THE FORTY-FIFTH MEETING OF THE INFORMAL PACIFIC ATC CO-ORDINATING GROUP (IPACG/46)

THE THIRTY-SECOND MEETING OF THE FANS INTEROPERABILITY TEAM (FIT/33)

(Virtual Meeting, 14-15 October 2020)

Agenda Item 4: ANY OTHER BUSINESS

Introduction of the Network Performance Assessment Center

(Presented by Civil Aviation Bureau, Japan)

SUMMARY

This paper provides information on the newly organized Network Performance Assessment Center (NPAC) in JCAB in April 2020. The NPAC was established to monitor, analyse and assess the service level of each CNS system if it meets the required performance specification for PBO in an integrated fashion. The results of these assessments are intended to substantiate advice and recommendations to the JCAB on operations, policy, standard, guidance material and implementation.

1. Introduction

1.1 For the purpose of realizing more efficient flight, improving service availability and reducing environmental impact, the JCAB has been promoting to implement “PBO (Performance Based operation)” . PBO requires the highly accurate position information and robust ATC communications. These required high operational services level in each field of C (Communications), N (Navigation), S (Surveillance) are supported by the complex combination of various systems.

1.2 The Network Performance Assessment Center (NPAC) was established to monitor, analyse and assess the service level of each CNS system if it meets the required performance specification for PBO in an integrated fashion. The results of these assessments are intended to substantiate advice and recommendations to the JCAB on operations, policy, standard, guidance material and implementation. NPAC also operates SBAS(Satellite Based Augmentation System) and the datalink exchange system necessary to support the “Performance-Based” air navigation services.

2. Discussion

2.1 Communication Performance Assessment

The NPAC has started PBCS performance monitoring (ADS-C, CPDLC, etc) and assessment from April 1, 2020. These evaluation results are provided to CRA and related organizations. The NPAC also contributes to troubleshooting and investigation on submitted PR by means of using datalink system analysing function.

2.2 Navigation Performance Assessment

The NPAC has started GNSS performance monitoring and assessments including GPS augmentation systems (SBAS and GBAS). These results are provided in an easy to see manner to users on the website. In Japan, the RAIM prediction information service had commenced at ATMC (Air Traffic Management Center) on January 20, 2005 and then NPAC succeeded to the service from ATMC with improvements of its functionality on April 1, 2020. The RAIM prediction information website is available at https://msas-raim.mlit.go.jp/.

2.3 Surveillance Performance Assessment

The NPAC will start Surveillance system performance assessments in late this year. Initially, an assessment of WAM and the multi sensor target fusion data is scheduled to start based on European standard. These performance assessments will refer to ED-142 (EUROCAE) for WAM performance assessment, and will refer to SPEC-0147 (Eurocontrol) for the multi sensor target data assessment.

2.4 System Operation

In addition to performance assessments, the NPAC operates ATC datalink exchange system and SBAS. DLCS (Data Link Center Sortation equipment) processes all the datalink communications messages such as ADS, CPLDC, DCL and ATIS throughout Japan and delivers them via DSPs.

MSG (MSAS Signal Generating equipment) connected to QZSS (Quasi Zenith Satellite System) to broadcast SBAS signal to the aircraft flying in Fukuoka FIR. QZSS, which is owned and operated by the Cabinet Office, provides JCAB's MSAS (Michibiki Satellite-based Augmentation Service) and their own regional positioning and time transfer system as well.

3. Conclusion

3.1 The meeting is invited to:

a) Note the information in the paper and the accompanying presentation slide; and

b) Review and comment to the NPAC duties.

END