



International Civil Aviation Organization

**The First Meeting of the APANPIRG ATM Sub-Group  
(ATM /SG/1)**

Bangkok, Thailand, 20 – 24 May 2013

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**Agenda Item 4: ATM Systems (Modernisation, Seamless ATM, CNS, ATFM)**

**CROSS POLAR TRANS EAST ATM PROVIDERS WORKING GROUP OUTCOMES**

(Presented by Japan)

**SUMMARY**

This paper presents a summary of outcomes and accomplishments from the Fourteenth Meeting of the Cross Polar Trans-East Air Traffic Management Providers' Working Group (CPWG/14), hosted by FAA in Chicago, United States 10-14 December 2012.

This paper relates to –

**Strategic Objectives:**

- A: *Safety – Enhance global civil aviation safety*
- C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

**Global Plan Initiatives:**

- GPI-1 Flexible use of airspace
- GPI-2 Reduced vertical separation minima
- GPI-3 Harmonization of level systems
- GPI-4 Alignment of upper airspace classifications
- GPI-5 RNAV and RNP (Performance-based navigation)
- GPI-6 Air traffic flow management
- GPI-7 Dynamic and flexible ATS route management
- GPI-8 Collaborative airspace design and management
- GPI-9 Situational awareness
- GPI-10 Terminal area design and management
- GPI-11 RNP and RNAV SIDs and STARs
- GPI-12 Functional integration of ground systems with airborne systems
- GPI-13 Aerodrome design and management
- GPI-14 Runway operations
- GPI-15 Match IMC and VMC operating capacity
- GPI-16 Decision support systems and alerting systems
- GPI-17 Data link applications
- GPI-18 Aeronautical information
- GPI-19 Meteorological Systems
- GPI-20 WGS-84
- GPI-21 Navigation systems
- GPI-22 Communication infrastructure
- GPI-23 Aeronautical radio spectrum

## 1. INTRODUCTION

1.1 The Cross Polar Trans-East Air Traffic Management (ATM) Providers' Working Group (CPWG) provides a forum where air navigation service providers (ANSPs) and operators meet to address operational issues and develop solutions related to the provision or use of air traffic services for the Cross Polar and Russian Trans East (RTE) traffic flows. The CPWG aims to identify, design and implement short and mid-term solutions to ATM issues to gain efficiencies including the development of routes. The CPWG is facilitated by the United States (U.S.) Federal Aviation Administration (FAA) and meets biannually at locations determined through group consensus. The CPWG is composed of representatives from the ANSPs for Russia, Canada, Iceland, Norway, Japan, China, Mongolia the U.S., and international organizations such as the International Air Transport Association (IATA) representing the airlines that operate in the Polar and RTE airspace.

1.2 This paper highlights relevant work accomplished during the CPWG/14 and provides an update on the Pacific Project.

1.3 There were over 40 attendees at the meeting, including delegations from the U.S., Russia, Japan, Canada, Norway, Iceland, Mongolia, IATA, aviation industry, and international airlines.

## 2. DISCUSSION

2.1 The CPWG/14 meeting discussed the following updates and topics relevant to the work of the Air Traffic Management Sub-Group 1 (ATM/SG/1) Meeting.

### ICAO Route Development Group- Eastern Part of the ICAO EUR Region (RDGE)

2.2 The ANSPs discussed the work of the International Civil Aviation Organization (ICAO) Route Development Group – Eastern Part of the ICAO European (EUR) Region (RDGE) meeting. The State ATM Corporation attended and represented the CPWG at the April 2013 meeting. Information was presented to the RDGE on CPWG activities and initiatives. State ATM also presented their ATS Route Catalogue Paper. The ATS Route Catalogue in particular, will assist in information sharing on routes being developed in the region. It is hoped that this new collaboration will help further more efficient routing in the region

### Volcanic Ash Exercise Steering Group

2.3 State ATM provided information on the outcome of the EUR (EAST) VOLCEX/SG/1 meeting held on 21-23 August 2012 in Petropavlovsk-Kamchatsky, Russia. ICAO, EUROCONTROL, Kamchatka Volcanic Eruption Response Team (KVERT), the University of Alaska – Anchorage, Japan Civil Aviation Bureau (JCAB), Japan Meteorological Agency (JMA) and the local meteorological (MET) office had shared information related to observing volcanic ash, issuing advisories, significant meteorological information (SIGMET) and Notices to Airmen (NOTAMs) as well as managing airspace during volcanic events.

2.4 Planning for VOLKAM13, simulating a volcanic event involving the Karymsky volcano in Kamchatka, was discussed. The JCAB described the Volcanic Ring of Fire that impacts the North Pacific (NOPAC) air traffic routes. The Tokyo Volcanic Ash Advisory Center (VAAC) is responsible for that area, and a description was provided as to the flow of volcanic ash information from the observer to Tokyo VAAC to the MET center in order for appropriate SIGMETs to be issued. The discussions laid the ground work for an Exercise Directive that would be used in guiding the volcanic ash exercise in Kamchatka (VOLKAM13) on 15-16 January 2013 (2100-0600 UTC).

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ICAO Communication Failure Coordination Group (CFCG)

2.5 The FAA informed the meeting that ICAO Air Navigation Bureau established the Communication Failure Coordination Group (CFCG) in order to address conflicting amendment proposals requesting change to existing communication failure provisions. The Secretariat recognized that many States and some regions preferred to develop communication failure procedures that differed from those in Annex 2. The CFCG will be responsible for conducting a detailed review of present CF procedures and consider the increasing dependability and availability of communication systems in developing an optimal proposal. ANSPs and airlines were invited to participate in the CFCG.

2.6 The first meeting was held 23-25 October 2012. The group discussed papers from the Secretariat that included background of the evolution of provisions in Annex 2 and Annex 10 as well as regionally-agreed provisions, and recently proposed amendments submitted by the European Region and North American Regions (the FAA), and several national regulations that differ from ICAO guidance.

2.7 This work group has the challenge and opportunity to review the provisions and update with new technologies that have been introduced into the system. The group includes representation from States, Air Navigation Service Providers, the Civil Air Navigation Services Organization (CANSO) as well as IATA, International Federation of Air Traffic Controllers' Association (IFATCA), and International Federation of Air Line Pilots' Association (IFALPA) at the beginning to ensure that all viewpoints are discussed with the aim of developing an amendment that best represents the international aviation community.

2.8 One of the key opportunities is to clarify some definitions for communication failure, current flight plan, and ultimately work to establish procedures (PANS) from operators conducting worldwide flights. The next meeting is scheduled for May 2013.

Pacific Project

2.9 The Pacific Project was established to discuss the creation of seamless and homogeneous airspace for the air traffic from North America to Asia, with the expansion of User Preferred Routes (UPR) that would result in an improved operational/environmental efficiency.

2.10 This project had been allocated to the CPWG by the ICAO Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS) in 2010. TRASAS assessed the concept of the Pacific Project and collectively endorsed the project objectives. TRASAS asked that the CPWG be invited to include this project in its work program, with an initial priority on the Pacific Route System enhancements, by involving all key stakeholders and using the existing structures to enhance coordination and efficiency of the current working arrangements.

2.11 It was agreed that the Pacific Project activities involving the Asia Pacific, North America and Europe regions should be supported and supervised through the existing TRASAS mechanisms to allow a continuous exchange of information for the improvement of future operations between North America, Far Eastern Europe and Asia.

2.12 IATA facilitated the fourth meeting of the Pacific Project Team on 11 December 2012.

2.13 Discussions were held on the IATA objective for the Pacific Project to maximize User Preferred Routes (UPRs), including elimination of fixed routes and tracks, and significant limitations/use of the Organized Track Systems (OTS). Although the eventual goal of the Pacific Project is to make use of UPRs throughout the region, the airlines recognized that there may be constraints due to the different ANSPs and their requirements and capabilities.

2.14 The FAA offered a presentation on unrestricted UPR's utilizing 12 city pairs, with tracks generated by the Dynamic Ocean Tracking System Plus (DOTS+) system. IATA expressed that no further need for modeling of that type was necessary.

2.15 A discussion ensued regarding what was seen as a conflict between the Pacific Project, and the work in progress by the Informal Pacific Air Traffic Control Coordination Group (IPACG) and the CPWG. The ANSPs took the position that IPACG and CPWG should maintain their initiatives, relative to near-term and mid-term work. JCAB expressed the position that NOPAC changes should be worked bilaterally between JCAB and FAA at IPACG because ongoing studies are related to the airspace between JCAB and FAA. Also, JCAB explained that Pacific Organized Track System (PACOTS) and associated UPRs have long been reviewed and developed at IPACG; therefore, detailed work by the Pacific Project on PACOTS issues should also be avoided so as not to duplicate work.

2.16 The meeting recognized the need for the clarification of the work of Pacific Project and agreed that close coordination between associated Working Groups should be sought in order to achieve efficient flight operations between North America and Asia via the Arctic Ocean, Siberia and the North Pacific.

2.17 JCAB provided information on the movement towards more flexible routings in the NOPAC. This issue will continue to be worked by the IPACG and updates will be shared at the Pacific Project Team meetings.

2.18 NavCanada provided the following information on the status of communication and automation systems needed to implement UPRs in the Vancouver Flight Information Region (FIR): Air Traffic Service Inter-facility Data Communications (AIDC) would be explored between Oakland Air Route Traffic Control Center (ARTCC) and Vancouver ACC in early 2014.

- a. Controller Pilot Data Link Communication (CPDLC) was scheduled for implementation in February 2013.
- b. Conflict prediction was scheduled for September 2013.
- c. Automatic Dependent Surveillance - Contract (ADS-C) was considered to be a required enabler, however, the timing had not yet been determined. NavCanada agreed to provide IATA with information regarding opportunities for fast tracking this implementation

2.19 The next Pacific Project Team meeting workshop is scheduled for 14 May 2013 in Bodo, Norway.

### Space Weather

2.20 Mr. Joe Kunches of the U.S. National Oceanic and Atmospheric Administration (NOAA), presented information on aviation impacts from 2012 space weather events and the outlook for 2013. Activity is expected to increase through 2016, with about 5-10 episodes per year.

2.21 ICAO established a Space Weather Taskforce and has developed a draft Space Weather Concept of Operations (CONOPS) and Standards and Recommended Practices (SARPS) that has been submitted to the ICAO Secretariat. For additional information and participants were invited to contact Steven Albersheim, FAA, at [steven.albersheim@faa.gov](mailto:steven.albersheim@faa.gov)

2.22 Information from the National Weather Service Space Weather Prediction Center is available at <http://www.swpc.noaa.gov/>

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North Atlantic Performance Based Communication and Surveillance Implementation Plan

2.23 The FAA provided information on the NAT Performance Based Communication and Surveillance Implementation Plan to implement Required Communication Performance (RCP) and Required Surveillance Performance (RSP) in the NAT Region. Tom Kraft, FAA subject matter expert, attended the meeting to present an introduction to RCP and RSP, highlighting why these criteria are needed. In addition, the FAA had developed a Question and Answer document the NAT Region, which was made available for the benefit of CPWG participants.

2.24 More information regarding the CPWG is available at:  
[http://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/service\\_units/enroute/oceanic/cross\\_polar/](http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/oceanic/cross_polar/)

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the information contained in this paper.

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