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Agenda Item 2: Safety Oversight

b) Achievements in the Regional Safety Oversight

The Information System of Aeronautical Regulations “SIAR”

(Presented by COCESNA)

SUMMARY

The following working paper presents a summary of the different activities and the work that has been done by COCESNA in the implementation of computerized solutions that allow improvement in the quality and automated safety management of the State, according to the International Civil Aviation Convention and its Annexes concerning safety issues.

1. Introduction

- 1.1 There is a compromise of all the States in complying with their obligations on safety oversight issues, based on the ICAO 8335 document, in reference to the establishment and management of a state safety oversight system. This document takes into account the eight critical elements; in which referring to Resolution of Safety Issues is the one that constitutes the main base for the construction of an automated safety oversight system.
- 1.2 A good oversight system must include dispositions and methods to prove the control over all the safety issues that result of the activities of operators, aeronautical technical personnel, aircrafts, accidents and incidents, etc. It must provide reports where it indicates the weak points, deficiencies and causes; in order to find possible solutions. With this, aeronautical authorities are conscious that the air operations are been safe.
- 1.3 Under this understanding and based on the requirements mentioned and as a result of the team work between the experts in Safety and in COCESNA's Development and Research area, a technological solution has been developed with high levels of safety, quality and satisfaction, denominated Information System of Aeronautical Regulations “SIAR”.
- 1.4 COCESNA has implemented the SIAR in all the Central American States, in its contribution to the region. Additionally, Panama and the Dominican Republic requested the implementation of the system.
- 1.5 Furthermore, the SIAR can be implemented for the surveillance of airports, control centers, security systems, quality systems, workshops and schools, among others.

2. Design and description of the SIAR

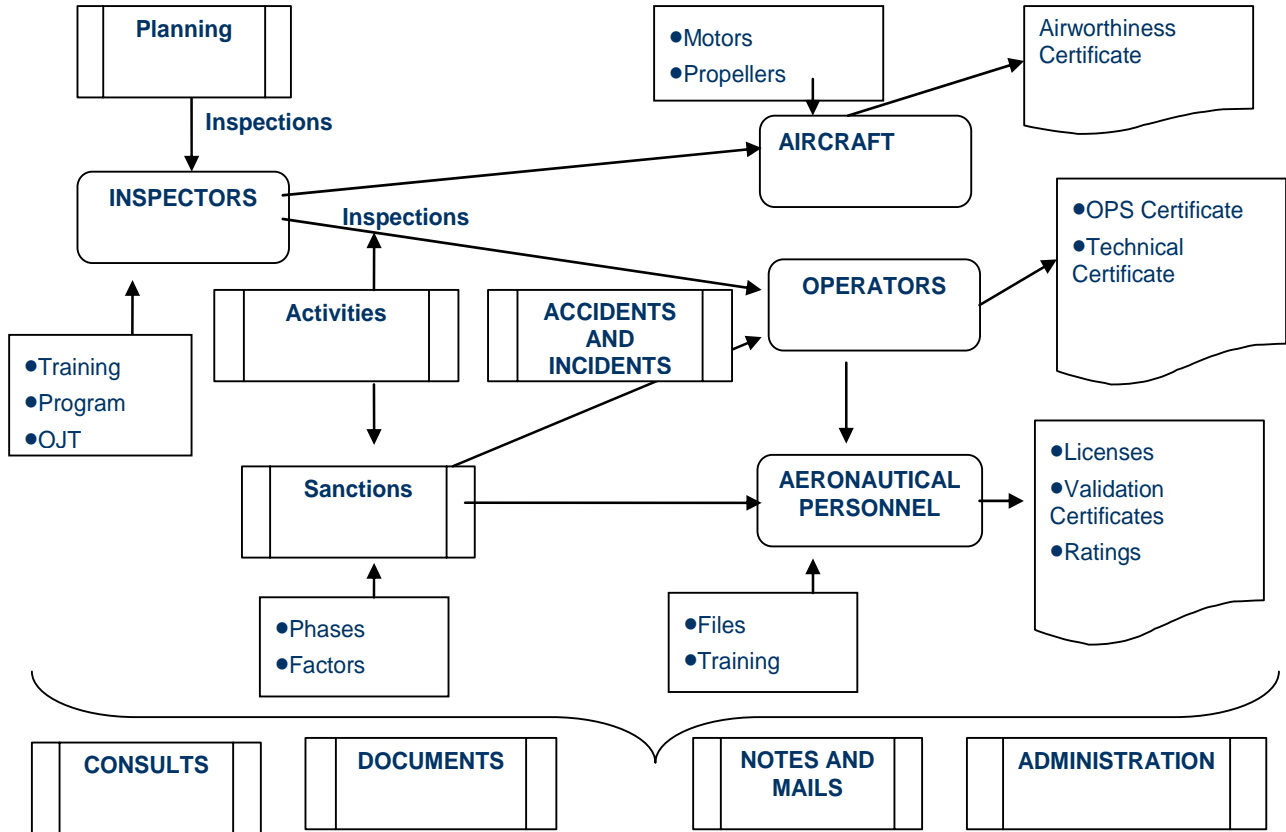
2.1 The Information System of Aeronautical Regulations “SIAR” has as its principal objective to support the surveillance institutions and the air transport operators in their management of those operations required for the compliance of the international standards regarding safety.

2.2 The SIAR is developed in modules, presenting the main information of surveillance as soon as the aeronautical authority requires it to make its decisions. It also allows having control over the execution and incidence of each of the inspections, with specific details of the found discrepancies.

2.3 The SIAR modules are the following:

1. **Planning.-** Planning, organizing and controlling of the inspections or certification activities of the operators, operational surveillance plan, aircraft certification, accident and incident investigation, proficiency check, audit. Preparations, among others.
2. **Inspections/Activities.-** Registering and detailed follow up of all the inspections or activities planned or not planned.
3. **Personnel Licensing.-** Optimizing and improving the information management of the aeronautical personnel, their licenses, convalidation, medical certification, electrocardiograms, rating, flight hours and training.
4. **Examinations.-** A solution in the process of the application of the exams through automated process that ensure trust in the emission of a license.
5. **Inspectors.-** Control over the list of the authority’s inspectors through the administration of their competencies, training programs, assigned activities, warnings and personal information.
6. **Accidents and Incidents.-** Reports, follow up and analysis of the different accidents and incidents related to the state; and classified by phase, factors, operator, model of aircraft, crew, place of the event, states involved.
7. **Aeronautical Operators.-** Management of the administrative and legal procedures of the operators.
8. **Sanctions.-** Follow up and control of the compliance of the sanctions applied by the authorities to the operators and/or technical personnel.
9. **Consults.-** Warnings, summaries and reports that support the process of taking operational and high management decisions.

2.4 SIAR Relation Diagram:



2.5 There are other SIAR applications that are available in all the modules, for example:

1. **Document Management.-** Digitalizing and filing documentation that allows the optimization of space and time.
2. **Notes.-** It allows a specific follow up of the operators, aeronautical personnel, surveillance plan, incidents and any other information of interest attached to the reports. These messages are viewed as a post-it when the report is accessed.
3. **Mail.-** The SIAR may send mails to predetermined accounts of predefined activities; such as, the assignment of an activity in the surveillance plan, the expiration of a discrepancy or an airworthiness certification and any other event.

2.6 The advantages of counting with an automated and integrated system for the management of safety are:

1. Maintenance and strengthening of the data base of the surveillance organization.

2. Take advantage of the concept of a Unique Data, based on the information's integration, allowing a global control of the different operations regulated by the authority.
3. Digitalized and unlimited storage of the files of operators, aircraft, technical personnel, etc.
4. Security and confidentiality in the information.
5. Counting with a standardized data base allows the possibility of sharing information among the surveillance organizations. This facilitates the standardization of aircrafts, operators and technical personnel's certification.

2.7 The SIAR can be adapted to the specific and special procedures of each State, allowing the system to adapt to the needs of the aeronautical authority and not the other way around.

3. Current State of the Development

3.1 At present the SIAR is operating on its 3.0 version, in a client-server mode. It is expected to be in a WEB environment by mid 2006.

4. Suggested Actions:

4.1 Take note of the information in this working paper.

4.2 Consider the extensive and adequate use of the development of the system in the needs of the region and in each administration.