



International Civil Aviation Organization

The 3rd Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/3)

Pattaya, Thailand, 26 – 27 May 2014

Agenda Item 3: Any Other Business

USE OF FANS1/A DATA LINK CAPABILITY TO IMPLEMENT 30 NM LONGITUDINAL SEPARATION ON ROUTES M300, N571, P570 & P574.

(Presented by Airports Authority of India)

SUMMARY

This paper presents the proposal by India to implement 30 NM Longitudinal Separation between aircraft with FANS1/A data link capability on an opportunity basis in the Bay of Bengal Arabian Sea Indian Ocean Airspace in a phased manner.

1. INTRODUCTION

1.1 The Bay of Bengal Reduced Horizontal Separation Task Force was dissolved during its last meeting in May 2012 and the residual tasks delegated to the South Asia/Indian Ocean ATM Coordination Group (SAIOACG). India presented Working Paper 15 in the third meeting of SAIOACG in February 2013 on the Proposal to introduce 30 NM longitudinal separation within the Bay of Bengal Arabian sea Indian Ocean airspace. Subsequently in the fourth meeting of SAIOACG in February 2014 India had committed to implement 30 NM longitudinal separation on routes M300, N571, P570 & P574.

2. DISCUSSION

2.1 India had previously proposed that we first introduce 30 NM longitudinal separation on the existing RNP routes in a phased manner and then progress to reducing the lateral separation to 30 NM. As a first step India expressed its readiness to introduce 30 NM longitudinal separation on four routes N571, M300, P570 & P574.

2.2 The pre-implementation safety assessment for the introduction of 30 NM RLS on four routes N571, M300, P570 and P574 was conducted by the Bay of Bengal Arabian Sea Indian Ocean Safety Monitoring Agency, BOBASMA, and the same will be presented in RASMAG/19.

2.3 India is in the final stages of implementing the use of 30NM reduced longitudinal separation between aircraft with FANS/1A data link capability on an opportunity basis on four routes N571, M300, P570 and P574 commencing from AIRAC date 24th July 2014.

2.4 The four routes M300, N571, P570 & P574 traverse the entire BOBASIO airspace in an east - west direction over an average distance of 2,050NM and an average flying time of 4 hours 30 minutes. These four routes are used by long haul aircrafts flying between airports in South East Asia and the Middle East & Europe and the distance flown across the Indian FIRs of Chennai & Mumbai accounts for a major portion of their flying time.

2.5 **Table 1** shows the number of flights operating on routes M300, N571, P570 and P574 within Indian FIRs based on the December 2013 Traffic Sample Data.

	Monthly Traffic Count	Daily Average
M300	3360	108
N571	3907	126
P570	1394	45
P574	1766	57

Table 1: Monthly Traffic count based on December 2013 TSD

2.6 For Chennai FIR, data was collected only for 2 routes N571 and P574 as the other two routes transit for a very short distance within the oceanic airspace of Chennai before entering into the terminal control area of Mangalore & Trivandrum and then on to Colombo FIR.

2.7 An analysis of the data link capability of aircraft was conducted using the Traffic Sample Data (TSD) of December 2013. **Figures 1 & 2** below show the percentage of data link capable aircrafts on the four routes in Mumbai and Chennai FIRs. The figures also indicate the percentage of aircraft that actually log on to data link.

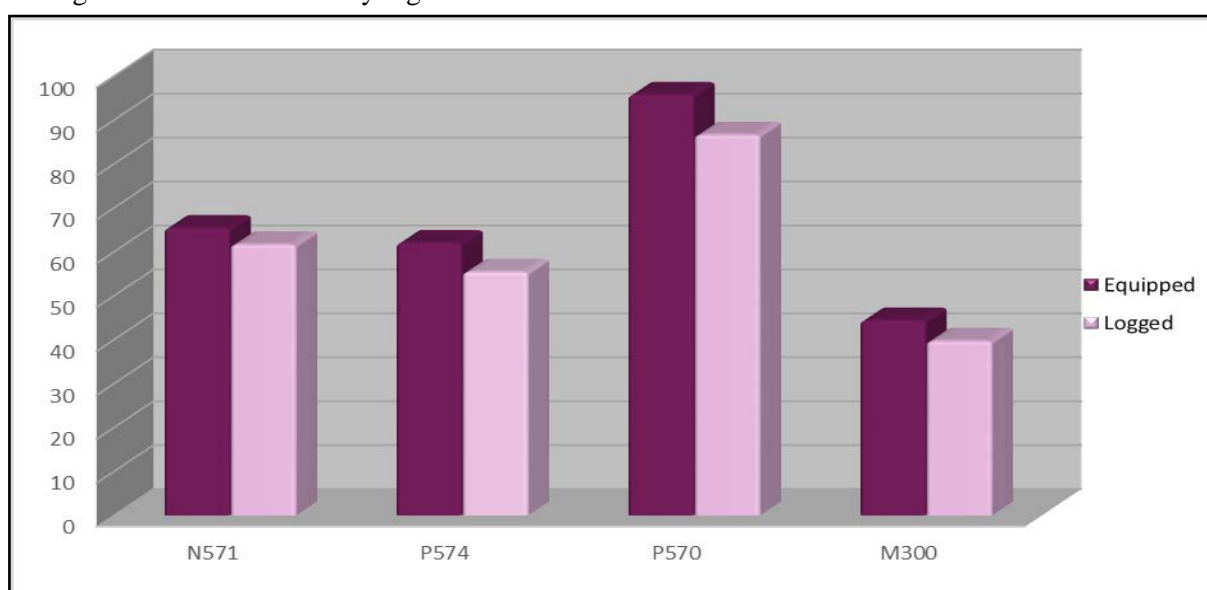


Figure 1: Data link capable flights on 4 Routes in Mumbai FIR

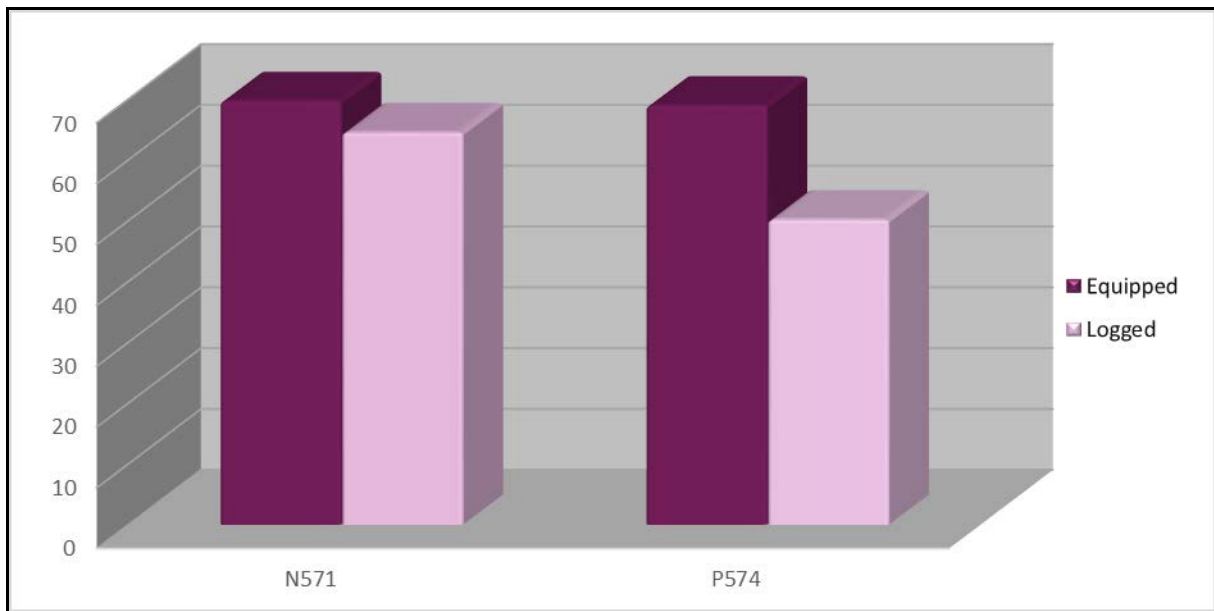


Figure 2: Data link capable flights on 2 Routes in Chennai FIR

2.8 **Figures 3 & 4** shows the top ten Operators who operate data link capable flights on these routes within Mumbai and Chennai FIRs. Emirates is the largest operator operating data link capable flights within Mumbai FIR and Singapore airlines operates the maximum number of data link capable flights within Chennai FIR.

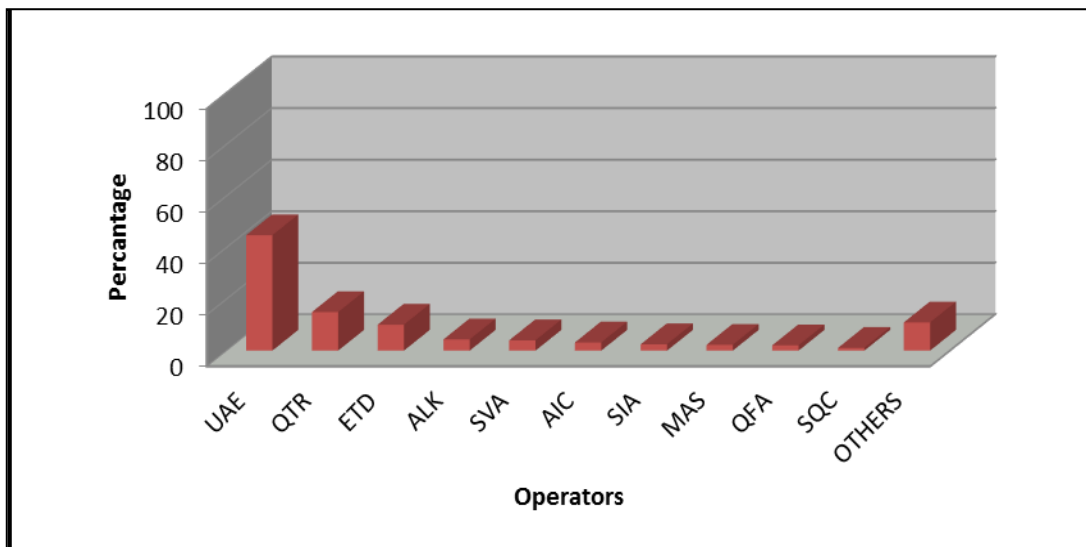


Figure 3: Top ten Operators of Data link capable flights on 4 routes in Mumbai FIR

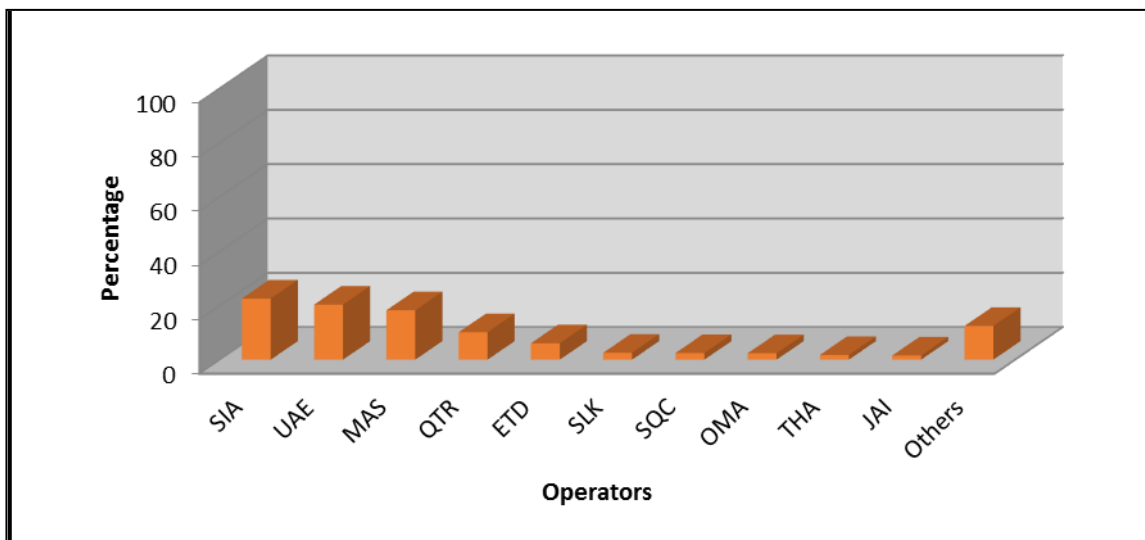


Figure 4: Top ten Operators of Data link capable flights on 2 routes in Chennai FIR

2.9 The types of aircraft used by data link capable flights on these routes are shown in **Figures 5 & 6**. It is seen that the long haul aircrafts such as B77W, A332, A333 and B772 etc. are the ones that are normally equipped with data link capability and aircraft that fly short durations are mostly not equipped with data link.

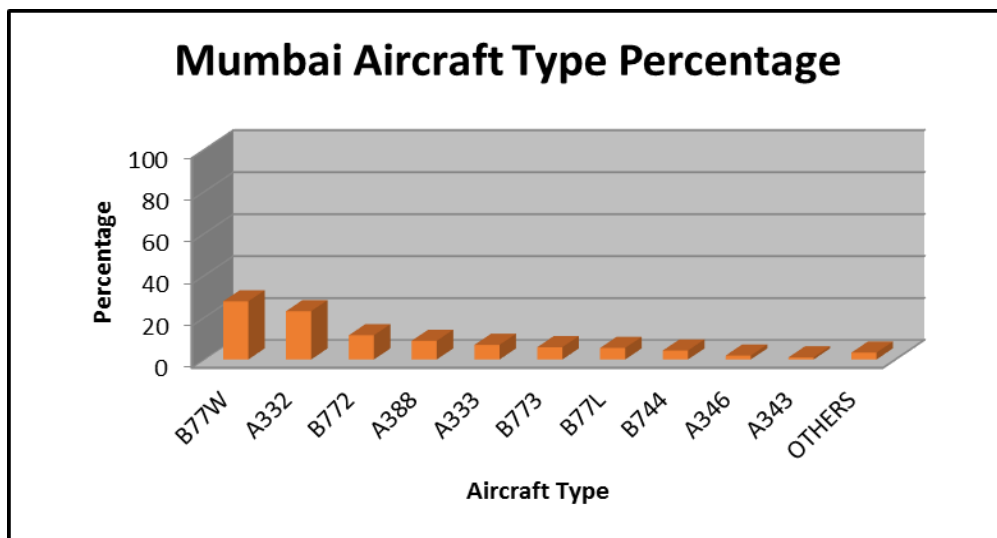


Figure 5: Top ten aircraft Types with Data link on 4 routes in Mumbai FIR

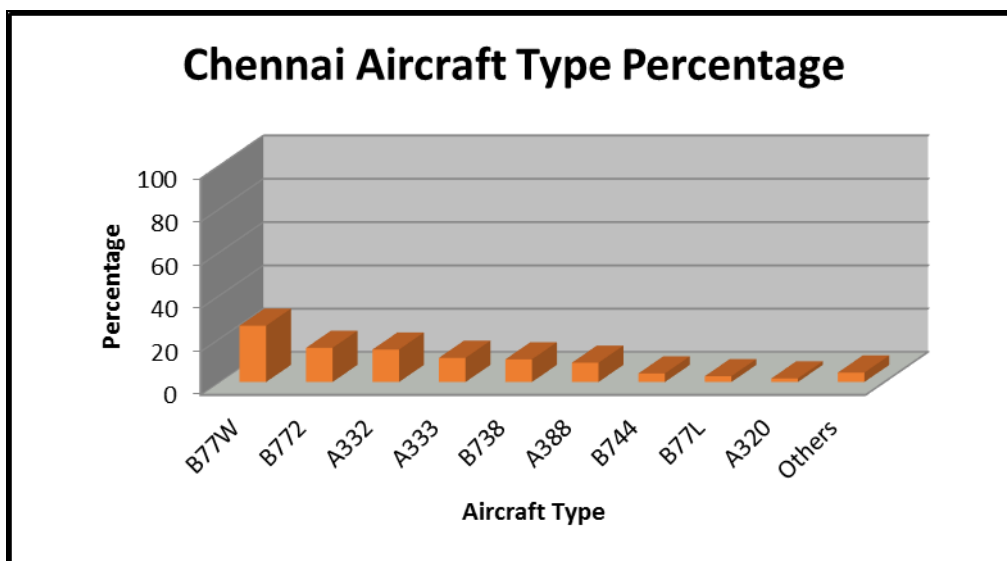


Figure 6. Top ten aircraft Types with Data link on 2 routes in Chennai FIR

3. CONCLUSION

3.1 It can be concluded that with the introduction of 30 NM Reduced longitudinal separation on the four routes N571, M300, P570 & P574, aircraft stand to benefit even if it is implemented only within the Indian FIRs.

3.2 Full benefit of any implementation of reduced horizontal separation cannot be achieved without corresponding enhancement in the on board data link equipage of aircraft.

4. ACTION BY THE MEETING

The meeting is invited to:

- a) Note the planned implementation of the use of 30 NM reduced longitudinal separation by India on the four routes N571, M300, P570 & P574.
- b) urge airline operators to equip aircraft with FANS/1A data link capability
- c) Discuss any relevant matters as appropriate.

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