Agenda Item 3: Communications, Navigation and Surveillance (CNS)

(Presented by SENEGAL ASECNA)

SUMMARY

This working paper presents the operational advantages of automatic coordination via AIDC messages, raises the experience between Dakar and Abidjan and recommends to extend this implementation within the SAT region.

I. INTRODUCTION

The increasing development of technology has allowed fairly rapid development of CNS / ATM concept launched by ICAO since the 80s. Thus under the framework of **Communication**, and more specifically **ground-ground communication**, the implementation of automatic coordination between ATS centres, using either ATS Interfacility data Communications between ATS systems (AIDC) or Online Data Interchange (OLDI), is being carried out all over the world because of the multiple advantages it offers.

II. DISCUSSION

1. Outcome of the implementation of AIDC between Dakar and Abidjan

In March 2013, after several online exchanges, Dakar and Abidjan ATS centers, using the same automated ATS system, have signed an agreement defining the time period from 11 to 30 April 2013, to perform tests related to automatic coordination using AIDC.
These exchanges have been successfully completed, allowing the two ATS units to implement automatic coordination using AIDC.
The core AIDC messages exchanged between the two centers are :

- **Notification phase**: ABI (Advanced Boundary Information),
- **Coordination phase:** CPL (Current Flight Plan), EST (Coordination Estimate), PAC (Pre-activation), MAC (Coordination Cancellation), CDN (Coordination), ACP (Acceptance), REJ (Reject),
- **Transfert phase**: TOC (Transfer of Control), AOC (Assumption of Control)
- **General information** : EMG (Emergency), MIS (Miscellaneous)
- **Application management**: LAM (Logical Acknowledgment), LRM (Logical Rejection).

2. Operational benefits of the AIDC implementation

Several benefits of this AIDC implementation have to be noted, among them :

- A significant reduction or elimination of verbal coordination between the two ATS units, giving more time to the controllers for the detection and resolution of conflicts and the processing of crew demands.
- A significant reduction or elimination of large height deviations (LHD)
- The elimination of errors and misunderstandings that may arise from verbal coordination
- The insurance for the controller of the effectiveness of the coordination
- The sharing of the flight plan information through ABI message between the ATS centres.

3. Disadvantages

However some disadvantages are :

- The workload in case of manual processing of multiple queuing messages at the same time during high traffic density
- The failure to take into account all possible situations concerning a flight in the message exchanges.

4. AIDC implementation perspective within SAT region

Taking into account the above listed advantages of automatic coordination and the fact that ICAO has recognized interoperability of systems as an effective tool for enhancing safety, SAT group should urge capable ATS units for

Note that OLDI, which uses radar functionalities, has a more refined negotiations process while AIDC is recommended in the oceanic and desert regions.

III. ACTION BY THE MEETING

The meeting is invited to :

- note the information given in this working paper
- urge ATS centres equipped with interoperable systems to implement automatic coordinations
- discuss other relevant matters as appropriate

-END-