



*International Civil Aviation Organization*  
**Twenty Second Meeting on the improvement of Air Traffic Services over the South Atlantic**  
**(SAT/22)**  
**Paris, France (7-9 June 2017)**

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**Agenda Item 4: Communications, Navigation and Surveillance / Air Traffic Management**  
**(CNS/ATM) Systems (Plenary session)**

**2. Performance Based Navigation (PBN) in the South Atlantic RNP4 in the EURSAM Corridor**

(Presented by *International Air Transport Association*)

**SUMMARY**

*This paper highlights specific concerns to support the application of the SAT airspace concept in accordance with the ongoing developments of ICAO Doc 9869 Performance Based Communication and Surveillance (PBCS). IATA requests development of a regional action plan based on the gap analysis for PBCS implementation readiness in the SAT region, in close coordination with operators and neighbouring States involved in the PBCS implementation.*

**1. Introduction**

- 1.1. A three phase EUR/SAM Corridor Airspace Concept Implementation Action Plan were agreed as follow:
  - a. Phase 1 - 50 NM Longitudinal Separation based on RNP10;
  - b. Phase 2 - Data Link Application Mandate to apply 50 NM Longitudinal Separation based on RNP10
  - c. Phase 3 - 30 NM Lateral / Longitudinal Separation based on RNP4
- 1.2. In March 2016, ICAO adopted Amendment 7 (i.e. Amendments 7-A and 7-B), to the fifteenth edition of the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM), for applicability on November 2016. With regard to airspace concept the amendment is related to:
  - a. Performance-based longitudinal and lateral separation minima and automatic dependent surveillance — contract (ADS-C) climb and descend procedure (CDP);
  - b. Separation departing aircraft from arriving aircraft that are following an area navigation (RNAV) or required navigation performance (RNP) route
  - c. Data link initiation capability (DLIC), ADS-C, performance-based communication and surveillance (PBCS) and satellite voice communications (SATVOICE)
- 1.3. For safety oversight applicable to ANSP, States should ensure that ANSPs established a validation process that confirms regulatory and system readiness that would meet capability and performance requirements as related to PBCS.



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## 2. Discussion

- 2.1. The current SAT airspace concept action plan developed in March 2015 should be reviewed and take into account the new Amendment of Doc 4444 with regards to the implementation of RNP 10, RNP 2/4 (Separation minima based on distance versus time) and the PBCS requirements for all the stakeholders (ANSPs, Airlines, CSPs, Regulators).
- 2.2. States are encouraged to commence gap analysis for PBCS readiness and implementation and develop their individual action plan to address the gaps in accordance with the most recent version of ICAO PBCS Manual. The gap analysis should include the following implementation issues: State PBCS regulatory framework, operator operational approval, ATC Flight Plan Systems to support RCP/RSP codes filling, training for flight crews and other appropriate personnel, implementation of local and regional monitoring programs, and other items to be identified.
- 2.3. The gap analysis may be different for each SAT State, impacting seamless operation and PBCS implementation across the EUR/SAM corridor. The Airspace Concept Task Force thus should develop a regional work plan in order to ensure harmonization and synchronization of activities of the States. The updates should include frequent reviews on regulators', ANSPs' and operators' readiness.
- 2.4. As the result of the gap analysis and the new Amendment of ICAO PANS-ATM, the airspace concept for the SAT region and associated action plans should be reviewed and updated. This review should include a collective re-assessment of a realistic implementation date for the SAT region for the updated airspace concept. Additionally, a transitional strategy to progressively achieve operational goals of the updated airspace concept should also be developed and regionally agreed. During the transitional period, the principle of Most Capable Best Served (MCBS) can be used to encourage progress, while fairly accommodating legacy aircraft.
- 2.5. Moreover, to achieve a high level of operational performance across the corridor, SAT States are urged to find measures of establishing local means of collecting and sharing PBCS-related data in a standardized format defined/agreed for the regional monitoring program (RMP). The tasks of this RMP should be defined. Tasks for the RMP may include but not limited to:
  - ensure centralized support to accommodate specific, local, regional and global needs;
  - validation of submitted data before importing it into a secure centralized database;
  - maintain data, such as related to the ANSP, CSP, aircraft type and aircraft operator;
  - manage resources and contracts, costs recovery and secure access to the services and information;
  - support participating ANSPs in the analysis and reporting of the operational data at the regional level;
  - coordinate, with other regional monitoring programs, such as those established for monitoring RVSM ( e.g. ARMA & SATMA);



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- provide means to receive , track, manage problem reports (e.g. web-based service);
- provide a diagnosis of the problem and recommend resolutions; and
- notify appropriate parties when the operational performance does not meet the RCP/RSP specification;

2.6. In light of the information presented above, IATA supports the following recommendations:

- a) SAT States to conduct a gap analysis for PBCS implementation readiness and develop their National Action Plan. This includes a SAT Conclusion for a supporting State Letter advising SAT States to conduct such activities;
- b) SAT Task Force, in close coordination with airline operators, to develop a harmonized and coordinated regional action plan with timeline based on the gap analysis;
- c) SAT Task Force to review the SAT airspace concept and revisiting targeted operational improvements, PBN and PBCS requirements to be applied, realistic implementation dates and the need for a regional transitional strategy;
- d) SAT Task Force to invite ICAO to expedite the development and the publication of guidance material for PBCS Operational Approval;
- e) SAT States, who have not done so, to start training on PBN and PBCS for their staff and to establish a State policy and State regulatory frameworks supporting the eventual implementation of PBN and PBCS; and
- f) SAT States and ANSPs to find measures for the establishment of local and regional PBCS monitoring programs to perform local/regional analysis for identifying problems and taking necessary corrective action.

### **3. Action by the Meeting**

The meeting is invited to:

- note the information provided; and
- consider the IATA recommendations mentioned in paragraph 2.6 of this WP as a pragmatic approach to implement SAT Airspace Concept and PBCS for the SAT Region.