



# ICAO

## Fifth Meeting of African Air Navigation Service Providers

(Lome, Togo, 28 mars –1<sup>st</sup> avril 2022)

### Agenda Item 4: *Les services de navigation aérienne et la pandémie de COVID-19*

#### WP/09/PPT : Increase ASECNA airspaces capacity: Implementation of ASEPS separations

(Presented by ASECNA)

<b>Summary</b>	
<p>This working paper focuses on the implementation of Advanced Surveillance Enhanced Procedures Separation (ASEPS) in oceanic and remote continental airspace under ASECNA's jurisdiction.</p> <p>The objective is to increase airspace capacity and operational efficiency in oceanic and continental remote operating areas through the implementation of 20NM separation minima in volumes where ten minute separation minima are currently applied, or approximately 80NM.</p> <p>Action Item:</p> <p>The meeting is invited to:</p> <ul style="list-style-type: none"> <li>• Take note of the information on the implementation of reduced separation minima under satellite ADS-B and appropriate the technical avionics performance following the survey conducted in 2021.</li> <li>• Note ASECNA's willingness to discuss with adjacent ANSPs the CONOPS implementation process for increasing airspace capacity through the implementation of ASEPS separations</li> </ul>	
<b>REFERENCE(S)</b>	DOC 4444
<b>Strategic Objectives</b>	Objective B: Air Navigation Capacity and Efficiency

## 1 INTRODUCTION

1.1 As part of its air traffic surveillance project, ASECNA has implemented ADS-B surveillance in the airspace it manages. During the trial period in 2020, ASECNA observed from the surveys conducted an acceptable rate of transponder carriage. Based on this, ASECNA is moving towards increasing the capacity of its airspace by implementing ASEPS separations in RVSM space.

1.2 The objective is to increase the efficiency and capacity of operations in oceanic and continental remote RVSM airspace where 80NM minimums have been applied to date

## 2. DISCUSSION

2.1 In order to implement ADS-B space base technology, ASECNA started data reception tests for monitoring purposes in 2018. Safety studies were conducted in 2019, followed by staff training. From 2020, the implementation of ADS/B was made effective in all our airspaces. The occurrence of the COVID-19 pandemic interrupted the progress of our concept of operations. However, ADS-B surveillance was used for the following actions in our airspaces:

- Acceptance of direct trajectories for the benefit of ADS-B equipped aircraft;
- Acceptance of the aircraft in our spaces at any entry point.

In addition, at the level of the ATS centers, we have noted repetitive events related to the reduction of personnel in positions:

- Lack of traffic coordination;
- backup nets poorly monitored due to a single agent in position;
- Reduction of vigilance and attention due to the decrease of the traffic level;

Consequently, to improve airspace surveillance during Covid-19 we deployed several remote display terminals (operational position, contingency position, training position) to ensure social distancing.

Today, after finalizing the studies, ASECNA has decided to capitalize on these achievements and move to ASEPS separation, which will optimize airspace capacity and reduce flight times.

## 2.2 Airspaces concerned

The application of the reduced minima of 20NM will be done in the following areas:

- Oceanic RVSM airspaces: Dakar Oceanic FIR, Antananarivo FIR.
- Remote continental RVSM airspaces: Niamey, Ndjamen, Brazzaville UIRs, outside the UTAs.

## 2.3 Applicable separations

The minimums separation in our CONOPS are as follows:

- Longitudinal separations: 20NM between ADS-B positions of aircraft flying in the same direction on the same route or on converging routes at an angle of less than 90°;
- 5NM between aircraft already crossed in opposite directions
- Lateral separation: 20NM between parallel or non-intersecting tracks.

Additional procedures will complete the CONOPS and indicate how to deal with contingency situations including unequipped aircraft. Prior coordination with neighboring airspaces will be done to optimize the benefits of applying these minima.

## 2.4 Expected benefits

The expected benefits are, among others

- Improved air traffic controller situational awareness and improved tactical air traffic management (optimized flight profile, adequate routing, etc.);
- Improved arrival and departure services at non-radar airports;
- Reduced impact of bad weather en route;
- Accurate and timely information for search and rescue.
- Time savings for users
- Increased airspace supply (more capacity available)

## 2.5 Projected Implementation Schedule

The schedule is as follows:

- Q2 2022: operational implementation of ADS-B operated according to the CONOPS; AIP supplement will be produced
- Q3: safety studies related to the reduction of minimums (ASEPS);
- Q1 2023: implementation of reduced separations in the affected spaces.

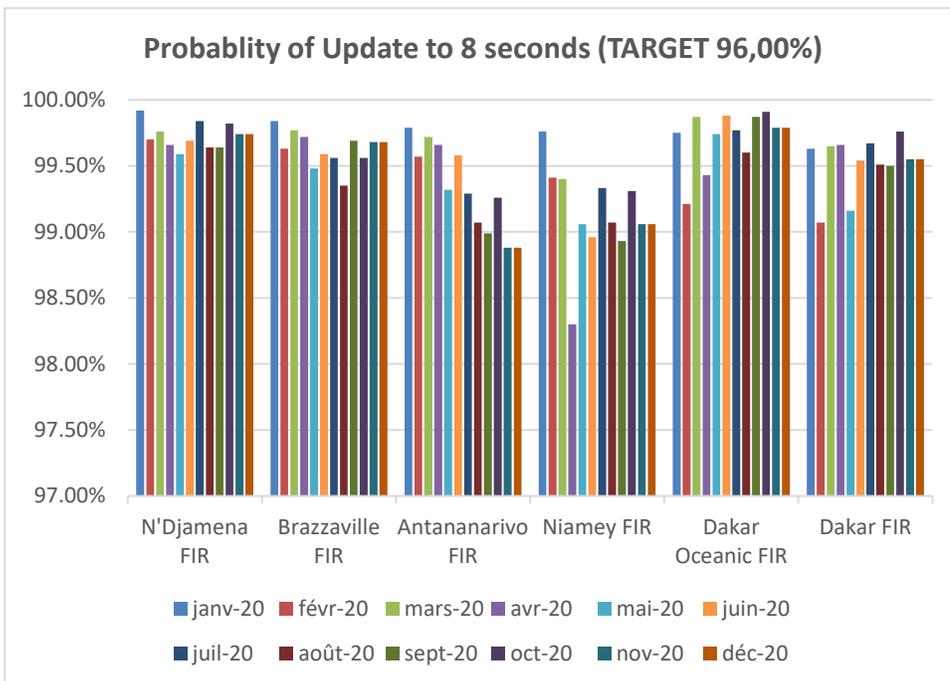
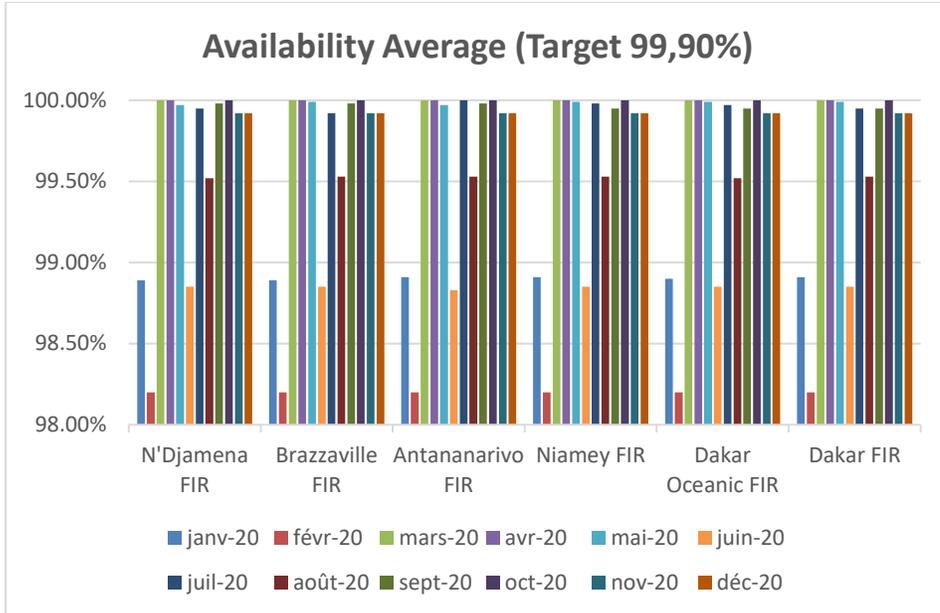
### **3 ACTION TO BE TAKEN BY THE MEETING**

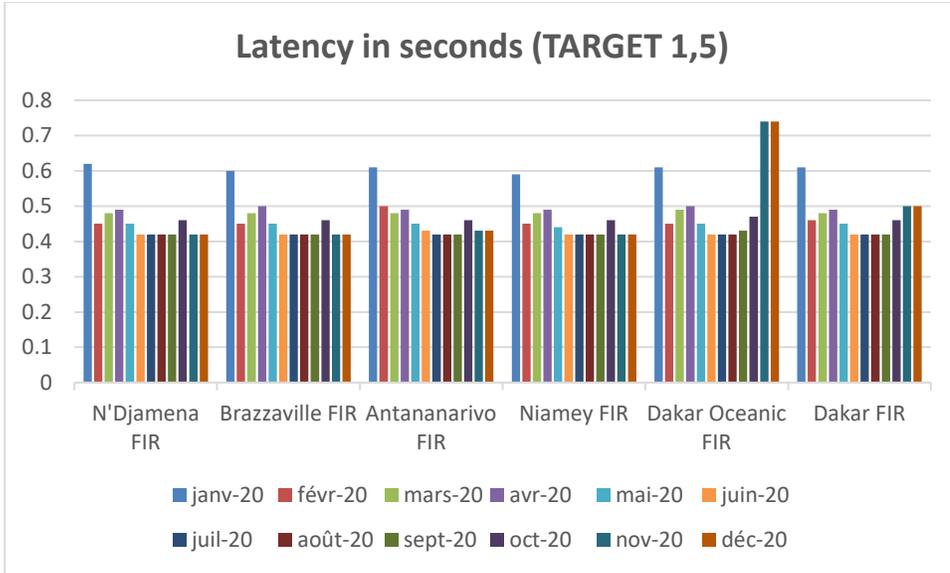
3.1 The meeting is invited to:

- To take note of the information on the implementation of reduced separation minima under satellite ADS-B and to appropriate the avionics technical performances following the survey carried out in 2021, which are annexed to this note;
- To note ASECNA's availability to exchange with adjacent ANSPs on the implementation of ASEPS separations.

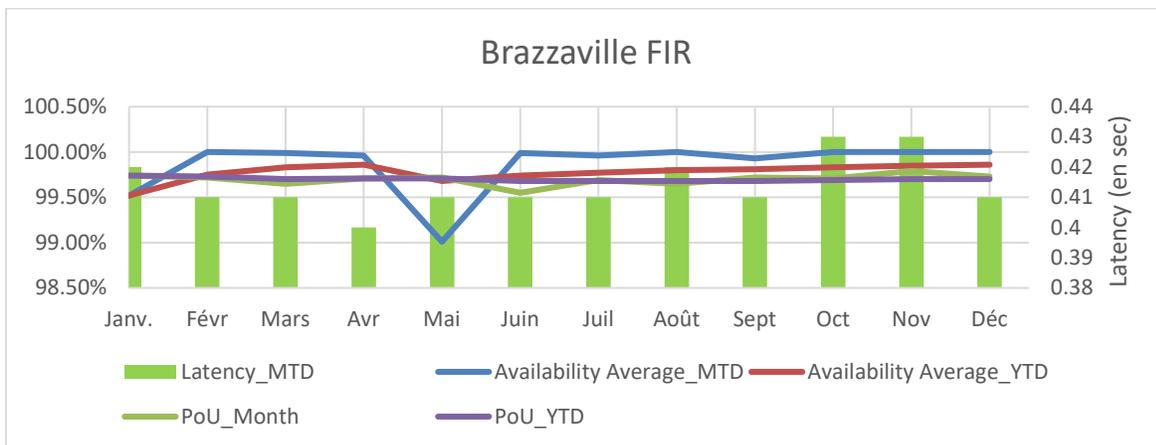
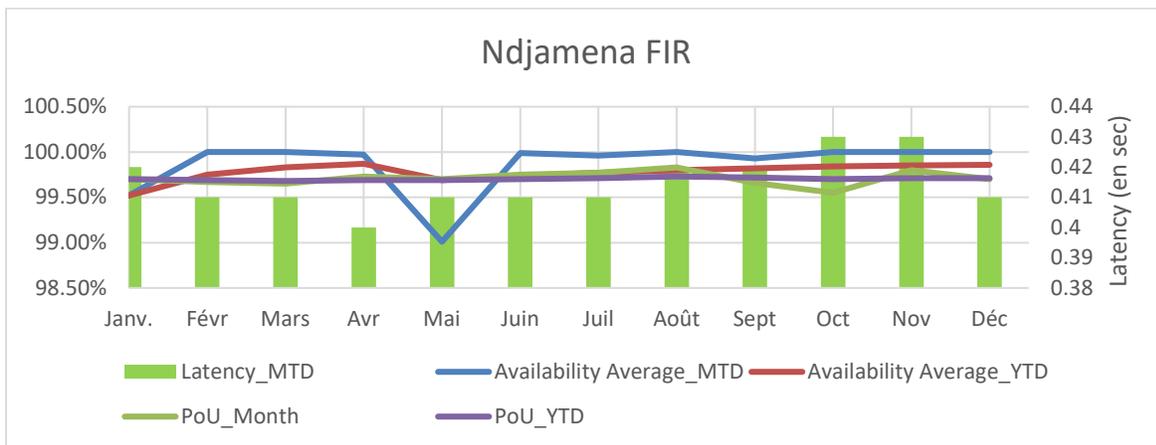
**ANNEXE : TECHNICAL PARAMETER GRAPHIC**  
**From 1<sup>st</sup> January 2020 to 28<sup>th</sup> February 2022**

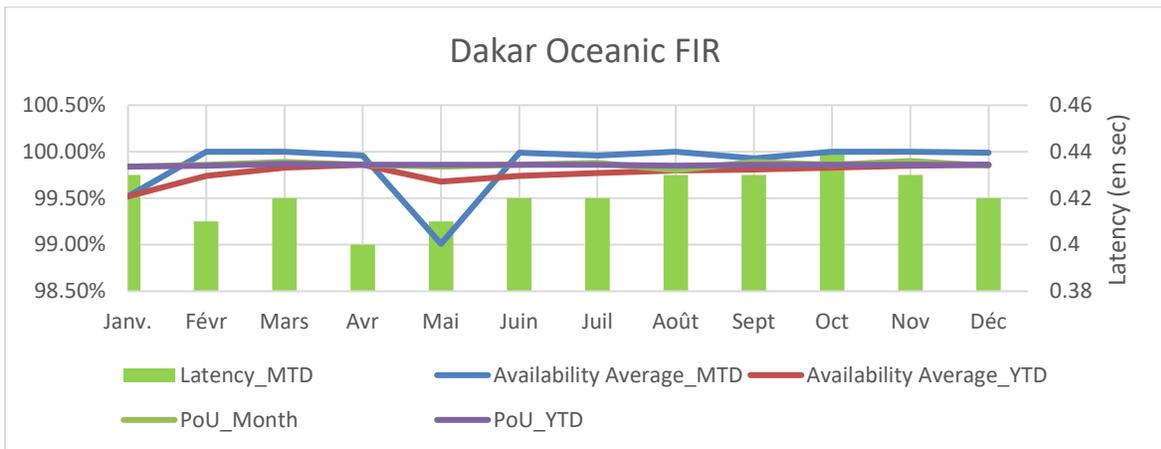
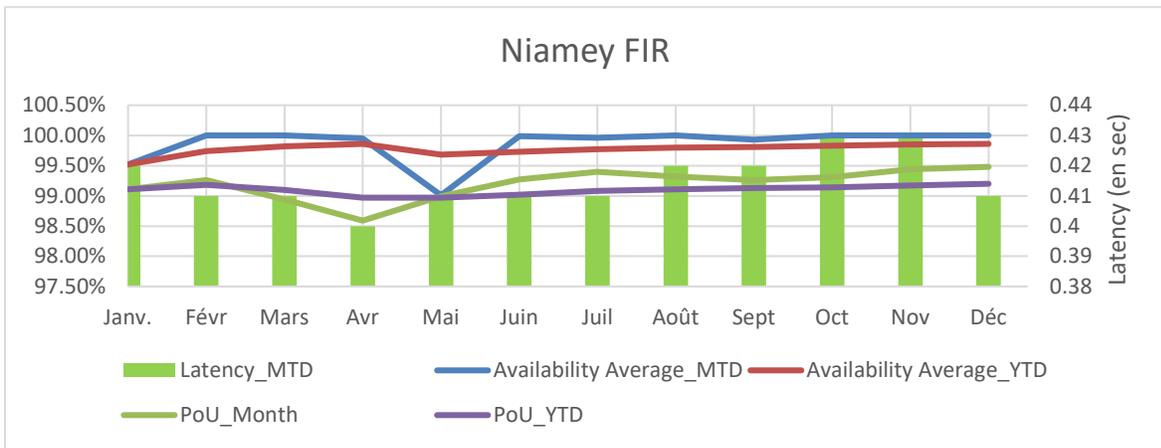
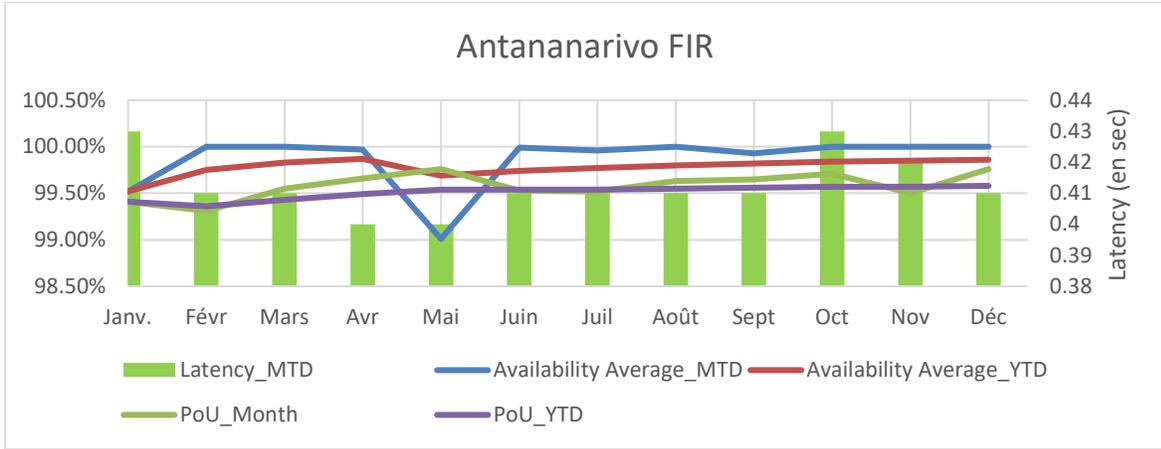
**Year 2020**

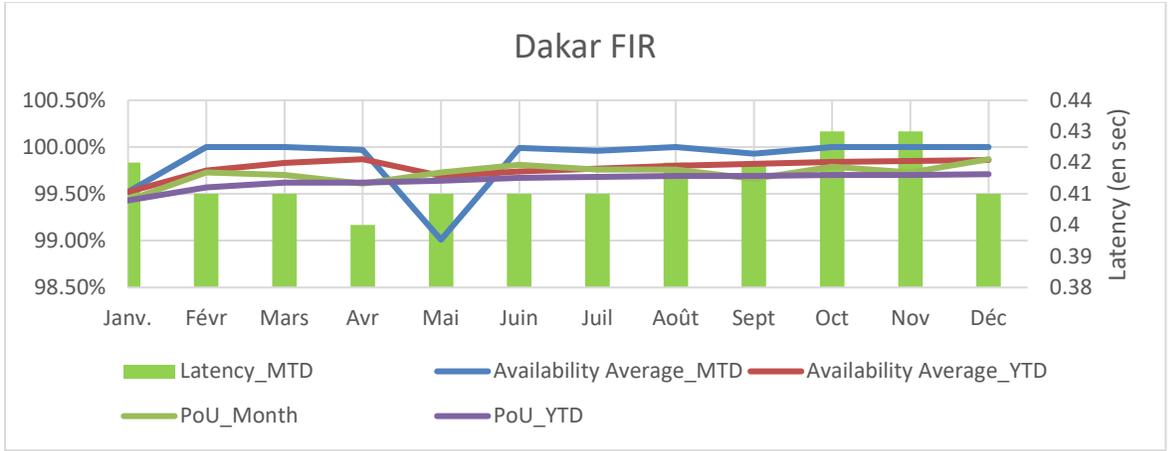




### Year 2021







### Year 2022

