DAKAR ADS-B WORKSHOP
(22nd and 23rd July 2014)

Ongoing Surveillance Projects

(Agenda Item 3)

Content

- Introduction;
- Surveillance in ASECNA area;
- Status of the current project: Surveillance Extension in ASECNA area:
  - The project,
  - MSSR sites and coverage,
  - TOPSKY ATM sites and functionalities.
- In perspective;
- Conclusion.

Introduction

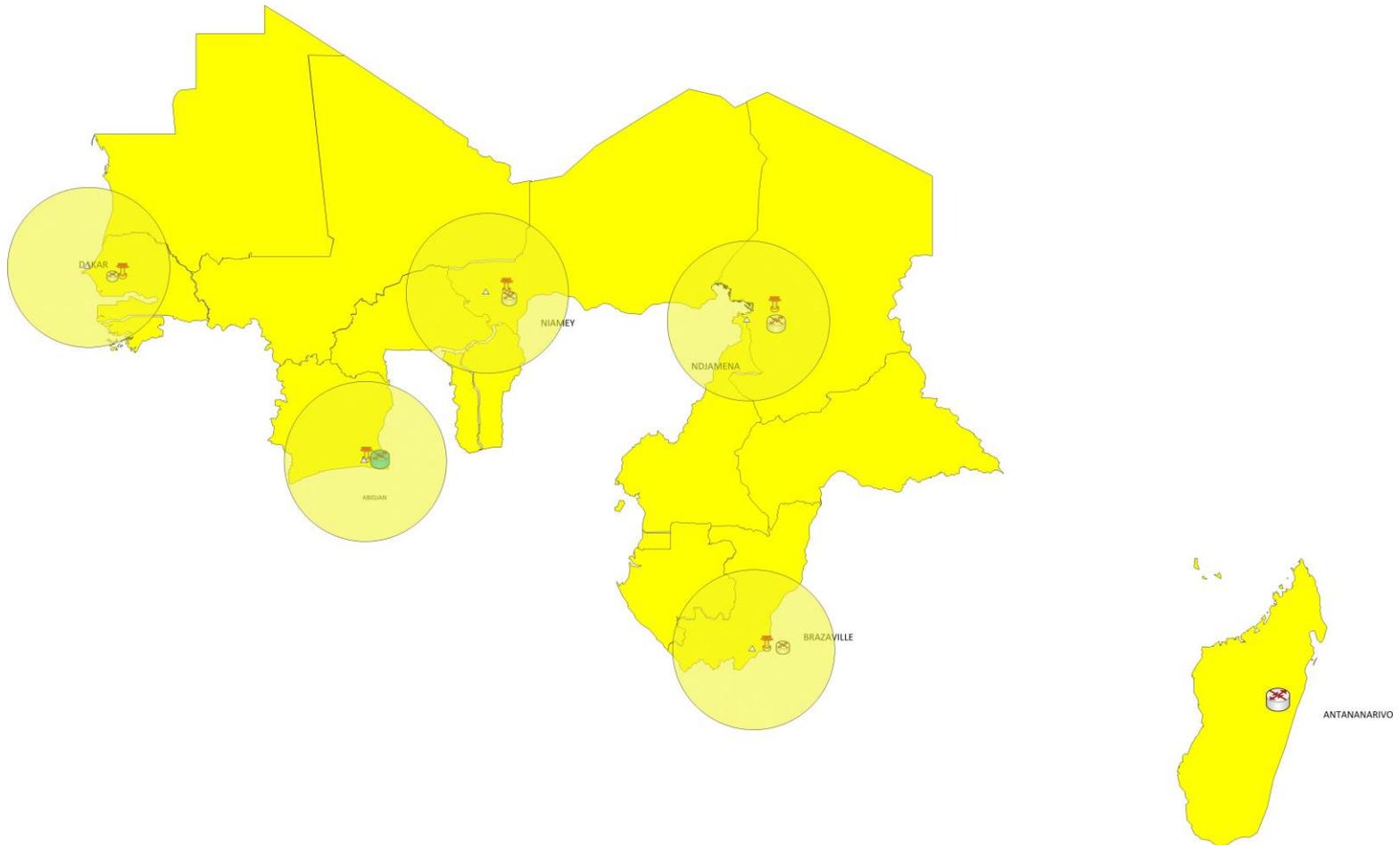The surveillance means are implemented in ASECNA area in the frame of:

➤ Global Air Navigation Plan

➤ Africa and Indian Ocean air navigation Plan

➤ AFI Planning Group (APIRG) Conclusions

➤ ASECNA / IATA Technical Panel Conclusions

➤ Expectations of ASECNA Member States

➤ Development of international air transport

➤ Institutional environment

Surveillance in ASECNA area (1)

- MSSR was implemented in Dakar, Niamey, Abidjan, Ndjamena and Brazzaville centers

- ADS/C and CPDLC in operation in Antananarivo, Dakar, Niamey, Abidjan, Ndjamena and Brazzaville FIRs

Surveillance in ASECNA area (2)

The « Surveillance extension» Project

- This project is for:
    - The provision of eleven (11) of monopulse secondary surveillance radar (MSSR) with Mode S functionality,
    - The provision of ten (10) ATM systems;
    - The upgrade of APP / TWR in five centers.

The steps of the project

- Technical specifications were developed with ICAO ;

- The call of tender was launched in April 17, 2012;

- The contract was singed with the THALES / INEO in November 20, 2012;

- The starting date of the project (T0): January 16, 2013;

- The previous end date of the project: October, 2014;

- The duration of the project : 21 months.

The « Surveillance extension Project:
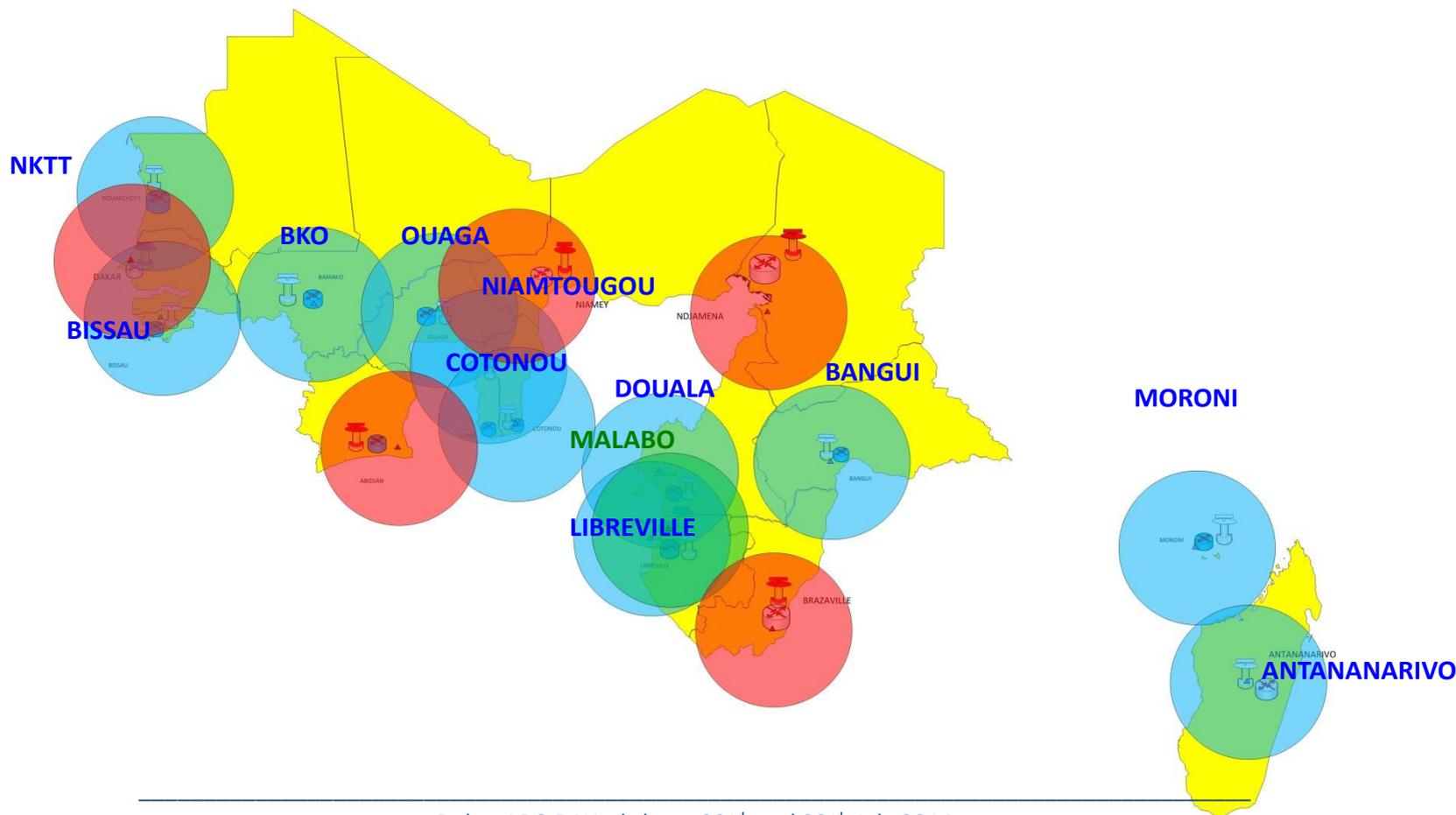# The MSSR sites:

The THALES RSM 970 S MSSR will be installed at:

- Antananarivo
- Moroni
- Bangui
- Libreville
- Douala
- Cotonou
- Niamtougou (Togo)
- Ouagadougou
- Bamako
- Bissau
- Nouakchott

The aim of the project:

MSSR theoretical coverage

The « Surveillance extension »Project:

The ATM system sites:

- Moroni
- Libreville
- Douala
- Bangui
- Cotonou
- Lomé
- Ouagadougou
- Bamako
- Bissau
- Nouakchott

ATM system functionalities

- The ATM system that will be install for the project is the THALES TOPSKY ATM, its main functionalities are:
    - Flight Data processing (FDP),
    - MEDIum System for Integration of Sensors (MEDISIS),
    - Safety Net and monitoring aids processing (SNMAP),
    - Flight plan conflict function (FPCF),
    - Display analysis and replay tool (DART,
    - Java aided data analysis facilities environment (JADE).
- The TOPSKY ATM has the ADS-C and CPDLC functionalities.

Data exchanges (1)

In the operational mode, ASECNA plans the exchange of surveillance data through the interconnection of systems:

- The exchange of radar data between ASECNA centers are already being tested and results are conclusive;

- The use of AIDC / OLDI will allow adjacent centers to exchange data between ATM systems.

Data exchanges (2)

- Data exchanges are implemented through the ASECNA satellite network (AFISNET);

- Satellite links are point to point direct connections using the IP protocol;

- These links have been implemented between each center with MSSR and TOPSKY.

Data exchanges (3)

Déport de données Radar.pdf

Status of the project:

- The implementation of the first sites: Nouakchott, Ouagadougou, Douala, Antananarivo are on going;

- The radar tower at Moroni is under construction;

- The next step will be the implementation of Libreville, Bamako, Bissau, Cotonou, Lomé and Bangui sites.

In perspective

- In the frame of the surveillance extension project and dealing with the strategic objective 1 of his POS,

- ASECNA planned to extend air traffic control over the whole airspace

- Aspects relating to ASBU implementation aiming to build single sky are in consideration

Conclusion

Participants are invited to:

- take note of the above information;

- propose appropriate solutions for ASECNA environment regarding Surveillance concept.

THANK YOU FOR YOUR ATTENTION