

**Twenty Seventh Meeting of the
Informal South Pacific ATS Co-ordinating Group
(ISPACG/27)**

**Auckland, New Zealand
27 February – 01 March 2013**

Agenda Item 5.1 – Seamless Airspace Chart

USER PREFERRED ROUTE (UPR) AND PACOTS UPDATE

Presented by Federal Aviation Administration

SUMMARY

This information paper provides an update on the status of UPRs and PACOTS Tracks within the Pacific Region.

1. INTRODUCTION

- 1.2. UPRs have been utilized in the Pacific Region for some time. The usage of UPRs has grown significantly, and trials of UPRs in conjunction with various organized tracks are still being conducted.

2. DISCUSSION

- 2.1. To ensure efficient and safe management of air traffic, operational requirements from the various Air Navigation Service Providers (ANSPs) are necessary. These requirements are developed and published in Aeronautical Information Publications (AIPs), International Notices to Airmen (NOTAMs), and/or the Pacific Chart Supplement.
- 2.2. It is recognized that these operational requirements often create negative impacts on the efficiency of various UPRs. ANSPs must constantly review the restrictions imposed in order to ensure that potentially negative impacts on the efficiency of a particular UPR are eliminated wherever possible.
- 2.3. Also, it is important to realize that UPRs are not always an efficient means of moving aircraft through oceanic airspace. For example, within Oakland OCA, the one area where unrestricted use of UPRs is not feasible is the Central East Pacific. Due to the volume of traffic transiting the airspace between North America and Hawaii, adherence to a structured ATS Route system provides the most overall efficient operations.
- 2.4. The operational trial of UPRs associated with PACOTS Track 1 and Track 3 is continuing. The main operational requirement for PACOTS Track 1 and Track 3 UPRs is to remain at least 50nm laterally separated from PACOTS Track 2. PACOTS Track 2 remains as the only eastbound PACOTS track that does not have an alternative UPR.
- 2.5. Two seasonal paper trials of UPRs associated with PACOTS Tracks E and F have been completed. The data shows a projected summer savings of 880 kilograms (kg) and winter savings of 299 kg of fuel burn per flight. While these are significant



savings the operators noted that the paper trial restriction to remain 50nm south of PACOTS Tracks C/D impaired the savings. If that restriction was removed, there was a potential average fuel burn savings of 7715 kg in the November paper trial. Recognizing this potential the IPACG meeting looked for a way to realize those significant savings.

- 2.6. The development of advanced oceanic air traffic control systems has allowed for efficient control of an increased volume of traffic. As a result, it is now possible to merge traffic from two adjacent PACOTS routes which will result in development of an overall more efficient track between North America and Japan. In conjunction with this potential merge, it will also be possible to allow UPRs to be flown in association with PACOTS Track F.
- 2.7. It has been agreed to start an Operational Trial to merge PACOTS Tracks C and E in the Oakland or Anchorage FIRs. When Oakland ARTCC generates the Westbound PACOTS Tracks, they will evaluate the tracks to see if there is at least a 200 lbs fuel burn savings on either Track C or Track E by merging the two tracks. If the minimum savings exists, then Track C and E will be published with a merge.
- 2.8. Oakland ARTCC Traffic Management will use the Track Advisory (TA) system to manage traffic loading onto the merged tracks. TA is a gateway reservation program that is used to plan the loading of aircraft onto PACOTS and the Russian Routes. Operators submit a request for their choices with a time window and altitude at a gateway point for a flight. TA compiles the operator choices at a 1650 UTC and then publishes a Gateway Reservation List for the flights. The point where Tracks C and E merge would be used as the "gateway" fix for a merged scenario. TA will provide for a managed traffic flow at the merge point for the two tracks.
- 2.9. The proposed operational trial would run for one year, in order to evaluate the seasonal differences in the merged tracks. During the trial, collaborative methods will be utilized to enhance the process and if safety hazards are encountered which cannot be mitigated, the trial will be suspended or terminated. Periodic teleconferences will be scheduled to discuss the trial, its effectiveness, and provide a forum for sharing any user concerns.
- 2.10. As an adjunct to this trial, an operational trial of UPRs south of PACOTS Track E would begin. This UPR trial would have the following guidelines associated with it.
 - a) The UPR must enter oceanic airspace over one of the existing waypoints on the Oakland Oceanic fir boundary along the west coast of North America.
 - b) Flights must join a NOPAC ATS Route when transiting the Anchorage FIR. However, the upr must not utilize ats route r591 and/or g344 if designated as an eastbound pacots track.
 - c) Operators must flight plan so as to remain 50 NM south of pacots Track E.
- 2.11. PACOTS Track F UPR aircraft do not have priority for altitude assignment over aircraft on an existing PACOTS, NOPAC or Central East Pacific (CEP) traffic.

3. ACTION BY THE MEETING

- 3.1. The meeting is invited to:
 - a) Note the successful implementation of UPRs throughout most of the Pacific Region.
 - b) Discuss UPRs and ways to improve their efficiency.