INTERNATIONAL CIVIL AVIATION ORGANIZATION

First Meeting of the Africa-Indian Ocean Aviation System Planning and Implementation Group (AASPG/1)

Libreville, Gabon, 3 - 7 November 2025

Agenda Item 4: Implementation of air navigation goals, targets and indicators, including the priorities set in the regional air navigation plan

Experience Sharing on the Implementation of AIDC (Air Traffic Services Interfacility Data Communication)

(Presented by ASECNA)

SUMMARY
This working paper presents the methodology used by ASECNA to implement AIDC, the challenges encountered and proposes solutions to accelerate the implementation of AIDC in the region. For the past ten years, ASECNA has been committed to gradually replacing voice communication links between its adjacent ATS/DS centers with automated message exchanges using AIDC to improve coordination efficiency and the transfer of control between adjacent ATS units. This implementation represents a first step toward automation in the evolution of coordination and control transfer between the agency's adjacent ATS units, ensuring that all relevant flight plan information is transferred and is available in the receiving unit without controller intervention. The difficulties encountered at the start of this initiative led ASECNA to develop a structured methodological approach including a safety assessment and clearly identified deliverables. Actions by the Meeting are outlined in section 3

REFERENCE(S)	- Global Air Navigation Plan (Doc 9750) - AFI eANP Vol III - DOC 9694
Strategic Objectives	A – Safety B –capacity and efficiency

1 INTRODUCTION

1.1 In accordance with the Global Air Navigation Plan (GANP) and its AFI regional implementation (AFI ANP), the Aviation System Block Upgrade (ASBU) concept provides for the implementation of element FICE-B0/1, which aims to improve coordination efficiency and control transfer between ATS units.

1.2 To date, the implementation rate of AIDC links between ATS centers for the automation of coordination and transfer of control between adjacent ATS remains low, and voice coordination via ATS/DS telephone links remains the widely used method, with its corollary of human error, even though ATS centers are increasingly equipped with automated air traffic management systems.

1.3 In its strategic plan, ASECNA has adopted projects aimed at enhancing the safety and efficiency of air navigation in the AFI region, including the implementation of AIDC between ASECNA centers or between ASECNA and non-ASECNA centers.

2. DISCUSSION

2.1 AIDC is an ATN application recommended by ICAO for communication between ATM systems of adjacent control centers, where the current flight plan data of an aircraft is automatically sent from the transferring center/sector (Current Data Authority – CDA) to the accepting center/sector (Next Data Authority – NDA), instead of traditional ATS/DS voice coordination.

2.2 Given the current continuous growth of air traffic, with a projected doubling over the next two decades, the implementation of AIDC provides substantial benefits, including:

- Reduction of air traffic controller workload,
- Elimination of human-factor errors in voice coordination
- Increased efficiency and performance of air navigation services.

2.3 ASECNA has equipped all its centers with automated air traffic management systems with AIDC capability and has begun interconnecting these ATM systems via AMHS or AFTN links in accordance with an annual plan.

The implementation of AIDC connections is carried out by ensuring that the fixed telecommunications network guarantees compliance with RCP240 performance requirements.

The deployment protocol uses four (04) categories of AIDC for these data exchanges:

- Notification messages (ABI),
- Coordination messages (CPL, EST, MAC, CDN, ACP, REJ),
- Control transfer messages (TOC, AOC),
- General information messages (EMG, MIS/Free texts).

2.4 At the beginning of this initiative to implement the AIDC, in the absence of a structured methodology agreed upon by the centers, the process encountered some difficulties, including a lack of understanding and involvement from some stakeholders. Learning from these shortcomings, ASECNA, relying on Abidjan and Dakar ATS centers, developed in 2021, a methodological approach for deployment structured around four stages:

- Stage 0: Safety assessment
- Stage 1: Pre-implementation actions
- Stage 2: Implementation of change

- Stage 3: Post-implementation assessment

Several actions are carried out throughout these different stages, the most important of which are:

- the establishment of a joint project team between the two ATS centers concerned, comprising a steering committee and a technical team;
- the identification of the list of AIDC messages to be exchanged;
- the development of a protocol for pre-implementation technical tests;
- the development of a protocol for pre-implementation operational tests;
- the evaluation of security studies;
- the training of technical and operational staff; and
- the revision of letters of agreement.

This methodology was presented and adopted at the SAT (South Atlantic) group level through the work of the SAT IMG subgroup. The tables in the appendix highlight:

- the various stages and associated deliverables of the methodology currently being deployed at ASECNA for the implementation of AIDC
- the AIDC links deployed by ASECNA with the main adjacent non-ASECNA centers

2.5 The main obstacle encountered in implementing AIDC links is the lack of interoperability between the AIDC and OLDI protocols used in certain regions, particularly the EUR region. To overcome this difficulty, a converter is required on ATM systems that are not fully IP-based.

Furthermore, ideally, the implementation of AIDC requires “direct dialogue” between automated ATC systems. In order to overcome the technical constraints for establishing this “direct dialogue,” ASECNA has chosen to use AMHS channels for the implementation of AIDC, while ensuring strict compliance with the required communication performance (RCP).

2.6 Pending the implementation of SWIM and FF ICE, the implementation of AIDC as prescribed in the global and regional planning frameworks is more than ever a necessity in the context of strong recovery of air traffic after COVID-19 in order to contribute to reducing the workload of controllers as well as the safety risks linked to coordination errors.

2.7 ICAO, through its Regional Offices, should assist States to accelerate its implementation in the AFI region in a structured manner that guarantees safety in air traffic management.

3 ACTION BY THE MEETING

The meeting is invited to:

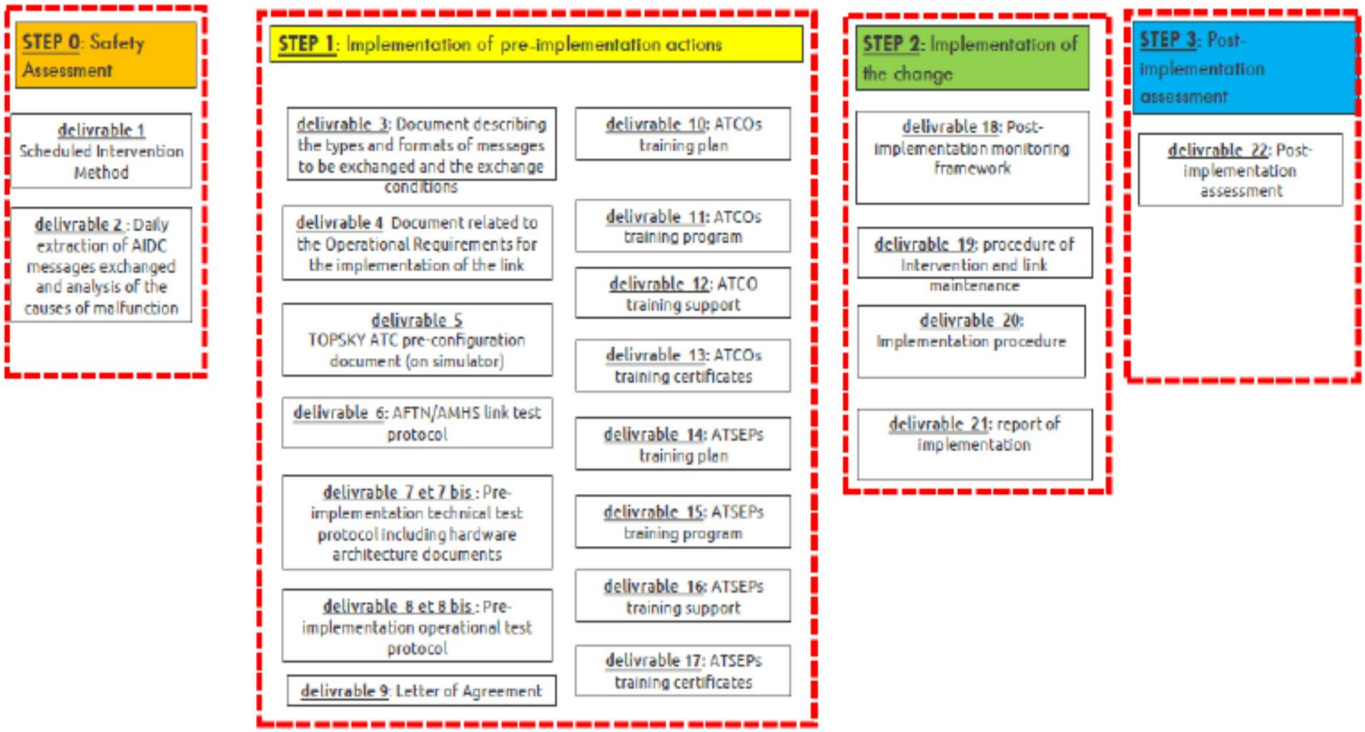
3.1 Take note of the information provided regarding the deployment of AIDC and ASECNA's willingness to share the methodology and deliverables adopted;

3.2 Encourage States/ANSPs to perform the necessary configurations and sign bilateral agreements for operating AIDC or OLDI automatic coordination links with their adjacent centers, to improve efficiency and air navigation service performance.

3.3 Request the SAT IMG subgroup, in coordination with ICAO Regional Offices, to support States in accelerating the implementation of AIDC.

Annexes:

Annex 1: Presentation of the steps and deliverables of the AIDC implementation methodology at ASECNA



Annex 2: AIDC Implementation Table with Adjacent Non-ASECNA Centers

ASECNA Centers	Adjacents Centers	AIDC Link Status	Comments
Abidjan	Roberts	Not implemented	ATM systems not interoperable
	Luanda	In progress	Interoperable ATM systems; configuration adjustments needed
	Accra	Implemented	AIDC via l'AFTN
	Atlantico	In progress	Interoperable ATM systems; configuration adjustments needed
Dakar	Roberts	Not implemented	ATM systems not interoperable
	Las Palmas	Not implemented	Interoperability issue between OLDI and AIDC
	SAL	In progress	ATM interoperability between OLDI and AIDC; AMHS link issues ongoing
	Cayenne	Not implemented	
	Atlantico	In progress	ATM interoperability between SEGITARIO and AIDC; ABI message issues ongoing
	Piarco	Not implemented	
	Recife	N/A	No interface with Recife, only with Atlantico
Brazzaville	Luanda	Not implemented	
	Khartoum	Implemented	AIDC via l'AFTN
	Kinshasa	Implemented	AIDC via l'AFTN
	Accra	Not implemented	
	Sao-tomé	Not implemented	
	Kano	Not implemented	
Antananarivo	Johannesburg	Not implemented	
	Plaisance	Implemented	AIDC via l'AFTN

	Seychelles	Not implemented	
	Dar Es Salam (Tanzanie)	Not implemented	
	Beira (Mozambique)	Not implemented	
Niamey	Alger	Not implemented	OLDI-AIDC interoperability issue
	Kano	Not implemented	
	Lagos	Not implemented	
Ndjamena	Khartoum	Not implemented	
	Tripoli	Not implemented	
	Kano	Not implemented	
	Juba	Not implemented	
Lomé	Accra	Implemented	AIDC via l'AFTN
	Lagos	Not implemented	OLDI-AIDC interoperability issue
Ouagadougou	Accra	Implementation in progress	Started 28/08/25 via AFTN; configuration ongoing; link evaluation planned end October 2025
Nouakchott	Casablanca	Not implemented	OLDI-AIDC interoperability issue
	Las palmas	Not implemented	OLDI-AIDC interoperability issue
	Alger	Not implemented	OLDI-AIDC interoperability issue