ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION
Twenty-Fifth Meeting of the AFI Planning and Implementation Regional Group (APIRG/25)

7 - 11 November 2022

Agenda Item 3: Implementation of air navigation goals, targets and indicators, including the priorities set in the regional air navigation plan

3.6 Other Air Navigation Initiatives

AIDC Implementation in GHANA

(Presented by Ghana)

SUMMARY
This working paper provides updates on the progress made by Ghana towards the implementation of Air Traffic Service (ATS) Inter-facility Data Communication (AIDC) in the Accra Flight information Region (FIR).   **References:** APIRG/24 Report, Aviation System Block Upgrade (ASBU)

Strategic Objectives	A: Safety; B: Air Navigation Capacity and Efficiency Related ASBU Bloc 0 Modules, Performance Improvement Areas, and Applications: B0-FICE/PIA2-AIDC

1   INTRODUCTION

1.1   Air Traffic Services Inter-facility Data Communication (AIDC) has been identified in the Aviation System Blocks Upgrades (ASBU) modules as one of the candidate modules for the block zero elements/technologies. AIDC seeks to inter-connect Air Traffic Service (ATS) Units in the provision of Air Navigation Services. One advantage of AIDC is that it provides automated coordination, which significantly reduces the workload on Air Traffic Controllers while impacting positively on safety.

1.2   Benefits of AIDC

The benefits that AIDC brings to the provision of Air Navigation include:
    a) Reduction in controller workload.

b) Reduction in the number of read-back/hear-back errors during coordination.
c) Reduction in the number of gross navigation errors and Large Height Deviations caused by errors in the "controller-to-controller" coordination loop.
d) Gradual replacement of the ATS speech service as a main coordination tool.
e) Data accuracy and integrity

1.3 Key requirement for AIDC implementation

The requirement for implementing AIDC include but not limited to:

- Communication link
- An automated Air Traffic Management System
- Agreed set of AIDC messages
- Airspace design and procedure
- A message Handling Systems
- Accurate flight plans

2.   DISCUSSION

2.1.   In May 2016 a Sub-regional initiative began with the assistance of the ICAO WACAF Regional Office, with participation from the Economic Community of West African States (ECOWAS).

2.1.1 This resulted in ASECNA (for Benin, Burkina Faso, Chad & Côte d'Ivoire), GCAA (Ghana), NAMA (Nigeria) and the Roberts FIR (Guinea, Liberia & Sierra Leone) deciding to implement AIDC for coordination between identified ATSUs.

2.1.2 Ghana has since been collaborating with its neighbouring ATSU, mainly ASECNA to realize the implementation of AIDC. Table 1 below shows the status of implementation of AIDC between Accra and neighbouring ATS units.

ATS Units	Status of Implementation	Remarks
Abidjan	Connected	Operationalised with LOAs in place
Lomé	Connected	Operationalized but LOA yet to be signed.
Ouagadougou	Connected	Yet to be operationalized
Niamey	Connected	Yet to be operationalized

Table 1: Status of Implementation

Table 2 provides information on the roadmap used by Ghana in the implementation of AIDC with its neighbours.

No	ACTIVITY	EXPECTED OUTCOME
1.	Identification of ATS Units for AIDC exchanges	All ATS units for the AIDC exchange identified.
2.	ATM infrastructure with AIDC capabilities.	All the ATS Units identified must have ATM systems which are AIDC Capable
3.	Agreement on set of AIDC Messages for exchange	Agreed set of AIDC messages to be exchanged.
4.	Commencement of mock trials	Identification and elimination of errors
5.	Final implementation	All letters of Agreements (LOAs) in place and signed.

Table 2: Ghana AIDC Implementation Roadmap

2.2 Challenges / Constraints

The following were some of the challenges Ghana encountered in the implementation of AIDC:

a) Missing flight plan;

b) Message format errors; and

c) Lack of training for Technical and operational personnel.

3   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) Take note of the information provided in the paper;

b) Encourage States who have not yet implemented AIDC to do so; and

c) Encourage States who have implemented AIDC to also share their experiences.