreement by virtue of which the interested States would become part of the Regional System, to become effective as soon as it had been signed by at least six States. Likewise, it was ratified that ICAO would be responsible for the administration of the System, through a trust fund agreement with the participating States. It was also noted that, to date, the following States had become part of the System: Argentina, Brazil, Chile, Ecuador, Paraguay and Peru. **Appendix A** contains a copy of the complete documentation of the System.

2.10 The Meeting also took note that the first regular meeting of the System's General Board was held on 29 June 1999 in Puntarenas, Costa Rica, with the participation of 6 member States, 9 observer States and 2 international organisations. On that occasion, Cuba, Dominican Republic, Guatemala, Panama, Uruguay and Bolivia also expressed their interest to participate in the System in the short term. As a result of said meeting, the annual programme of activities, shown in **Appendix B**, was approved.

2.11 On the other hand, the Secretariat informed the Meeting that, pursuant to the memorandum of understanding, ICAO had prepared the draft letter of agreement on trust funds and the regional technical co-operation project document that will uphold the operation of the regional system (RLA/99/901). Once approved, the aforementioned documents will be submitted for subscription by all the States adhering to the System.

2.12 During the discussion, several delegates emphasised the importance of the System and the role to be played by all the segments of the aeronautical community involved in the enhancement of safety oversight of air operations in the Region.

2.13 Likewise, the Meeting welcomed the information presented by the Delegate of Uruguay ratifying the willingness of his Administration to adhere to the System. In turn, the Delegate of France expressed his support to the work carried out in the Region in this respect and his interest in adhering to the System. Lastly, the Delegate of the United States expressed his support to the initiatives of the Region on this very important matter.

2.14 As a result of the discussion, and taking into account the importance of this issue, the Meeting encouraged the States of the Region that had not adhered yet to the System to do so as soon as possible and, accordingly, formulated the following conclusion:

CONCLUSION 6/5 ACCESSION TO THE REGIONAL SAFETY OVERSIGHT SYSTEM

The Sixth Meeting of Civil Aviation Authorities of the SAM Region encourages the States that have not yet adhered to the Regional Safety Oversight System to do so as soon as possible, by signing the relevant agreement with LACAC.

2.15 Likewise, the Meeting requested the ICAO South American Regional Office to keep the States informed about the actions being adopted by the Regional Safety Oversight System.

b) Planning and Implementation of the CNS/ATM Systems

2.16 The Meeting took note that the Fifth Meeting of GREPECAS gave its approval to the CAR/SAM Regional CNS/ATM Implementation Plan, and that the Eight Meeting of the Group approved the amended version consisting of two documents: the first containing a detailed description of the CNS/ATM concept and the way it would be applied in the CAR/SAM Regions; and the second, the Action Plan, giving details on the specific CNS elements to be implemented in order to meet air traffic management (ATM) requirements.

2.17 The Meeting also noted that the regional implementation strategy defined by GREPECAS was dependent upon ATM improvements and its communication, navigation and surveillance requirements. Likewise, it noticed that ATM improvements had been defined based on the main international traffic flows identified in homogeneous areas, and that the introduction of the new CNS elements should be gradual, bearing in mind the benefits they will provide to ATM and the savings they may offer to both system users and providers.

Regional CNS/ATM activities***Human resources and training***

2.18 The IC Subgroup, through a Task Force, is preparing a Manual on CNS/ATM Systems as a starting point for training human resources, consisting mostly, but not exclusively, of flight crews, air traffic controllers and technical support personnel. Thus far, Section I, “General aspects of the CNS/ATM systems”, and a “Glossary of terms” have been completed. Currently, work is being done on Sections II and III, corresponding to a curriculum and the psychological impact of automation, respectively.

Satellite-based augmentation system (SBAS) trials

2.19 In light of the offers made by the European Tripartite Group (ETC) and the United States Federal Aviation Administration (FAA) to carry out tests of the EGNOS and WAAS systems, GREPECAS considered their possible performance by common agreement with the CAR/SAM States, thus contributing to the establishment of the SBAS operational model being developed by the CNS/ATM/IC/SG. GREPECAS has urged the States in both Regions and ICAO, through its Regional Offices and, if appropriate, its Technical Co-operation Bureau, to provide the necessary support for carrying out these tests.

2.20 The IC Subgroup is co-ordinating the possible performance of SBAS/WAAS tests in two stages. The first stage would take place in the southern cone of South America and would require the installation of four WRSs, in addition to those already installed by Chile. The second stage would be carried out in northern South America and the Caribbean. It is important to emphasise that these tests would be performed under a Regional Technical Co-operation Project at a very low cost, inasmuch as both the WRSs and the technical personnel for the installation would be provided by the FAA. The CNS/ATM/IC Subgroup has scheduled the conduction of these trials for the second half of the year 2000.

RNAV trials

2.21 The CNS/ATM/IC Subgroup felt that it would be advisable to start taking advantage of the existing navigation capacity of the aircraft operating in the region, by making trials of direct routes between selected city pairs with long-haul flights. Use of these routes would not only benefit carriers in economic terms because of shorter flight times, but would also enable flight crews and air traffic controllers to gain experience in the use of these new systems and direct routes. For trial and demonstration purposes, flights between the following city pairs were chosen:

- a) Buenos Aires - Miami
- b) Sao Paulo - Miami
- c) Santiago - Lima - Miami
- d) Lima - Los Angeles
- e) Santiago - Los Angeles
- f) Caracas - Houston/Dallas

CNS/ATM pilot implementation project

2.22 Conclusion 2/14 adopted by the ALLPIRG/2 Meeting encouraged ICAO to develop a Special Implementation Project (SIP) for CNS/ATM pilot implementation within the context of the work of GREPECAS in the CAR/SAM Regions. In general terms, the aim of the SIP was to develop a CNS/ATM planning methodology, prepare guidelines on a business case and apply the methodology and guidelines to a given main traffic flow in the CAR/SAM Regions. A new role and scope for the PIRGs would also to be proposed, with emphasis on the economic aspects of CNS/ATM implementation.

2.23 After the corresponding approval by the ICAO Council, the pilot project was executed during the second half of 1998 and the first quarter of this year. A CNS/ATM planning methodology geared towards main traffic flows was developed with the following aim:

“To deliver a planning tool for studying the feasibility of door-to-door solutions in relevant traffic flows within areas defined as homogeneous, whose improvement would benefit both service users and providers from the operational and economic viewpoints, while maintaining or improving existing safety levels.”

Regional Project RLA/98/003, “Transition to CNS/ATM systems in the CAR and SAM Regions

2.24 The first meeting of the Project Co-ordinating Committee, held in March 1999 in Mexico City, decided to relate Immediate Objective No. 1 of the Regional Project to the results of the Special CNS/ATM Implementation Project (SIP) in the CAR/SAM Regions, whose final results were presented at the ALLPIRG meeting held in Montreal in April of this year.

2.25 The Co-ordinating Committee agreed that the CNS/ATM planning methodology prepared by the SIP could be used to validate ATM evolution and the CNS requirements for each of the 18 main traffic flows defined in the **CAR/SAM Regional CNS/ATM Implementation Plan**. It was also pointed out that a business case could be established for each of these main flows, according to the guidelines of the SIP itself.

2.26 The evaluation of all flows will be completed next year. It is important to emphasise the assistance required from the States in providing the necessary information for applying the methodology developed by the aforementioned SIP. Experts from the DGCA's who have been trained in the application of this methodology at the two workshops are being asked to provide this assistance.

2.27 The Fifth RAAC Meeting unanimously expressed its full satisfaction for the work being carried out by GREPECAS concerning CNS/ATM implementation, highlighting the implementation strategy (gradual introduction of the new elements) and the use of existing systems to make immediate ATM improvements. It was also noted that the activities being carried out by the Regional Project RLA/98/003 were contributing significantly to the advancement of CNS/ATM transition in the Regions.

2.28 In keeping with the foregoing, the Civil Aviation Authorities formulated the following conclusion:

CONCLUSION 6/6

SUPPORT TO REGIONAL CNS/ATM ACTIVITIES

The States of the SAM Region are encouraged to give all their support to CNS/ATM activities being carried out in the Region, particularly those related to:

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- a) tests and trials of satellite-based augmentation systems (SBAS);
 - b) tests and trials of RNAV routes; and
 - c) Regional Project RLA/98/003, Transition to the CNS/ATM systems in the CAR and SAM Regions.

Institutional aspects related to CNS/ATM implementation

2.29 The Meeting recognised that the global nature of the new CNS systems called for institutional arrangements different from those developed over the years for the current CNS system. Furthermore, the need for centralised control of some CNS elements, vastly enlarged service areas and a number of other characteristics of a global system sharply contrasted with the decentralised nature of the current CNS system in which the elements are generally provided, owned and operated by individual States.

2.30 The Meeting also noted that the FANS Committee had developed a number of institutional guidelines to be applied by States, service providers and users to assist them in developing acceptable institutional arrangements for these systems. Considering that these arrangements can take many forms, it was deemed advisable to assess the economic, institutional and political implications, using scenarios, so that States can be pro-active in the development of implementation, administration and operation schemes, rather than reacting too late to a situation that has been allowed to grow out of control.

2.31 The Meeting felt that, first of all, scenarios should describe how the CNS/ATM systems or portions thereof could be put together with elements provided by States, civil aviation administrations, international organisations, service providers and aircraft operators. Secondly, scenarios under which these systems would be administered and operated should be explored.

2.32 Based on the discussion, the Meeting decided that the necessary work would be done in two stages: a first stage would revolve around GREPECAS activities; and, the second, around a group of high-level experts from the States, convened by the ICAO Regional Office. In line with the above, the Meeting approved the following conclusions:

CONCLUSION 6/7 GUIDELINES FOR MULTINATIONAL FACILITIES AND SERVICES

That the Regional Office, through GREPECAS, consider the guidelines developed by ICAO and examine its applicability in the implementation of CNS/ATM systems in the SAM Region.

CONCLUSION 6/8 DEVELOPMENT OF SCENARIOS FOR THE PROVISION OF FACILITIES AND SERVICES

That the Regional Office, through GREPECAS, develop scenarios for the evaluation of issues related to the implementation, administration and operation of CNS/ATM systems, including their economic, institutional and political impact.

2.33 The Meeting unanimously agreed that the ICAO Regional Director for South America, in co-ordination with the States, should develop the Terms of Reference and Work Programme for a Regional Group on Institutional Aspects. Furthermore, once the work provided for in the conclusions contained in the previous paragraph had been completed, he should call upon the States for the establishment of said Group. Based on the foregoing, the Meeting developed the following conclusion:

CONCLUSION 6/9 MECHANISM FOR DETERMINING THE FEASIBILITY OF CNS/ATM IMPLEMENTATION

That the Regional Director of ICAO, in co-ordination with the States of the South American Region:

- a) prepare the Terms of Reference and Work Programme for the establishment of a Regional Group of high-level experts to study the feasibility of CNS/ATM implementation; and
- b) call upon the Regional Group referred to in the previous paragraph, once the work provided for in the conclusions contained in paragraph 2.32 above has been completed.

Digital network for the South American Region

2.34 The Meeting received detailed information on the project for the implementation of the SAM Digital Network (REDDIG). It was recognised that this network would substantially improve Aeronautical Fixed Service (AFS) communications, providing the following benefits:

- a) communication operations at a cost much lower than at present, through a modern digital network with homogeneous hardware and software functionality;
- b) more bandwidth capacity available for telephone, data and video traffic among the operational units of the States in the Region;
- c) personnel training and progressive transition from the current operational environment, characterised by the use of mostly manual procedures, to a new, more automated operational environment with inter-network services;
- d) digital platform for the gradual introduction of ATN; and
- e) network management functions and regional integration.

2.35 The Meeting took note that the following cities had been confirmed by the corresponding States as those where REDDIG nodes would be implemented:

Bogota	Lima
Brazilia or Curitiba	Maiquetía
Buenos Aires	Manaos
Georgetown	Montevideo
Guayaquil	Paramaribo
La Paz	Santiago

2.36 The Meeting also noted that the cost of the project per node was 271,843 U.S. dollars, to be paid in three instalments (169,177 in 1999; 85,354 in 2000; and 17,304 in 2001). The phases of the project are as follows:

- a) Preparation of detailed technical specifications (including satellite selection), tender documents, tender, and negotiation and awarding of the contract. During this phase, the Fourth REDDIG (REDDIG/4) Meeting will be held, where States will examine the final technical specifications.
- b) Installation of the REDDIG, personnel training, testing and start-up.
- c) Management of the REDDIG for six months. The network management plan most convenient for the States will be delivered as a result of this phase.

2.37 In view of the advantages to be derived by States from the economic and operational safety viewpoints due to the high level of efficiency and reliability of communication services through the REDDIG, the Meeting adopted the following Conclusion:

CONCLUSION 6/10**IMPLEMENTATION OF THE REDDIG**

In view of the economic and operational safety advantages to be derived from the prompt implementation of the REDDIG, the States of the SAM Region who have not yet done so are urged to assign high priority to their accession to the Project.

Duplication of efforts on CNS/ATM training

2.38 Proceeding with the discussions under this agenda item, the meeting turned its attention to the duplication of efforts for defining the requirements of CNS/ATM training for aeronautical personnel. Within this context, it was stated that there were different groups working on the same thing and with similar objectives, among them, the Human Resources and Training Task Force of the GREPECAS CNS/ATM/IC Subgroup, the Meetings of Aeronautical Training Centre Directors, TRAINAIR programme courses and the Study Group on Personnel Planning and Training of the Air Navigation Commission.

2.39 Following an extensive discussion on the matter, it was clearly stated that the training capabilities of the Region and the training developments in the various technical disciplines related to CNS/ATM systems as, for instance, aeronautical mapping, should not be subject to any restriction or limitation. Therefore, the Meeting considered that proper co-ordinations should take place to avoid the duplication of efforts aimed at the same objectives. Consequently, the following Conclusion was adopted:

CONCLUSION 6/11**CO-ORDINATION OF TRAINING ACTIVITIES**

That:

- a) ICAO analyse and co-ordinate the work programmes of the various groups dealing with issues related to CNS/ATM training, in order to avoid duplication of efforts; and
- b) State Members attending the meetings of the Groups mentioned in the previous paragraph co-ordinate beforehand their participation so as to derive maximum benefits from said meetings.

Technological development for the implementation of CNS systems

2.40 The Meeting took note of the need to implement a technological development programme for the new CNS systems in the Region, to allow States assimilate the latest technological developments. It was reported that this proposal had been submitted to the World CNS/ATM Conference held last year in Rio de Janeiro, Brazil.

c) Third CAR/SAM Air Navigation Meeting

2.41 Under this agenda item, the meeting was informed about the forthcoming Regional Air Navigation (CAR/SAM/3 RAN) Meeting and, accordingly, it suggested actions to be taken by States in preparation for participation in the regional planning exercise to be conducted at said RAN Meeting.

2.42 It was recalled that the last regional exercise of this nature was carried out at the Second Regional Air Navigation (CAR/SAM/2 RAN) Meeting, held in Santiago, Chile, in May 1989, which drew up the bases for the existing CAR/SAM regional air navigation plan, Doc. 8733. This Plan has been duly amended since then, insofar as possible, to keep regional planning up to date. The GREPECAS Group has played a major role in this procedure.

2.43 It was also noted that the CAR/SAM/3 RAN Meeting will be held in Buenos Aires, Argentina, from 5 to 15 October, 1999. The Meeting will examine aspects of air navigation services in the FIRs of the ICAO CAR/SAM Regions. In addressing the agenda, the Meeting is expected to produce revised and updated material for a new air navigation plan (ANP), which, once published by ICAO, will consist of two documents. The BASIC document will cover the permanent or almost permanent elements of the regional plan subject to the ICAO Council amendment process. The FASID document on facilities and services, for its part, will mainly contain information in the form of tables and charts regarding planned facilities and services, as furnished by each State/Territory in the CAR/SAM Regions. The FASID will be subject to a regional amendment process which will allow its contents to be kept up to date, for the most part. The new air navigation plan will draw, *inter alia*, from the following sources:

- a) specific changes in aircraft operations within the area under consideration (FIRs in the CAR/SAM Regions);
- b) developments related to the new CNS/ATM systems, including the incorporation of the CAR/SAM regional CNS/ATM implementation plan developed by GREPECAS in the new ANP;
- c) the elimination of air navigation shortcomings and deficiencies;
- d) the FASID structure; and
- e) preparatory work done by GREPECAS.

2.44 Likewise, a detailed discussion was held on the main developments expected in the various areas of air navigation services as a result of the CAR/SAM/3 RAN Meeting. A summary of these developments appears in **Appendix C** to this part of the Report.

2.45 The Meeting noted that, in view of the volume of information to be processed and the time that will be available for the CAR/SAM/3 RAN Meeting, an efficient and effective job by the various Committees that will be created during the meeting to discuss the different spheres of air navigation services (aerodromes, ATM, AIS, CNS, MET and SAR) must be guaranteed. In this sense, it agreed on the need for each State to review beforehand, and in as much detail as possible, the planning of its air navigation services as compared with the current ANP requirements. The purpose is to obtain updated requirements, with a view to developing air operations that are consistent with the concept of the ICAO new CNS/ATM systems. Likewise, and for the same reason, it deemed it necessary for States to send the appropriate persons in sufficient numbers to discuss the issues to be taken up under the agenda for the Meeting.

2.46 In this regard, the Meeting formulated the following Conclusion:

**CONCLUSION 6/12 REVIEW OF AIR NAVIGATION SERVICE REQUIREMENTS
AND PARTICIPATION OF STATES AT THE CAR/SAM/3
RAN MEETING**

That the States, in order to enable the CAR/SAM/3 RAN Meeting to work efficiently and effectively:

- a) make a timely review of their international air navigation service requirements for submission to the CAR/SAM/3 RAN Meeting, taking into account those resulting from the evolutionary implementation of the ICAO CNS/ATM system concept; and
- b) send experts in the various fields of air navigation as required for discussion of the agenda items for the Meeting.

d) Problems related with the Year 2000 (Y2K) Regional Contingency Plan

2.47 Upon starting the analysis of this item, the Meeting took note of the actions carried out by the ICAO Regional Office regarding the Y2K problem and the programme it had developed, which consisted of the following phases:

- a) **visit to the SAM States** to obtain information on the air navigation aid systems that could be affected by the Y2K problem and on the contingency measures to be adopted in the event of partial or total disruption of services, and to underscore the need to draft National ATS Contingency Plans.
- b) **holding of two informal ATS/COM/Y2K meetings.** The basic objective of these meetings was to draft a Regional Contingency Plan, which was completed during the second meeting. The meetings also served to refine the National Contingency Plans, which needed to be harmonised with the FIRs of adjacent States.
- c) **publication of the AIC and follow-up of actions taken by States.** The third phase of the programme consisted of the dissemination of the format to be used by States in the Region for publishing information about the Y2K problem and the contingency measures for ATS services and aircraft operators.

2.48 The Meeting also noted that all the States of the Region had completed their national ATS contingency plans and that most of them had published the Aeronautical Information Circular (AIC) containing the relevant information as required. It was also noted that Y2K co-ordination procedures envisaged the establishment of National Co-ordination Centres under the responsibility of each State, Regional Co-ordination Centres (the one corresponding to the SAM Region located in the city of Lima), and a Global Co-ordination Centre to be established at ICAO Headquarters in Montreal.

2.49 The Meeting was very pleased with the work carried out, and highlighted the timely formulation of contingency measures and the drafting of national and regional plans adopted by the States of the Region.

2.50 During the Meeting, some States provided updated information for insertion in the table presented as Appendix to WP/7. The resulting modified table is shown in **Appendix D** to this agenda item.

2.51 Some States expressed their concern regarding the information disseminated on Y2K-related actions being carried out. In this sense, the Meeting deemed it advisable for Civil Aviation Authorities, operators and other organisations concerned to make utmost efforts to inform the general public of these actions, thus avoiding distortions that hinder the proper development of this activity. Consequently, the Meeting formulated the following conclusion:

CONCLUSION 6/13 DISSEMINATION OF Y2K INFORMATION

That Civil Aviation Authorities and aeronautical service users provide proper, timely and precise Y2K-related information to the specialised mass media and the general public, using all of the means at their disposal.

2.52 On the other hand, the Meeting noted that certain applications, such as the AFTN and the ATS speech circuit networks, called for effective and global contingency measures, namely, the use of the SITA network and of an INMARSAT satellite telephone terminal, respectively. The effectiveness of these contingency measures will depend on the status of implementation in each State of the Region.

2.53 The Meeting underscored the importance of implementing the national Y2K co-ordination units in each State in order to co-ordinate the necessary actions before, during and after the critical hour, and to report to the regional co-ordination unit on the status in each country. In turn, the regional co-ordination unit will disseminate the information to all the States in the Region, the relevant organisations and co-ordination units from other regions.

2.54 Consequently, the Meeting formulated the following conclusion:

**CONCLUSION 6/14 REGIONAL Y2K CONTINGENCY MEASURES AND
IMPLEMENTATION OF NATIONAL CO-ORDINATION
UNITS**

That:

- a) the States of the Region adopt the relevant action for the implementation of regional contingency measures, such as the use of the SITA network and of an INMARSAT satellite telephone terminal, no later than 15 November, 1999; and
- b) the States set up national co-ordination units with the necessary equipment and staff to deal with any Y2K-related problems that might arise, and carry out the planned communications with the regional co-ordination unit, as established at the SAM informal Y2K meetings.

2.55 The delegates of Argentina and the United States informed the Meeting about the Y2K activities carried out by their States on this matter.

e) **Pan American Civil Aviation Institute**

2.56 The Meeting was informed that, in November 1996, the Government of Panama offered the facilities for the establishment of a regional institute of advanced civil aviation studies. On that occasion, the Panamanian civil aviation authorities and the Presidents of ICAO and LACAC agreed to establish a working group to define the objective, scope and terms of reference of said institute.

2.57 The Meeting noted that ICAO had gathered the necessary basic information to determine the demand for management-level training encountered by civil aviation institutions in the Region, both public and private. ICAO had also conducted a survey among the institutions of the sector, reaching the conclusion that said training was required by all the entities surveyed. The results of the survey are shown in **Appendix E** to this part of the report.

2.58 It was also stated that the Committee had found very few management-level training mechanisms in Latin America. It also identified the need for the establishment of an advanced training centre to prepare programmes and teach management-level courses to improve the management of activities in this sector.

2.59 As a result of the efforts of the working group, the conclusion was reached that it would be feasible to establish a Pan-American Civil Aviation Institute in Panama City as a non-profit international advanced civil aviation training centre, whose objective would be to: *“prepare, schedule and teach management-level courses, at the lowest possible cost, in order to improve the management of civil aviation activities, in keeping with the demand, striving for levels of excellence by engaging prestigious professors or instructors”*.

2.60 The Meeting was also informed that, broadening its support in order to enable PACAI to begin its operations, the Government of Panama, through the General Bureau of Civil Aeronautics, had granted the necessary financial support to equip the building that will host PACAI. The financial operation of PACAI would rely on contributions, donations and/or grants received from industry, government agencies, multilateral organisations, etc., together with the fees it would set for the training programmes to be offered.

2.61 The Sixth meeting of Civil Aviation Authorities expressed its deep gratitude to the Government of Panama for the effort displayed so that the CAR/SAM Regions could have an Institute for improving the management of civil aviation activities through management-level courses. It also extended its recognition to ICAO for the support it is providing to this important initiative. In view of the foregoing, the Meeting deemed it advisable to adopt the following conclusion:

CONCLUSION 6/15**SUPPORT TO THE PAN-AMERICAN CIVIL AVIATION
INSTITUTE**

The Sixth Meeting of Civil Aviation Authorities of the SAM Region, recognising the need to provide management-level training to the personnel from civil aviation entities, agrees to provide its full support to the development of the activities of the Pan-American Civil Aviation Institute “Assaid Kotaite”, expediting the participation of the professionals required as speakers for the courses it organises, and making use of the training programmes it fosters.

f) Resolution A 32-1 of the ICAO Assembly: Increasing the effectiveness of ICAO (measures for continuing improvement in the 1999-2001 triennium and beyond)

2.62 Emphasis was placed on the permanent concern of signatory States to the Convention on International Civil Aviation and of the Organization itself over this item.

2.63 Likewise, it was noted that the contracting States were concerned with the increasing costs of the UN System in general, and those of ICAO in particular, which had given rise to the adoption of a policy of strict control over the Organization's tri-annual budget, and the adoption of the "zero nominal growth concept" as a general criterion.

2.64 The meeting also noted that aviation was a basically dynamic and constantly growing activity, and thus required that all those participating in this activity double their efforts in order to fulfil the responsibilities assigned to each sector, with the efficiency required by the activity itself.

2.65 It was also recalled that this matter had been discussed during the last two ICAO General Assemblies, resulting in the adoption of Resolutions A-31/2 and A-32/1, on the improvement of the effectiveness of ICAO. The conduction of a complete re-engineering emerged as one of the main objectives.

2.66 On the other hand, the Meeting was informed of the activities of the Regional Offices and their planning processes, as well as of the difficulties being faced by the Lima Office and GREPECAS, especially regarding the actions resulting from the aforementioned Resolution A-32/1, which required an active participation by the States of the Region.

2.67 Upon reviewing the information on the performance of the SAM Regional Office, the actions emanating from GREPECAS and the new responsibilities recently assigned to said Office concerning the Regional Safety Oversight System, the Regional Technical Co-operation Project on the Transition to the CNS/ATM Systems in the CAR/SAM Regions and the Technical Co-operation Project for the implementation of the SAM digital network (REDDIG), the Meeting recognised the limitations of the SAM Regional Office in terms of facilities, staffing and financial resources.

2.68 As to facilities, the Meeting was made aware of the negotiations being held between ICAO and the authorities of the host State since the early 80's and the urgent need to find a solution to the current situation of the South American Office, consistent with current circumstances and needs.

2.69 Regarding staffing, it was noted that the Secretariat of the Organization, aware of this problem, had adopted the following measures:

- 1) temporary engagement of personnel to face specific emergency situations,
- 2) updating and streamlining of internal administrative methods and procedures at the Office; and
- 3) assigning special priority to the Regional Offices and considering that they should not be affected by some of the restrictive policies of the Organization.

2.70 Taking into account personnel and budgetary limitations, the Meeting adopted the following conclusion:

CONCLUSION 6/16 PERSONNEL AND FINANCIAL LIMITATIONS

To encourage States to:

- a) participate in the ICAO associated experts programme (short-term secondment of national officials, paid by the State under an agreement with ICAO, in those areas in which the Office has insufficient human resources to meet the needs of the Region; and
- b) continue supporting the meeting programme of the SAM Office and, thus, reduce their cost.

2.71 As to the work of GREPECAS, the Meeting welcomed an assessment being carried out on its efficiency and the measures to be implemented to overcome the deficiencies and difficulties in the operation of said Group.

2.72 Upon examining the operational and administrative problems which might be affecting the efficiency/effectiveness of the aforementioned Group, the meeting adopted the following conclusion:

CONCLUSION 6/17 OPERATIONAL AND ADMINISTRATIVE PROBLEMS OF GREPECAS

That States and the relevant Organisations be urged to adopt corrective measures to solve the following problems of GREPECAS:

-
- a) high turnover of members, delay in the designation of replacements and incomplete information from States or international organisations as to the identification of their designated members;
 - b) limited participation by members in the GREPECAS work programme and late delivery of documentation;
 - c) bulky documentation and reports for the meetings, delay in the distribution of documentation, work duplication within GREPECAS, insufficient control of the tasks assigned.

2.73 The Meeting emphasized the importance of the GREPECAS and its contributory bodies in the integration and harmonization activities of the intra-regional planning, particularly regarding air space boundaries between the CAR and SAM Regions.

2.74 Regarding the possibility of consolidating the regional offices, the meeting reviewed the background information, especially the criteria that led the Organization to select the current geographical distribution. It also considered the urgent need for ICAO to take into account the constant support that member States should receive from the Organization.

2.75 The Civil Aviation authorities showed interest that the States of the Region be timely informed on the surveys being carried out by ICAO, regarding the consolidation of the Regional Offices.

g) World Radiocommunication Conference (WRC-2000) of the International Telecommunication Union (ITU)

2.76 The Meeting took note of important aspects to be submitted to the forthcoming World Radio Communications Conference (WRC-2000), to be held in the city of Istanbul, Turkey, from 8 May to 2 June, 2000. These aspects were related to the worldwide radio frequency spectrum allocations to communication and radio navigation services and its repercussions on air traffic service support systems.

2.77 It was also noted that, due to the growing demand for radio frequency spectrum and the aggressive competition from commercial services, the ITU (International Telecommunication Union), which is the organisation in charge of regulating the use of the radio frequency spectrum, has been changing in recent years the primary radio frequency spectrum allocations, and those allotted to the safety services provided by aviation. The potential and growing problem now is the sharing of all or part of the allocation with non-safety services, like the aforementioned commercial ones.

2.78 The Meeting was also informed about the position to be adopted by ICAO before the WRC-2000, as contained in the appendix to WP/10. The Meeting expressed its concern regarding the possibility of an allocation to the mobile satellite service (MSS) in the space-ground direction within the band allocated on a primary basis to the radio navigation service and the satellite radio navigation service, a band reserved for the main elements of the GNSS.

2.79 The Meeting was informed that the establishment of allocations other than those on a primary basis in the aforementioned frequency band would affect the signals of the GNSS system and, thus, would jeopardise the use of this system in the air navigation field and would delay said application for many years.

2.80 The Meeting expressed its concern in this respect and recalled that ICAO participated in said world conference as an observer with no voting rights, although it could present its position. Therefore, utmost efforts should be made so that States may co-ordinate with telecommunication authorities in order to secure support to this position.

2.81 In view of the foregoing, the Meeting adopted the following conclusion:

**CONCLUSION 6/18 SUPPORT TO THE POSITION OF ICAO BEFORE THE ITU
WRC-2000**

That the States:

- a) work jointly and in a co-ordinated manner with ICAO in the preparation of their proposals, including, inasmuch as possible, material containing the position of ICAO;
- b) co-ordinate with the telecommunication authorities of each State in order to secure support to their position; and
- c) make utmost efforts so that the aeronautical sector is represented in State delegations attending the WRC-2000.

2.82 The Meeting noted that CITEL, through its Permanent Committee III, Radiocommunications, was preparing the position to be upheld by Latin American countries at the WRC-2000. The intention was to have a draft position ready for the meeting held by said Committee last April, in Costa Rica. It is important to mention that, taking advantage of the fact that all of the telecommunications authorities of the region participate in CITEL, aeronautical authorities should work in close co-ordination with them in order to ensure, inasmuch as possible, an effective support to the position of ICAO.

Item 3: Other matters*ATS incidents*

3.1 Upon examining this agenda item, the Meeting noted the great concern that exists in the region regarding the increased number of ATS incidents and their connection with the safety of international air operations. Therefore, concrete steps to overcome the existing deficiencies need to be taken.

3.2 Along this line of thought, it could be said that all of the States in the SAM Region investigate ATS incidents with varying degrees of speed and efficiency, according to the procedures and structure of each Administration. However, it was felt essential for SAM States to continue making efforts to establish and improve their ATS incident investigation programmes in order to clearly identify the causes of such incidents, and to take the necessary corrective measures, either increasing oversight and training levels, or reorganising the relevant units, so as to avoid a reduction of safety and efficiency levels.

3.3 Regarding the procedures used for reporting and investigating ATS incidents, the Meeting also felt that the relevant ICAO provisions were sufficient and adequate for the proper and timely reporting and investigation of incidents. The corresponding guiding material is contained in the Air Traffic Services Planning Manual (Doc. 9426, Part II, Section 1, Chapter 3) and in the PANS/RAC (Doc. 4444, Part II, par. 16 and Appendix 4).

3.4 The Meeting also analysed the importance for administrations to develop awareness-raising programmes for ATC personnel, encouraging their voluntary and spontaneous participation in the discussion of their own failures with no fear of punishment or penalties of any kind. The purpose of this awareness programme should be to improve service and to correct the identified failures. This should be an on-going and transparent policy of civil aviation administrations.

3.5 Finally, the Meeting felt that the States, together with the SAM Regional Office, should prepare an air traffic service quality assurance programme with the purpose of developing guidelines to improve reporting and investigation, and solving different kinds of ATS incidents that have a negative impact on the provision of ATS services. In this sense, **Appendix A** contains information on the Strategies and other issues to be taken into account in the programme.

3.6 In light of the information provided and considering the benefits that could be derived from the implementation and/or improvement of ATS incident investigation programmes and ATS operational quality assurance programmes, the Meeting adopted the following conclusions:

CONCLUSION 6/19 IMPLEMENTATION OF ATS INCIDENT INVESTIGATION PROGRAMMES IN THE SAM REGION

That:

- a) States in the SAM Region that have an ATS incident investigation programme in place do their utmost to improve the procedures used; and
- b) States that have not yet done so, establish an ATS incident investigation programme in order to determine and identify the causes of such incidents, take the necessary corrective measures, and thus avoid a decline of safety and efficiency levels.

CONCLUSION 6/20 IMPLEMENTATION OF AN ATS QUALITY ASSURANCE PROGRAMME

That the SAM States, with the assistance of the ICAO South American Regional Office, implement an ATS quality assurance programme and develop relevant guidance documents covering the purpose, goals, objectives and responsibilities of the programme in each State.

English language project

3.7 The Meeting took note of the research and development project for the identification of a minimum English standard for air traffic controllers and pilots, which is being prepared by the United States Federal Aviation Administration, with the support of the ICAO Lima and Mexico Offices and some Latin American States.

3.8 The Meeting was also informed that the data-collection phase had been completed in several Air Traffic Control (ATC) Centres of United States and Latin America, and that the data would be thoroughly assessed. This would permit the identification of a minimum standard for understanding and writing the English language.

3.9 The Meeting noted that the FAA had plans to present the results of its investigation to the ICAO Air Navigation Commission, as reference material for the possible drafting of an international standard. In this sense, the work presented was received favourably by the Meeting, since a standard of this nature would permit the establishment of objective training programmes for pilots and air traffic controllers. In view of the foregoing, the following conclusion was adopted:

**CONCLUSION 6/21 MINIMUM LEVEL OF ENGLISH REQUIRED FROM
CONTROLLERS AND PILOTS**

The Sixth Meeting of Civil Aviation Authorities endorses the presentation of material on a minimum level of English required from controllers and pilots to be made by the United States Federal Aviation Administration to the ICAO Air Navigation Commission for its consideration.

Three-dimensional aerodrome simulator project

3.10 The Delegate of Brazil informed the Meeting about the possibility of joint development of a 3D aerodrome control simulator between his Administration and other States that might express an interest in participating in this project. It was informed that the latter had been analysed at the Third meeting of Directors of Civil Aviation Training Centres (CIAC/3), held in Bogota, Colombia, in July 1999.

AIRPORT PRIVATISATION AND/OR CONCESSION IN SOUTH AMERICA

(Panama, Panama, 18 – 20 August 1999)

STATE	PROCESS/ AIRPORTS/ PERIOD	AREAS HANDED OVER	AIRPORT AUTHORITIES	AWARDEE INCOME	STATE INCOME	RATE SYSTEM
Argentina	*Concession *33 airports (32 handed over, 1 pending) (*) list below *Period: 30 to 40 years	All airport areas, except those corresponding to air navigation and airport security	*ORSNA (Regulates System and User Protection) *FAA (Air navigation and airport security) *Air-ports/2000 (Airport administration)	*Commercial/non aeronautical *Aeronautical ground support *Airport tax	*FAA (Flight protection and approach fees) *Annual tax (US\$ 171 million/year) *Investment (US\$ 2.3 billion)	*ORSNA responsible for regulating and approving airport and flight protection fees and charges
Bolivia	*Concession *3 airports (La Paz, Cochabamba and Sta. Cruz) *Period: 25 years	All airport areas, except those corresponding to air navigation	*DGAC *AASANA (Air Navigation) *Transport Superintendency (regulator and user protection) *FAB (AVSEC/Perimeter) *SABSA (Administration)	*Commercial/non aeronautical *Aeronautical ground support *Airport tax (US\$ 20 per passenger)	*AASANA (70% of flight protection fees) *Aeronautical fund (US\$ 5 of airport tax) *State (30% of flight protection fees) *Monthly tax of 20.3% of income *Investment: Maintenance	*Transport Superintendency responsible for regulating and approving airport and flight protection fees and charges
Brazil	*There have been no privatisation or concession processes. INFRAERO is in charge of the airport system, except for the Buzios and Porto Seguro airports, which from the very beginning have been private.					

(*) City of Buenos Aires, Bariloche, Comodoro Rivadavia, Córdoba, Esquel, Ezeiza, Formosa, General Pico, Iguazú, La Rioja, Mendoza, Posadas, Río Gallegos, Río Grande, San Fernando, San Luis, San Rafael, Santiago del Estero, Santa Rosa, Viedma, Villa Reynolds, Salta, Tucumán, Catamarca, Paraná, Río Cuarto, Resistencia, Jujuy, San Juan, Malargue, Puerto Madryn, Reconquista, Mar del Plata.

STATE	PROCESS/ AIRPORTS/ PERIOD	AREAS HANDED OVER	AIRPORT AUTHORITIES	AWARDEE INCOME	STATE INCOME	RATE SYSTEM
Chile	<ul style="list-style-type: none"> *Concession *10 airports (Iquique, Calama, Serena, Copiaco, Antofagasta, Santiago, Temuco, Concepción, Puerto Montt and Punta Arena) *Period: from 12 to 18 years 	All airport areas, except those corresponding to air navigation, airport security and rescue and fire fighting	*General Civil Aeronautics Bureau	<ul style="list-style-type: none"> *Commercial/non aeronautical *Aeronautical ground support *Airport tax (Fixed value ranging from 1.5 to 8 dollars per passenger) 	<ul style="list-style-type: none"> *DGAC (Aeronautical fees and charges) *Annual tax *Investment: 332 million US dollars 	*DGAC responsible for regulating and approving airport and flight protection fees and charges
Colombia	<ul style="list-style-type: none"> *Concession *2 airports (Cartagena and Barranquilla) *1 runway at Eldorado airport (operation and maintenance) *Period: 15 and 17 years 	All airport areas, except those corresponding to air navigation	*Special Civil Aeronautics Administration Unit	<ul style="list-style-type: none"> *Commercial/non aeronautical *Aeronautical ground support *Airport tax 	<ul style="list-style-type: none"> *Economic counterpart funds *Quarter-ly tax based on interest rate *1999 Budget: estimated income of 20 million dollars 	*Predetermined in the concession contract using indexation formula with inflation over time as the parameter
Ecuador	<ul style="list-style-type: none"> *Concession (the State creates corporations for each airport/ business feasibility study/operation of existing and building of new airports) *2 airports (Quito and Guayaquil) *Period: not defined 	All airport areas, except those corresponding to air navigation	*General Civil Aviation Bureau	<ul style="list-style-type: none"> *Commercial/non aeronautical *Aeronautical ground support *Airport tax 	<ul style="list-style-type: none"> *DGAC will receive taxes per passenger to maintain other airports *Commission on some services *Investment: to be determined 	*State responsible for regulating and approving airport and flight protection fees and charges

STATE	PROCESS/ AIRPORTS/ PERIOD	AREAS HANDED OVER	AIRPORT AUTHORITIES	AWARDEE INCOME	STATE INCOME	RATE SYSTEM
Guyana	*Concession (in process, to be defined *1 airport (Cheddi Jagan Intl.)	All airport areas, except those corresponding to air navigation	General Civil Aviation Authority	*Commercial/non aeronautical *Airport tax	To be defined.	State responsible for regulations and approving airport and flight protection.
Panama	*Concession (in process, to be defined on 28/10/99) *1 airport (Tocumen) *Period: 20 years	All airport areas, except those corresponding to air navigation	*DGAC *Tocumen Airport Authority	*Commercial/non aeronautical *Aeronautical ground support *Airport tax	*DGAC (share of landing fee) *Annual tax, 10 million dollar base, amount to be defined in adjudication *Investment: 250 million dollars for maintenance and replacement	*DGAC responsible for regulating and approving airport and flight protection fees and charges
Paraguay	*No privatisation or concession process planned.					
Peru	*Concession (in process) *5 airports (Lima, Cusco, Arequipa, Iquitos, Trujillo) *Period: 30 years	All airport areas, except those corresponding to air navigation	*OSITRAN *DGTA (CORPAC)	*Commercial/non aeronautical *Aeronautical ground support *Airport tax	*CORPAC (20% of airport tax) *50% of landing fee *Annual tax to be defined, base: 10 million dollars *Investment: 500 million dollar base	*OSITRAN responsible for regulating and approving airport and flight protection fees and charges
Suriname	*Concession to State- owned corporation * 1 Airport * 25 years	All airport area, except those corresponding to air navigation	*CAD * M.V. Suchthaven Beheer	*Commercial/non aeronautical *Landing fees *Fuel concession *Passenger facility charge (US\$20)	*Annual concession fee *Taxes on profit	*Landing fees and concession fee subject approval government. *Air navigation charges set and collected by DCA

STATE	PROCESS/ AIRPORTS/ PERIOD	AREAS HANDED OVER	AIRPORT AUTHORITIES	AWARDEE INCOME	STATE INCOME	RATE SYSTEM
Uruguay	<ul style="list-style-type: none"> *Concession (one in process) *2 airports (Montevideo and Punta del Este /Different bases) *Period: 25 years 	All airport areas, except those corresponding to air navigation	*DINACIA (DGIA)	<ul style="list-style-type: none"> *Commercial/non aeronautical *Aeronautical ground support *Airport tax 	<ul style="list-style-type: none"> *DINACIA (DGIA) *Income based on unit/freight one passenger or 100 kg./freight *5 million dollars a year expected *Investment: 165 million dollars minimum 	<ul style="list-style-type: none"> *Aeronautical authority responsible for regulating and approving airport and flight protection fees and charges
Venezuela	<ul style="list-style-type: none"> *Decentralisation *Concession (one airport regional government) 	All airport areas, except those corresponding to air navigation	<ul style="list-style-type: none"> *DGSTA *Airport Bureau 	<ul style="list-style-type: none"> *Commercial/non aeronautical *Aeronautical ground support *Airport tax 	<ul style="list-style-type: none"> *Regional government (unknown) 	<ul style="list-style-type: none"> *Aeronautical authority (DGSTA) responsible for regulating and approving airport and flight protection fees and charges

**SIXTH MEETING OF THE CIVIL AVIATION AUTHORITIES
OF THE SAM REGION (RAAC/6)**

**SEXTA REUNION DE AUTORIDADES DE AVIACION
CIVIL DE LA REGION SAM (RAAC/6)**

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(Panamá, 18 - 20 de Agosto de 1999)**

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MEMORANDUM OF UNDERSTANDING
signed between the Latin American Civil Aviation Commission and
the International Civil Aviation Organization
to promote the establishment of a regional safety oversight system

The Latin American Civil Aviation Commission, with headquarters in Lima, Peru, hereinafter called "LACAC," represented by its President; and

The International Civil Aviation Organization, with headquarters in Montreal, Canada, hereinafter called "ICAO", represented by the President of the Council,

hereinafter referred to as “the Parties”,

WHEREAS:

The Convention on International Civil Aviation has as one of its main objectives the safe and orderly development of international civil aviation, the fulfillment of the need of the peoples of the world for safe air transport, and the promotion of flight safety in international air navigation;

ICAO is the international body created by the Convention to handle the implementation and adoption of these principles and provisions and to adopt and amend, as needed, the standards, recommended practices and international procedures concerning personnel licensing, flight operations and aircraft airworthiness, among other matters connected with the safety, regularity and efficiency of air navigation;

ICAO Assembly Resolution A29-13 on the strengthening of safety oversight urges all States that are able to do so to furnish technical cooperation to those requesting it in the form of financial and technical resources, so that the latter States are able to fulfill their responsibility for monitoring the safety of their air carriers;

Article 4 of LACAC by-laws has as a main objective providing the civil aviation authorities of member States with an appropriate structure within which they can discuss and plan all of the measures required for achieving co-operation and for the co-ordination of civil aviation activities;

It is the responsibility of LACAC to promote agreements among the States in the region that will contribute to the best possible implementation of ICAO regional plans and the adoption of ICAO specifications regarding airworthiness, aircraft operations and personnel licensing;

Resolution A12-4 of the XII LACAC Ordinary Assembly, related to safety in the region, among other aspects, urges its member States to support the establishment of a regional multinational mechanism that may meet the needs shared by States concerning the fulfillment of their safety oversight responsibilities;

LACAC maintains close relations with ICAO to ensure the harmonization and co-ordination of its activities with ICAO objectives and plans;

The Conference of Directors General of Civil Aviation on a Global Strategy for Safety Oversight emphasized the need of co-ordinating and harmonizing the principles and procedures of assessing safety oversight at a global level, recognizing at the same time the advantages of following a regional focussing. In that context, the Conference recommended that ICAO promote the establishment of regional mechanisms with a view to achieving the long term support of safety oversight capability at a global level;

AGREE:

To sign the present Memorandum of Understanding to promote the establishment of a regional safety oversight system (hereinafter called “the System”) in the American Continent, based on the following:

First. The System will conform to the provisions on safety of the Convention on International Civil Aviation and its Annexes and will be compatible with the ICAO universal safety oversight audit programme (IUSOAP). In a first phase, the Standards and Recommended Practices in Annexes 1, 6 and 8 to the Convention, as well as associated ICAO procedures and guidance material will be considered. The organizational and operational procedures of the System are to be set out in the attached Regulations which shall be agreed upon between the Parties.

Second. The System shall have the following objectives:

- 2.1 To participate in the conduct of audits undertaken by ICAO under the ICAO universal safety oversight audit programme by providing qualified team members in accordance with the selection criteria established by ICAO.
- 2.2 To recommend the necessary measures so that States may overcome the problems detected during the audits and ensure compliance with their safety oversight responsibilities as Contracting States.
- 2.3 To increase the level of civil aviation safety within the region.
- 2.4 To foster, in close co-ordination with ICAO, the harmonization and updating of safety regulations and procedures for civil aviation amongst its participating States.

Third. ICAO shall have the following responsibilities:

- 3.1 To promote a multinational technical co-operation agreement in the form of a trust fund financed by the participating States, that will enable the launching of the System with the required technical, logistic and administrative support.
- 3.2 To manage and co-ordinate the trust fund based on the provisions contained in the complementary trust fund agreement.
- 3.3 To provide, in accordance with the ICAO universal safety oversight audit programme, the necessary technical support for the activities of the System.
- 3.4 To furnish the System with relevant information and documentation.
- 3.5 To determine the review by its auditors of the financial statements of the System as of December 31 of each year.

Fourth. It shall be the responsibility of LACAC:

- 4.1 To foster an agreement among States of the American Continent for the implementation and participation in the System.
- 4.2 To inform the participants in the System about the status of safety in the States, so that they may take appropriate measures.
- 4.3 To urge the States participating in the System to urgently take proper steps to overcome the problems that may be detected as a result of the audits as referred to in the objectives of the System contained in the second paragraph of this Memorandum.
- 4.4 To arrange, on request by ICAO, for the required experts to be made available by the States participating in the System for audit missions under the leadership of ICAO.

Fifth. General provisions:

- 5.1 The personnel assigned to the System shall neither request nor shall they receive instructions with regard to the performance of their functions from any authority other than ICAO or the System in accordance with ICAO rules as well as with the Regulations attached hereto. Such personnel participating in the audits undertaken by ICAO under the ICAO universal safety oversight audit programme shall be immune from legal process in respect of words spoken or written and all acts performed by them in their official capacity as ICAO team members.

- 5.2 This Memorandum of Understanding shall be construed in keeping with the provisions of the by-laws and the Convention that govern the activities of LACAC and ICAO, respectively.
- 5.3 This Memorandum of Understanding shall enter into effect after being signed by the Parties and its duration shall be indefinite.
- 5.4 Either Party, ICAO or LACAC, may propose amendments to this Memorandum of Understanding. All amendments shall be examined by the Parties concerned and shall require approval by both Parties, ICAO and LACAC, to enter into effect.
- 5.5 Any difference or dispute concerning the interpretation or the application of this Memorandum of Understanding shall be resolved by negotiation between the Parties concerned.
- 5.6 This Memorandum of Understanding may be terminated by either Party through notice given to the other at least one year in advance.

Done at Montreal this first day of October, one thousand nine hundred and ninety-eight.

Signed on behalf of LACAC:

Signed on behalf of ICAO:

Marcos Meirelles Guizmán
President of LACAC

Assad Kotaite
President of the Council

REGULATIONS OF THE REGIONAL SAFETY OVERSIGHT SYSTEM

Article 1 MISSION

The Regional Safety Oversight System, hereinafter called "the System," created by virtue of the Memorandum of Understanding signed by the Latin American Civil Aviation Commission and the International Civil Aviation Organization, has the mission of participating in the implementation of the ICAO universal safety oversight audit programme by providing qualified experts in the areas of personnel licensing, operation of aircraft and airworthiness of aircraft, for the purpose of conducting safety oversight audits under the leadership of ICAO, and recommending corrective measures as appropriate to help States overcome the problems that may be detected and that will ensure compliance with their responsibilities for safety oversight.

Article 2 HEADQUARTERS AND DURATION

The System shall have as its headquarters the ICAO Regional Office in Lima; it shall be governed by the provisions of these Regulations and its duration shall be indefinite.

Article 3 PARTICIPANTS

Participation in the System shall be open to States that are members of the Latin American Civil Aviation Commission and to other States of the American Continent that wish to adhere through their respective authorities.

Article 4 FUNCTIONS

The functions of the System shall be:

- a) To establish and implement a safety oversight programme in the participating States in close co-ordination with the ICAO universal safety oversight audit programme, with a view to maintaining and/or ensuring fulfillment of their responsibilities emanating from the Convention on International Civil Aviation and its respective Annexes. Initially, it will consider the Standards and Recommended Practices of Annexes 1, 6 and 8 to the

Convention, the associated ICAO procedures and guidance material, and the regulations and procedures that are adopted by the System for implementation by its members in compliance with the said ICAO rules, including rules regarding transparency of audit results;

- b) To propose uniform regulations and procedures in the areas of Personnel Licensing, Aircraft Operations and Airworthiness, compatible with relevant ICAO Standards and Recommended Practices, associated procedures and guidance material, leading to the harmonization and adoption of such regulations and procedures by the participating States;
- c) To promote the provision of advice and assistance required by participating States to implement and apply ICAO Standards and Recommended Practices, associated procedures and guidance material in a co-ordinated and uniform manner;
- d) To participate in the conduct of audit missions under the leadership of ICAO by making the required experts available through LACAC. These experts must have been trained by ICAO and selected under this Organization's criteria;
- e) To recommend the necessary measures to overcome the problems that may be detected as a result of the audits, and assist in their implementation;
- f) To develop other related activities as may be required and that are within its capacity.

Article 5 STRUCTURE

System functions shall be performed by a General Board, a General Co-ordinator and a Technical Committee.

Article 6 GENERAL BOARD

- a) The General Board shall be comprised of a representative from each participating State, preferably who has the responsibility of managing the civil aviation safety in his/her respective State. It shall meet at least once a year in ordinary meetings, called by its President, who will be elected from its members for a period of one year. The President could be re-elected for equal and succeeding periods.
- b) Notwithstanding the above, the General Board may hold extraordinary meetings, duly called by its President on his/her own initiative, or as requested by a single majority of its members or by the General Co-ordinator.

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- c) The first ordinary meeting of the General Board will be called by the President of LACAC once the System is established.

Article 7

FUNCTIONS OF THE GENERAL BOARD

The functions of the General Board shall be:

- a) To facilitate the conduct of mandatory, regular and harmonized audits under the ICAO universal safety oversight audit programme, the formulation and adoption of corrective measures, and the adequate dissemination of the corresponding information;
- b) To establish the number of experts required to integrate the Technical Committee and approve the terms and conditions for such assignments;
- c) To provide experts from the System to be trained by ICAO in accordance with Article 4 d) of these Regulations;
- d) To approve the annual programme of activities of the System;
- e) To examine and approve the annual budget and the financial regime;
- f) To examine and approve the expenditures and accounts;
- g) To examine and approve the annual reports of the Technical Committee and the annual report on the activities of the System;
- h) To propose amendments to these Regulations, when necessary;
- i) To agree on the withdrawal of one or more States from the System based on the analysis that shall be developed by the Technical Committee for such cases;
- j) To agree on the liquidation of goods and assets of the System, in the event of the termination of the System;
- k) To consider any other matter within the scope of the System that has not been specifically assigned to any of its other bodies.

Article 8
GENERAL CO-ORDINATOR

The ICAO Representative at the ICAO Regional Office in Lima, headquarters of the System, will be in charge of the general co-ordination of the System, and shall receive the technical and logistic support from the ICAO Regional Offices concerned (Lima and Mexico) and from the Technical Committee as needed, in accordance with relevant ICAO procedures and guidelines, as well as with these Regulations and other procedures of the System.

Article 9
FUNCTIONS OF THE GENERAL CO-ORDINATOR

The functions of the General Co-ordinator shall be:

- a) To co-ordinate with the participating States the implementation of the annual programme of activities, including audit missions;
- b) To co-ordinate with the President the meetings of the General Board and act as Secretary of such meetings;
- c) To provide guidance to the experts assigned to serve on the Technical Committee;
- d) To co-ordinate and direct the Technical Committee meetings and the implementation of its programme of activities;
- e) To exchange such information as is necessary with the participating States and bodies concerned;
- f) To prepare an annual report of the activities of the System and submit it to the General Board;
- g) To co-ordinate with the States the designation of experts and their participation in the audits;
- h) To keep updated the lists of Civil Aviation Authorities, of the candidates nominated to serve on the Technical Committee, and of the available experts;
- i) To perform such other functions within the scope of the activities of the System as are entrusted to him/her.

Article 10
TECHNICAL COMMITTEE

The Technical Committee shall be composed of experts complying with ICAO requirements in Personnel Licensing, Aircraft Operations and Airworthiness in a number to be determined by the General Board and selected in consultation with ICAO and in accordance with Article 4 d) of these Regulations. The duration of their contracts shall be one year, renewable, of which the first three months will be a probationary period.

Article 11
FUNCTIONS OF THE TECHNICAL COMMITTEE

The Technical Committee shall have the following functions:

- a) To plan and develop a permanent programme for safety oversight in participating States, with the purpose of verifying compliance with their safety related obligations, in accordance with the ICAO universal safety oversight audit programme and as per the relevant provisions of the Convention on International Civil Aviation, its Annexes, and procedures;
- b) To propose regulations and procedures as may be needed with regard to personnel licensing, aircraft operations and airworthiness, as mentioned in Article 4 b) of these Regulations, with a view to achieving their harmonization;
- c) To participate in audits of States in the System, as per the programme approved by ICAO and the General Board;
- d) To recommend to participating States the uniform adoption and application of the harmonized regulations and procedures;
- e) To facilitate the dissemination of the harmonized regulations and procedures;
- f) To determine the assistance required by Civil Aviation Administrations regarding safety;
- g) To prepare on a yearly basis the programme of activities and the budget of the System for approval by the General Board;
- h) To set up such sub-committees and groups of experts as deemed necessary;
- i) To examine the reports of the sub-committees and of the groups of experts that have been set up, and to decide on the issues submitted for its consideration;

- j) To analyze the audit reports prepared by the groups of experts;
- k) To give its opinion with respect to amendments to these Regulations, when requested by the General Board;
- l) To analyze and report to the General Board on the consequences of the withdrawal of one or more States from the System;
- m) To propose to the General Board the liquidation of System's goods and assets in the event of the termination of the System.

Article 12
ICAO SUPPORT

- a) The System shall be managed by ICAO through a trust fund agreement to be entered into by the participating States and ICAO, as provided for in the third paragraph of the Memorandum of Understanding;
- b) ICAO shall give the System technical and logistic support and such information and documents as it may need, and shall monitor its activities using the regular means available to it;
- c) At the request of LACAC or of any of the participating States, ICAO shall propose the most appropriate course of action for those activities required which the System is not able to implement;
- d) ICAO shall arrange for the review by its auditors of the financial statements of the System as of December 31 of each year, and forward their reports to the General Board through the General Co-ordinator.
- e) Any expenses incurred by ICAO from the activities described above and which exceed normal ICAO support to its Contracting States, shall be covered in accordance with the relevant provisions of the complementary trust fund agreement, the details of which will be arranged by the Parties.

Article 13
FINANCIAL STRUCTURE

The System shall be financed with the contributions from the participating States, as established in an agreement between such States for the implementation of the System, on the basis of an annual budget of its operating costs, to be approved by the General Board no later than September 30 of the year immediately prior to the year of its application. The budget shall also include the annual amount (in US dollars) of the contributions set for the participating States, which are to be deposited into a trust fund account that ICAO shall open in the name of the System.

Article 14
CONCILIATION

Any difference or dispute concerning the interpretation or the application of these Regulations shall be resolved by negotiation between the parties concerned.

Article 15
AMENDMENTS

- a) Either Party, ICAO or LACAC, may propose amendments to these Regulations.
- b) As far as LACAC is concerned, any State member of the General Board may propose amendments to these Regulations. All amendments shall be examined by the General Board and approved by an expanded meeting of the LACAC Executive Committee which could be attended by all States forming part of the System.
- c) Any amendment proposed by ICAO or LACAC shall require approval by both Parties to enter into effect.

Article 16
ENTRY INTO FORCE

These Regulations shall enter into force once formally approved by the Parties and once the System is established.

Annual programme of activities

- a. To foster the dissemination of the Regional System through seminars in the various regional civil aviation fora, including, *inter alia*, those of the Association of Caribbean States, the Andean Committee of Aeronautical Authorities, the Fortaleza Agreement, and the meetings of LACAC Panels and Executive Committee.
- b. For that same purpose, to request the ICAO South America Regional Office to place this matter on the Agenda for the Sixth Meeting of Civil Aviation Authorities of South America, and the ICAO NACC Regional Office to bring this matter up in similar fora in that region.
- c. To include a presentation of the “advantages” of joining the Regional Operational Safety Surveillance System on the agenda for the LV Meeting of the LACAC Executive Committee, scheduled to take place in Lima, Peru on 24- 26 November of this year.
- d. To ask the President of LACAC to send a letter giving a detailed explanation of the advantages of the system and requesting the accession of States that have not yet done so, including those that are not formal members of LACAC.
- e. To call a meeting of the General Board to coincide with the closing of the LV Meeting of the LACAC Executive Committee, which will take place in Lima, Peru, on 24-26 November of this year. The purpose of said meeting will be to assess the situation with regard to achieving the minimum number of accessions needed to economically justify the implementation of the System and thereby determine its viability.
- f. To postpone to the year 2000 those activities of the System which involve spending, so that States are able to budget beforehand for the payment of the pertinent fees.
- g. To start the pre-qualification and identification of candidates to form part of the Technical Committee.
- h. To co-ordinate with the States the appointment of experts to participate in the Technical Committee, once they have been selected and trained by ICAO.
- i) To continue with the tasks of harmonising personnel licensing, aircraft operation, and airworthiness regulations and procedures started by the Regional Project RLA/95/003.
- j) To establish an *ad hoc* group comprised of Argentina, Brazil, Chile, Ecuador, Paraguay, Peru, Uruguay and ICAO, to examine and update the objectives of Regional Technical Co-operation Project RLA/99/901. The General Co-ordinator would present the results to the next General Board meeting scheduled for November 1999 in Lima.

AGA issues

1.1 The airport network in the South American Region currently consists of nearly 128 international airports, of which 102 are used for international air transport, including almost 64 airports with scheduled international air operations. In order to adjust the Regional Air Navigation Plan to the current needs of international air transport, the CAR/SAM/3 RAN Meeting is expected to incorporate about 30 new airports to the plan and delete 2 of the existing ones.

1.2 The aircraft fleet used for international air transport in the Region is changing substantially. Old aircraft are gradually being replaced by those of the latest-generation. The operation of the latter, however, calls for aerodrome pavements and other facilities and services to be high quality. Attentive to these demands, and as part of the strategic action plan to promote the safety and efficiency of international civil aviation, ICAO has established a working group in order to include aerodrome certification provisions in Annex 14, Volume I. Some States in the Region are already adopting measures to this effect and one of them already has 16 airports that have been certified according to the total quality criterion of ISO 9001 Standards.

1.3 Within the context of the Regional Air Navigation Plan, the AOP area is not yet represented in GREPECAS as a subgroup, and it is the Secretariat that deals directly with the corresponding issues. Consequently, and in preparation for the CAR/SAM/3 RAN Meeting, the South American Office held an informal AOP meeting, attended by representatives from 16 CAR/SAM States. Some important States, however, were unable to send representatives, which means that the meeting may be overburdened by the activities to be carried out. To avoid this occurrence and because of the short time the AOP Committee will have to discuss specific issues during the CAR/SAM/3 meeting, it would be desirable for civil aviation administrations that have any comments to make, to send them to the ICAO Secretariat duly beforehand.

AIS/MAP issues

1.4 With regard to the AIS/MAP issues to be considered during the meeting, actions are expected to be adopted for promoting, *inter alia*,: the effective and standardised application of the technical requirements specified in ICAO Annexes 4 and 15; the effective implementation of the World Geodetic System (WGS-84); the adequate supply of pre- and post-flight information services; the standardised production of aeronautical charts; the progressive transition of the CAR/SAM integrated automated AIS system toward the Regional AIS database system; the formulation of technical requirements relating to the supply of information on GNSS satellite availability and the harmonised integration of AIS/MET information for pre-flight services; and lastly, requirements for changes in the AIS approach to its new role, based on operational requirements for quality systems.

ATM issues

1.5 In the air traffic management (ATM) area, the States/Territories of the CAR/SAM Region are expected to examine the Flight Information Regions and control areas in both the lower and upper airspaces under their responsibility. If appropriate, they are expected to make the necessary changes to meet current and future international civil aviation needs, taking into account the implementation of the ICAO CNS/ATM systems and the use of the globalisation concept for the establishment of FIRs, especially with regard to the upper airspace. Furthermore, in order to establish an optimum route structure with the consequent economic saving for airspace users, the ATS route network in both Regions is to be examined, including RNAV routes and the RNP concept, and included in the Air Navigation Plan, inasmuch as they are a supplement to the ANP at present.

1.6 Considering the possible changes in Flight Information Regions, the essential requirements for the provision of efficient ATS services in terms of aeronautical fixed and mobile service communications, navigation and surveillance will be examined and established. In this respect, the Meeting should pay special attention to the expected evolution of ATM for en-route and terminal area operations, in light of the progressive implementation of the CNS/ATM systems.

1.7 The Meeting is expected to review the Recommendations of previous CAR/SAM meetings in order to determine their validity. It will also examine the application of a uniform longitudinal separation between aircraft at the same cruising level over the entire CAR/SAM Regions, the SSR code allotment plan, ATIS broadcasting requirements, the investigation of ATS incidents and their close relationship with an ATS quality assurance programme, civil/military co-ordination in order to improve available airspace use, ATM deficiencies and amendments to supplementary regional procedures (Doc. 7030).

CNS issues

1.8 Regarding CNS issues, the Meeting should formulate, in general, the necessary measures and supply the required material so that ICAO may publish in the future the new version of the Air Navigation Plan taking into account the GREPECAS CNS/ATM planning. In doing so, the Meeting is expected to encourage CAR/SAM aeronautical administrations to work out plans for modern communication networks that will allow for the development of a network structure that is suitable for both improving existing services and providing the capability for future ones, and the evolutionary introduction of the Aeronautical Telecommunication Network (ATN) and its interface with the AFTN. In this connection, data links for air/ground and ground applications should be planned. In the area of aeronautical radio navigation, the expectation is that the available use of existing GNSS elements, such as the GPS, and the corresponding SBAS and GBAS augmentations will be planned in order to meet the precision, integrity, continuity, and availability requirements for satellite radio navigation services. Regarding surveillance services, an innovation is expected in the formulation of plans for both radar and automatic dependent surveillance (ADS) systems. Aspects of ATM automation systems are also to be discussed, on the basis of the ICAO concept of CNS/ATM systems and the plans in that regard. Considering the radioelectric frequency spectrum requirements, the Meeting is expected to encourage support for ICAO's position at the ITU World Radio Communication Conference (WRC-2000), as well as the attendance of personnel from the civil aeronautical administrations at that conference.

MET issues

1.9 The CAR/SAM/3 Meeting is expected to analyse, discuss and agree upon matters related to Part IV – Meteorology of the CAR/SAM ANP and to the MET Tables contained in said plan, in order to bring them into line with the operational requirements of the States of these Regions. Drafts of the MET Part of the CAR/SAM ANP and of the Facilities and Services Implementation Document (CAR/SAM FASID), prepared in keeping with the formats and contents of the ANP and of the basic FASID document approved by the Council on February 26, 1997, will also be placed before the Meeting for consideration. Also to be addressed are the implementation of MET facilities and services and of the OPMET exchange agreed upon during the Meeting, together with the shortcomings and deficiencies in the MET area.

SAR issues

1.10 In the search and rescue field, the meeting is expected to review the search and rescue regions plan, the requirements for search and rescue facilities and aspects connected with the Cospas/Sarsat programme.

**TABLES ON PROBLEMS AND CONTINGENCY MEASURES FOR SUPPORT SYSTEMS TO
ATS SERVICES**

1. Coordination with Communications Services Providers

State	Communications Service Provider	Y2K Problem	Contingency Measure
Argentina	Telefonica Impsat Telecom S.A. Teleintar Telecom Soluciones	No, Y2K compliant. No, Y2K compliant. Under evaluation. Under evaluation. Under evaluation	Use of HF
Bolivia	Superint. de Telecom. Entel Cotel Conteco Cotas	Under evaluation, Y2K compliance in August	Use of HF
Brazil	Embratel Satellite System Radio Links	No, Y2K compliance at end of July 1999. No No	The contingency measures are contained in document DMA 63-1
Chile	Entel Chile	No	
Colombia	Telecom Impsat Comsat Own satellite network	No	
Ecuador	Andinatel/Pacifictel Intelsat Own satellite system (STM) Own radio link	Awaiting response from provider. No, awaiting compliance. No, Y2K updating until September 1999. No.	
French Guiana	France Tqg Com	No	
Guyana	GT&T	No	
Panama	Cable & Wireless	No	Use of HF
Paraguay	Antelco	Awaiting response from provider	To be determined
Peru	Telefónica del Perú	Awaiting response from provider. Y2K compliance expected by September 1999.	Use of HF
Suriname	Telesur	No	
Uruguay	Antel	No, Y2K compliant.	Use of HF
Venezuela	CANTV	No. Part of the national contingency plan	Use of HF

2. Aeronautical Information Processing System

State	Hardware/Software Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	HP Vectra /Aydin	1998	No	
Bolivia	Does not have OPMET or AIS data bank			
Brazil	Opmet Sun Sparc 5 AIS	19991999	No. Y2K compliance July 1999. No. Y2K compliance July 1999	Back to old system, pre-established routing
Chile	Compaq/Syseca	1992	Updating by the end of October 1999	
Colombia	Compaq/Syseca	1998	No. Certified	
Ecuador	Compaq/Syseca	1996	No, updating contract in execution. Compliance by July 1999.	Manual procedure.
French Guiana		1995	Yes	Replacement
Guyana			No	
Panama	Digital Alfa Server 100A/GW	1998	No	
Paraguay	Does not have OPMET or AIS data bank		No	
Peru	Compaq/Syseca	1994	Yes, by 15 December 1999.	Manual procedure.
Suriname		1995	No	
Uruguay				
Venezuela	Does not have OPMET or AIS data bank			

3. AFTN System

State	Hardware/Software Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Digital Micro Vax ii/IMX 700	1998	Under evaluation by manufacturer. Compliance on October 1999.	
Bolivia	Stratus/Syseca	1996	Yes, problem solved by October 1999.	Manual switching
Brazil	Atech	1998	No	
Chile	Stratus/Syseca	1992	No	Add fixes in hardware and software. Updating will be made by end of October 1999.
Colombia	Stratus/Syseca	1998	No, Certified	
Ecuador	Stratus/Syseca	1996	No, updating contract in execution. Compliance by July 1999.	Manual switching
French Guiana (France)	Sagen	1989	Yes	Replacement
Guyana	Siemens	1996	No	
Panama	Digital Alfa Server 100A/GW	1998	No	
Paraguay	Philips DS 714/Aeropp	1980	No	
Peru	Stratus/Syseca	1994	No	Manual switching. Four-year calendar turn-back trials.
Suriname	Messier	1995	No	Sitatex
Uruguay	GPW MSC8000	1988	In consultation. Manufacturer no longer exists.	
Venezuela	DS714/Aeropp	1980	No	Replacement second quarter 1999, parallel circuits until December 1999.

4. ATS speech circuits communications

State	Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Andes Electron	1989/90	No	
Bolivia	Microcont	1996	No	
Brazil	Thomson 3179 Thomson 3140	1980 1985	No	
Chile	Denro ICSS-400	1989/90	No (software replaced).	
Colombia	Sitti 3000, 5000 Denro	1996, 1999 1998	No, certified.	
Ecuador	Thompson TMX 400	1998	No	
French Guiana (France)	SEGE	1990	Yes	Repair
Guyana	Siemens	1997	No(repair Oct.99)	
Panama	Denro 400D	1993	No, October 1999 (contract signed).	Manual switching .
Paraguay	Philips RL 400	1980	No	
Peru	Intelect US Logic	1998	No	
Suriname	Nessing	1995	No	
Uruguay	Thomson TXM 2112	1988	No	
Venezuela	Intelect 3301	1982	No	

5. Microwave, HF, VHF, UHF Transmission/Reception Systems

State	Make	Model	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Rohde Schwarz Harris Others			No	
Bolivia	-ICOM/King/Terra Yaesu/Kenwood -Telectron/Edo- Aire -Telectron	RL-24B	1991-1997 1985-1990 1985	No No No	
Brazil	Tectelcom	V300	1997/98	No	
Chile	Rohde Schwarz PAE	Series 400 Serie 5000	1990	No No	
Colombia	PAE OTE Aerocom	7072/8081	1995 1997 1988-1990	Certified No No	
Ecuador	Aerocom MAS Edo Aire	7015/7071/707 28080/7990/79 92 SL-11R PTR-661	1985 1994 1982	No No No	
French Guiana (France)	Telerad	G164	1982	No	
Guyana					
Panama	ITT Jotron Motorola	Angr RA5251 M300	1988 1988	No No	
Paraguay	Philips PYE	RZ585/590 R403/R4003/R 4201	1980 1980	No No	
Peru	Harris Aerocom PAE	VDR 2205 7071/8080 2700/1201	1998 1985 1988	No No No	
Suriname	Jotron/ Hessing	RA5002 TA5103	1995	No	
Uruguay	PAE	2750/1250/190 1/5100	1995-1998	No	
Venezuela	Telerad Aerocom PYE	7072/8080	1981-82 1980/85 1980/85	No No No	

6. Navigation systems

State	VOR, DME, ILS Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Wilcox476/485B Alcatel 431 SEL 4000 Wilcox 596B Pelorus 8900	1976/88 1998 1990 1983 1996	No No No No No	
Bolivia	CVOR Toshiba T1233B DVOR Toshiba TW1964B ILS NEC NNG-6L1	1997	No	
Brazil	Tectelcom585 Racal Mark II Thomsontah510 Buttler1020 Thomson 381 Wilcox Mark 10	1981/95 1984/1998 1973/75 1976/85 1984/86 1996/98	No No No No No No	
Chile	Thomson 5850 Thomson 5960 Thomson Me 10	1994/95 1994/95 1994/95	No No No	
Colombia	ASI Wilcox Thomson ALCATEL	1990/98 1990/98 1990/98 1990/98	No No No No	
Ecuador	Wilcox 585 B AIRSYS5850 Wilcox 596B/60 Wilcox Mark 10	1981 1998 1985/98 1998	No No No No	
France	VOR/DME/ILS		No	
Guyana	VOR/DME/ILS		No	
Panama	Wilcox 5850 ASI 1150/1119 Wilcox5960 ASI1100	1995 1998 1995 1998	No No No No	
Paraguay	SEL 431 Wilcox 5850/5960 Wilcox MK10 Philips7202	1.99719932e+15	To be confirmed. Under consultation with manufacturer.	
Peru	Wilcox 585B SEL 4000 FACEFSD15/40 Wilcox MarkID	1981 1997 1986/1997 1978	No No No No	Use of NDB

State	VOR, DME, ILS Equipment	Year of Installation	Y2K Problem	Contingency Measure
Suriname	Wilcox 5850 Wilcox5960 Wilcox Mark 10 Wilcox 596	1995	No No No No	
Uruguay	Wilcox S 585 Butler1020 WILCOX 596 Wilcox MarkI/2	1996 1974 1984 1971/77	No No No No	
Venezuela	Wilcox 585B Wilcox 596 Wilcox MarkI0 Thomson	1982 1982 1998 1982/98	No No No No	

7. Co-ordination with electrical power suppliers

State	Electrical Power Service Provider	Y2K Problem	Contingency Measure
Argentina	Cammesa	Awaiting response from provider	
Bolivia		Awaiting response from provider	
Brazil	Various	No	Use of Diesel Generators
Chile	Chilectra Elecda Emelat Emelari Eliq	No	Use of emergency power generators
Colombia		Awaiting response from provider	Use of emergency power generators
Ecuador	Inecel Empresa Eléctrica Quito Emelec	Awaiting response from provider	Use of emergency power generators
French Guiana (France)		No	
Guyana	GEC	Awaiting response from provider	Use of emergency power generators
Panama	Electra Noreste Metro Oeste Chiriquí Tranmisión S.A.	Awaiting response from provider	Use of emergency power generators
Paraguay	Ande	Awaiting response from provider	Use of emergency power generators
Peru	Luz del Sur Edelnor	Awaiting response from provider	Use of emergency power generators
Suriname	EBS	No	Use of emergency power generators
Uruguay	UTE	No	
Venezuela	Electricidad de Caracas Enelbar Elecentro Cadafe	No	

8. Surveillance Systems

State	Primary, Secondary, RDP, FDP Radar Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Thomson CMS 970	1972/87	Under evaluation	Use of non radar procedure
Bolivia	Ceselsa ASR 110	1998	No	
Brazil	Primary and Secondary Radars FDP, RDP Mitra VaX II		No Yes	Use of non radar procedure
Chile	Thompson TA10K TRAC2000 RMS 970	1996 1996	No No	Use of non radar procedure
Colombia	Alenia, Thompson FDP, RDP		No Yes	Use of non radar procedure
Ecuador	Plessey Thompson Eurocat 200	1976/86 1999 1998	No No Under consultation. Equipment under guarantee	Use of non radar procedure
French Guiana (France)			No	
Guyana			Under consultation with manufacturer.	
Panama	ASR9, MSSR FDP, RDP	1993	No, compliance by October 1999 (contract signed).	Use of non radar procedure
Paraguay	Marconi S511H Marconi M55R		No, with exceptions not affecting operationally	Use of non radar procedure
Peru	ASR12SS, MSSR AMS200	1998	No Yes, under Y2K compliance process.	Use of non radar procedure
Suriname			No	
Uruguay	Thomson TA10M, RS870	1987	Under consultation	Use of non radar procedure
Venezuela	Texas ASR8 Alenia ATCR-2T	1980/73	No	Use of non radar procedure

9. Meteorological Systems

State	Hardware/Software Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Digital Alpha Server 2100/Open VMS	1996	No	
Bolivia	Vaisala Midas 600	1997	No	
Brazil	Surface Meteorological Observation Stations	1994-1998	Does not update date	Update manually
Chile	Digital Dec Alfa	1999	No	
Colombia	External provider		No	
Ecuador	Vaisala			Replacement
French Guiana (France)			No	
Guyana			No	Use of analogic system
Panama	Weather Trac WEFAXIIPC137	1991	Under consultation with manufacturer	
Paraguay	Vaisala Midas 600	1990	Yes	Under study
Peru	Vaisala	1998	No	
Suriname	Siemens		No	
Uruguay			No	
Venezuela	Digital VAX 4200		No, Y2K compliant.	

10. WAFS System Table

State	Hardware/Software Equipment	Year of Installation	Y2K Problem	Contingency Measure
Argentina	Alden Star 4		Yes	
Bolivia	Alden Star 4 500	1997	Yes	Internet
Brazil	Alden Star 4	1998	Yes	Internet
Chile	Alden Star 4		Yes	
Colombia	Alden Star 4		Yes	
Ecuador	Alden Star 4	1999 (to be installed)	It is expected not to	Internet
French Guiana (France)			No	
Guyana			Yes	
Panama	Alden Star 4		Yes	Internet
Paraguay	Alden Star 4	1998	Yes	Internet
Peru	Alden Star 4	1997	No	
Suriname			No	
Uruguay	Alden Star 4		Yes	
Venezuela	Alden Star 4		Yes	Internet

- END -

**RESULTS OF THE
SURVEY ON MANAGEMENT-LEVEL TRAINING REQUIREMENTS
OF CIVIL AVIATION**

Answers received to the survey give the following results, by form number:

1 and 2	Total of organisations that responded to the survey	72
3	Organisations classified by type:	
	a. Government	41
	b. Private	26
	c. Joint ventures	5
4	Organisations fit in one or more of the following fields according to the activities performed:	
	a. Aeronautical authority	33
	b. Air transport authority	32
	c. Airport authority	16
	d. Other type of authority	8
	e. Airport service company	17
	f. Air navigation service company	22
	g. Airport engineering company	9
	h. Air transport company	37
	i. Apron and/or dispatch service company	15
	j. Aircraft maintenance company	16
	k. Air freight company	19
	l. Travel and tourism company	6
	m. Company providing other services	7
	n. Training centre	10
5	Instruction level of management-level personnel:	
	a. University	519
	b. Technical institute	322
	c. Occasional courses or seminars	351
	d. On-the-job training	243
	e. Promoted within the organisation	52
	f. Other (indicate)	4

6	Field of activity of the organisations requiring job-specific management-level training	
a.	Top management (president, director general, general manager or similar position)	223
b.	Line direction (director, manager, administrator or similar position)	552
c.	Head of a given service (department, division or similar level)	1,284
d.	Other	33
7	Management-level training required, indicating estimated number of candidates for the next five years:	

Field of training	1998	1999	2000	2001	2002
Administration of civil aviation	72	52	59	38	48
Administration of air transport	67	54	45	42	40
Administration of airports	118	101	120	110	110
Administration of air navigation services	66	57	58	63	56
Financial administration of civil aviation	66	50	54	59	60
Commercial administration or airports	90	83	83	77	79
Training administration	108	80	82	74	110
Air law	55	53	43	43	46
Management and planning of civil aviation	64	51	43	43	38
Airline management	100	78	79	73	76
Airline financial management	57	49	48	44	64
Personnel management	94	78	85	76	90
Procurement management	60	42	40	29	42
Marketing management	64	59	62	60	70
Information technology and systems management	95	87	97	84	94
Management of airport services	86	85	86	116	119
Management of aircraft maintenance	104	92	95	87	94
Management of Airport maintenance	34	42	44	45	57
Security management	92	84	83	85	98
Air freight management	54	47	49	52	58
Management of travel and tourism agencies	24	28	27	27	32
Project management	76	56	59	61	72
Airport planning	23	26	23	30	34
Air transport policy	45	43	40	38	39
Flow control management	0	1	1	1	1
Airspace planning	2	2	2	1	1
Communication systems management	0	1	1	0	0
Other	10	8	9	8	3

8 Preferred training languages:

Spanish	38
English	19
Portuguese	5
Spanish/English	7
Spanish/Portuguese	1
English/Portuguese	2

9 Do you consider that an international management-level training institute for civil aviation is required in the American continent?

YES	72	NO	0
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