Twenty-Second Meeting of the Cross Polar Trans East Air Traffic Management Providers' Work Group (CPWG/22)

(Paris, France 25-27 October 2016)

Agenda Item2: Administrative Matters

IPACG Actions re the North Pacific (NOPAC) Route Structure (Action Items CP18-04P, CP19-07P)

(Presented by the Federal Aviation Administration)

SUMMARY

This paper provides information concerning actions taken by the Informal Pacific ATC Coordinating Group (IPACG).

1. Introduction

1.1 The latest meeting of the IPACG, *i.e.* IPACG 42, was held in Seattle, Washington during the week of September 12th, 2016. Participants at IPACG 42 included IATA, Operators, OS DOD, JCAB and the FAA. At the meeting, the Federal Aviation Administration (FAA) presented a paper (WP/18-02) concerning the North Pacific (NOPAC) route system titled, "Optimization of NOPAC Navigable Airspace: Suggestions for a way forward". A copy of the paper is included as Attachment 1.

1.2 FAA's paper made the following recommendations:

- The IPACG formally adopt an action item to study the reorganization of the NOPAC based upon current aircraft Communication, Navigation and Surveillance (CNS) capabilities,
- The IPACG solicit input from IATA and non-affiliated operators (such as the U.S. Department of Defense) for proposals and recommendations, and
- The IPACG ANSPs advise the CPWG of their intention to work this issue in the IPACG venue.

The IPACG accepted these recommendations.

2. Discussion

2.1 This working paper serves to advise CPWG of IPACG's intention to research the possible reorganization of the NOPAC.

2.2 In light of the IPACG's intention, some aspects of the CPWG Action Items CP18-04P (concerning UPRs to the Russian Trans East), and CP19-07P (concerning expansion of UPRs thru and across the Pacific) would be better served in the IPACG venue. For example, CP18-04P includes consideration of UPRs to the KOKES, LUMES and KUNAD RTE entry points. Because these fixes are located on the

southern boundary of the Petropavlosk-Kamchatsky FIR, aircraft flight planning them will necessarily be navigating via, or across, the NOPAC. Therefore, any reorganization of the NOPAC needs to include consideration of how these RTE flights will interact with the NOPAC flow. Similarly, consideration of expanded UPRs across the North Pacific will impact, and be impacted by a NOPAC reorganization.

3. Action by the Meeting

3.1 The meeting is invited to:

a. Review the information contained in this Working Paper; and
b. Recommendation to close the two action items and move them to the IPACG

IPACG PM/18
WP/18-03
9/12/16

THE EIGHTEENTH MEETING OF THE INFORMAL PACIFIC ATC CO-ORDINATING GROUP PROVIDERS MEETING
(IPACG PM/18)

(Seattle, WA 12 & 16 September 2016)

Agenda Item 6: Air Traffic Management (ATM) Issues

Optimization of NOPAC Navigable Airspace: Suggestions for a way forward

(Presented by the Federal Aviation Administration)

SUMMARY

The North Pacific Route System (NOPAC) was last modified in 1997. Since that time, increases in aircraft range, improved navigation capability, and increases in Air Traffic Control Communication, Navigation and Surveillance (CNS) capabilities has led to increasing demand for User Preferred Routes (UPRs). Predicated on this trend, the IATA led *Pacific Project* (now merged with the Cross Polar Working Group) and IPACG have both begun to recognize that the North Pacific Route System (NOPAC) is no longer optimal when considering aircraft fleet performance. Both CPWG and IPACG have taken action already, and/or are considering what action should be taken to address this issue. This working paper forwards two substantive proposals to ensure a coordinated and efficient solution.

1. Introduction

1.1. The NOPAC was last modified in May of 1997 when Air Traffic Service (ATS) routes R580 and A590 were modified into full time (24 hour per day) unidirectional routes. In the ensuing 19 years, aircraft navigation capability has significantly improved due to GNSS based navigation and new aircraft types have been introduced, such as the A330-300, B777, B787, etc., which have increased the fleet's average for both range and endurance. Simultaneously, Air Navigation Service Providers have leveraged the advancement in aircraft Satellite Communication (SAT COM) equipage to develop improved CNS capabilities.

1.2. As a direct result of the improvement noted in 1.1, aircraft operators are increasingly requesting the availability of new and/or revised User Preferred Route (UPR) options. With the *Pacific Project* work now being subsumed by CPWG, the subject of NOPAC UPRs is being addressed by both the CPWG and IPACG[i]. In addition, at CPWG/20 meeting, the discussion of UPRs expanded to include reorganizing the NOPAC route structure. The International Air Transport Association (IATA) took an action to survey their members for route recommendations and revision proposals[ii].

2. Discussion

2.1 The subject of UPRs is not unique to any single airspace volume. It is natural to assume that in some situations UPRs may be envisioned which cross otherwise independent traffic flows and airspace boundaries. Cross Polar (Arctic) UPRs, which are severely limited due to Russia's entry/exit point

requirements, have virtually no interaction with the NOPAC. For the most part, UPRs for the Russian Trans East (RTE) flow are also isolated from the NOPAC[iii]. Consequently, except for the *Pacific Project's* work program, CPWG's discussions of UPRs would normally not touch upon the NOPAC.

2.2 As evidenced by CPWG discussions, UPRs across the NOPAC is transforming into a discussion of the optimization of the NOPAC route structure (reorganization). This has become increasingly evident as more of the aircraft fleet is capable of achieving flight efficiencies based on navigation and route planning, which the existing route structure does not support.

2.3 Any discussion of NOPAC reorganization must also encompass a discussion of the Pacific Organized Track System (PACOTS) since PACOTS tracks are essentially extensions of the NOPAC to both the U.S. west coast and Japanese domestic route system and the PACOTS route generation and procedures are particularly germane to the IPACG.

3. Recommendations

3.1 Based upon the discussion above, and a belief that time and efficiency are best served by sharing concepts, formulating solutions, and developing a work plan for potential NOPAC reorganization within the *IPACG* venue, FAA recommends the following:

1. The IPACG formally adopt an action item to study the reorganization of the NOPAC based upon current aircraft CNS capabilities,
2. The IPACG solicit input from IATA and non-affiliated operators (such as the U.S. Department of Defence) for proposals and recommendations and,
3. The IPACG ANSPs advise the CPWG of their intention to work this issue in the IPACG venue.

4. Conclusion

4.1 The meeting is invited to note the recommendations provided and discuss their adoption.

[i] See CPWG Action Item CP19-07P and IPACG Action Items IP29-4, IP35-1, IP40-1
[ii] See IPACG/42 IPxx, "Summary of the Outcomes of the 21st Cross Polar Trans East Air Traffic Management Providers Working Group (CPWG/21) Meeting"
[iii] FAA now permits both east and westbound traffic via Russia's south-easternmost entry/exit points KOKES, LUMES and KUNAD and, while UPRs to these southern RTE points do interact with the NOPAC, that interaction is wholly contained within Anchorage ARTCC's airspace.